

MDMS IMPACT ASSESSMENT

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1. INTRODUCTION

This is the Final Report for the study titled "Exploratory study for the new proposal for a Regulation on multimodal booking and the proposal for a rail ticketing Regulation" (hereafter the 'study'). The report has been submitted by a consultant consortium led by Ricardo BV, Ricardo Consulting S.L and Ricardo-AEA (hereafter just referred as "Ricardo"), together with Transporte e Territorio SRL (TRT), Transportes Inovação e Sistemas (TIS) and Transport & Environmental Policy Research Ltd (TEPR).

1.1 MULTIMODAL DIGITAL MOBILITY SERVICES (MDMS)

MDMS can be defined as a service providing information on traffic and travel data such as location of transport facilities, schedules, availability and fares and/or the distribution of transport products, in relation to two or more transport operators or two or more groups of transport operators[1], operating in one or more transport modes, which may include features enabling the making of reservations, bookings or payments or the issuing of tickets. Only platforms which sell or distribute tickets of two or more transport operators, or two or more groups of transport operators are in scope. The others are simply direct channels websites as these are not aggregating platforms. This means that a platform/website which only sells its own tickets and/or the tickets of operators which belong to the same group is out of scope because it cannot be qualified as comparing offers of different competing operators. This is also the case when a platform is selling more tickets in more than one mode in as far as it is not selling multiple operators.

MDMS are digital platforms that distribute (directly or indirectly) transport offers on the same display and thereby assist passengers and other intermediaries to directly compare various travel options, choices, and prices across multiple transport operators and modes, such as rail, bus, and air. These platforms facilitate the access to information, booking, payment, and integration of transport offers, thereby improving the sustainability, resilience, efficiency, and comfort of the transport system. They may also include features for making reservations, issuing tickets, and processing payments. Computerised Reservation Systems (CRS) are a specific type of MDMS designed to streamline access to information about operators (mostly air carriers) schedules, availability, and fares in the business-to-business (B2B) market. These systems compile offers from various air carriers and rail operators, allowing travel agents (offline and online – OTAs) and travel management companies (TMCs) operating in the business travel market to sell air tickets and bundled air and rail tickets.

Unlike other MDMS platforms, CRSs do not directly offer distribution services to consumers. Instead, they act as intermediaries, empowering travel agents and TMCs to compare offers from competing transport operators and book tickets on behalf of their customers. In return for these services, CRSs often provide long-term loyalty incentives to travel companies that maintain strong partnerships with them.

By integrating a full range of transport offerings and multiple legs of a trip, MDMS have the potential to collect and aggregate data on actual transport user behaviour and the performance of the transport system, including the functioning of established and novel transport modalities. This valuable data can support public and transport authorities in enhancing the overall functioning of the transport system. Furthermore, integrating more sustainable transport options in MDMS can assist in the promotion of the use of these transport options as stand-alone or in combination with other modes of transport assisting the overall performance of the transport system.

MDMS can be classified in regards the geographical scope in which the MDMS services are offered (Table 1-1). **The proposals for a RMB (Regulation on Multimodal Booking RMB) and RTR (Rail Ticketing Regulation) focus on the regional/national and international trips as these are more relevant for integrating the EU transport offering.**

[1] This is particularly relevant for aviation, where each group represents a single undertaking and "undertaking" is based on the definition set out by competition law case law.

Table 1-1: Geographical scope of MDMS trips

Geographical scope	Description
Rural	A trip within a rural area, starting or ending there or taking place between two rural areas. In general, fewer options might be available compared with an urban trip (e.g., often only private car, ride-sharing, irregular bus services) though this might change in the future e.g., with emerging on-demand shuttle services.
Regional/National	A trip from one urban/rural area to another urban/rural area within the same country. Such a trip integrates first and last mile legs potentially using different mobility service providers or private vehicles.
International/ cross-border	A trip from one urban/rural area to another urban/rural area which involves crossing borders to reach to the end or to conduct part of the trip. Similarly, to national trips, such a trip integrates first and last mile legs potentially using different mobility service providers or private vehicles with differences related to the crossing of administrative borders which may demarcate the areas of operation of different long-distance operators.

1.2 POLITICAL CONTEXT

The European Commission's Sustainable and Smart Mobility Strategy (SSMS)[2] supports the European Green Deal's goal of reducing transport emissions by 90% by 2050. A crucial aspect of this is promoting multimodality, using the most efficient mode of transport for each leg of a journey. This initiative encourages competition and innovation in MDMS development, contributing directly to the emission reduction goals outlined in the Green Deal. It achieves this by utilising real-time data to offer low-emission mobility solutions as alternatives to cars.

The **Commission's Communication on a European Strategy for Data** emphasises that data-driven innovation will bring significant benefits to citizens through its contribution to the Green Deal. The Strategy also identifies the need to review the **Regulation on a Code of Conduct for Computerised Reservation Systems**[3]. This regulation governs business-to-business transactions between CRS providers and air and rail carriers, as well as between CRS providers and travel agents in indirect air ticket distribution. The goal is to create a harmonised framework for the entire ticket distribution value chain across different transport modes by integrating the provisions from the Regulation on a Code of Conduct for CRS which are still relevant into the proposed RMB initiative.

Furthermore, the Sustainable and Smart Mobility Strategy emphasises the importance of digitalising the EU's transport system and the global competitive advantages it will bring. It highlights that achieving multimodality requires multimodal and interoperable travel information, ticketing, and payment systems. The importance of digitalising transport booking and ticketing as a means of increasing the efficiency of the transport system is identified in the goals of the current Commission as highlighted in the mission letter to the Sustainable Transport and Tourism Commissioner Apostolos Tzitzikosas where the need for a Regulation on Rail Ticketing (RTR) is identified as a means to ensure that Europeans can buy one single ticket on one single platform and benefit from passenger rights protection for their whole trip. MDMS also has the potential to support the achievement of greater societal goals. These can be served by:

- Presenting and sorting of travel options also based on GHG emissions aiming to promote more sustainable travel options.
- Provision of data from MDMS, critical for mobility management, to public authorities aiming to assist in public tasks.

[2] COM/2020/789 final (European Commission, 2020).

[3] Regulation (EC) No 80/2009 of the European Parliament and of the Council of 14 January 2009 on a Code of Conduct for computerised reservation systems and repealing Council Regulation (EEC) No 2299/89.

The different policy options examined in this study affect the deployment, completeness of data and benefits achieved by the use of MDMS. The analysis also includes any potential wider societal impact they will provide.

1.2.1 Sustainable Development Goals (SDG)

These initiatives aim to promote a more multimodal and sustainable transport system and contribute to Sustainable Development Goals SDG#3 ("Ensure healthy lives and promote wellbeing for all at all ages"), SDG#9 ("Make cities and human settlements inclusive, safe, resilient and sustainable"), SDG#13 ("Climate Action").

1.3 LEGAL CONTEXT

Three main policy instruments constitute the basis for this initiative on RMB: the **Directive on intelligent transport systems (ITS)**[4] and its **Delegated Act on Multimodal Travel Information Services (MMTIS)**[5], as well as the current Regulation on a **Code of Conduct for Computerised Reservation Systems**[6]**.**

The **ITS Directive** establishes a framework to support the coordinated and coherent deployment of ITS in the road sector and its interfaces with other modes of transport. The ITS Directive provides for developing specifications (the detailed requirements needed to ensure the objectives of the Directive) in four priority areas. In 2023, the Commission adopted the revision of the ITS Directive[7], updating these priority areas. In particular, in the proposal, Priority Area 1 relates to information and mobility ITS services, including specifications for EU-wide Multimodal Digital Mobility Services. This priority area addresses technical specifications for information and planning with Multimodal Travel Information Services (MMTIS). The **Delegated Regulation on MMTIS** provides a framework for the development of MMTIS across the EU, including the obligation for each Member State to set up a National Access Point (NAP) enabling access to passenger information static data, and since its 2024 revision, it sets obligation to share dynamic data in complement8. Nonetheless, these data will be limited to information data. To facilitate distribution services and the development of MDMS enabling the making of reservations, bookings or payments or the issuing of tickets, additional data are necessary (such as real-time fares). This will be addressed by this initiative on RMB.

Indirect air ticket distribution was originally established by airlines to sell their own tickets and the vast majority of airline bookings were made by travel agents passing through **CRSs.** In 1989, specific ad-hoc rules were adopted in the form of a **CRS Code of Conduct** to avoid risks of competitive abuse by CRS, as most of them were owned and controlled by air carrier, and general competition rules were not sufficient. In particular, the Code of Conduct introduced requirement for results to be shown on an unbiased display that did not favour the CRS's parent carriers[9] or any other carriers and do not favour their own CRS over the others. Changes in CRS technology and market economics eroded the key features of the competitive landscape for which the Code of Conduct was created. Therefore, in 2009 the Code of Conduct was revised by adopting Regulation (EC) 80/2009, which regulates the B2B transactions between the providers of CRSs and air and rail carriers and between CRS and travel agents. Further background information on the CRS and air ticket distribution market is provided in Annex VI. In this section, existing and proposed EU policy instruments are presented in relation to their synergies with the RMB and RTR initiatives.

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[4] Directive 2010/40/EU of the European Parliament and of the Council of 7 July 2010 on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport, OJ L 207, 6.8.2010, p. 1–13.

[5] Commission Delegated Regulation (EU) 2017/1926 of 31 May 2017 supplementing Directive 2010/40/EU of the European Parliament and of the Council with regard to the provision of EU-wide multimodal travel information services, OJ L 272, 21.10.2017, p. 1–13.

[6] Regulation No 80/2009 of the European Parliament and of the Council of 14 January 2009 on a Code of Conduct for computerised reservation systems and repealing Council Regulation OJ L 35, 4.2.2009, p. 47–55

[7] Directive (EU) 2023/2661

[8] EU Delegated Regulation 2024/490

[9] As defined in Article 2, para 7 of Regulation (EC) 80/2009 *"any air carrier or rail-transport operator which directly or indirectly, alone or jointly with others, controls, or participates in the capital with rights or representation on the board of directors, supervisory board or any other governing body of, a system vendor, as well as any air carrier or rail-transport operator which it controls"*

The RMB and RTR initiatives are expected to have synergies with **Digital Markets Act**[10], the **Data Governance Act**[11], the **Digital Services Act**[12] and the proposal on the **Data Act**[13], all part of the EU's Digital Strategy. More specifically:

- Sector specific measures are considered in this RMB to further support multimodality. The Digital Markets Act aims to ensure fair competition by banning certain practices used by large platforms acting as "gatekeepers" i.e., businesses with a significant impact on the internal market and a strong intermediation position. In its current definition of gatekeepers, MDMS and CRS are not included, indicating the importance of sector specific MDMS measures in this area. The RMB and RTR initiatives have synergies with the Data Governance Act as it covers data intermediation services (but does not address ticketing data). As the Digital Services Act (DSA) mainly focuses on creating a safe online environment, it covers all online intermediaries offering services in the EU, imposing obligations regarding illegal content, transparent advertising, and disinformation on online intermediary service providers. It can therefore co-exist with RMB and RTR initiatives without overlap. One of the aims of introducing the RMB and RTR initiatives is to harmonise rules on data and content sharing, particularly in markets where there are highly restrictive contractual agreements or general limited data and content sharing that negatively impacts consumers. The RMB and RTR initiative will also complement the Data Act, which addresses limited data sharing and data sharing in highly restrictive contracts.
- The **Directive on Unfair Commercial Practices**[14] prohibits undisclosed advertising and paid promotion in search results. This is complementary to the proposed RMB policy measures and they address neutral display, avoiding self-preferencing, and listing minimum ranking criteria.

Another key aspect of the initiative is enabling MDMS to provide greater visibility in terms of the sustainability of available modes. The proposed **CountEmissionsEU** (multimodal) and **Flight Emission Label** (aviation) initiatives aim to establish a common framework for calculating and reporting transport-related greenhouse gas emissions, enabling users to choose the most sustainable options, including through MDMS, and so theRMB will complement these initiatives. By operationalising some of the elements of these policies, the RMB and RTR initiatives aim to create a more efficient and sustainable multimodal transportation system for EU citizens.

The 2020 evaluation of the **Regulation on a Code of Conduct for CRS**[15] revealed that while some objectives remain relevant, such as ensuring a level playing field and increasing transparency, the Code of Conduct's effectiveness has been diminished due to market and technological changes in air ticket indirect distribution. The evaluation concluded that the objectives of preventing distortion of competition between CRSs by parent carriers may no longer be relevant, given that horizontal legislation already covers these aspects. Despite these findings, the evaluation maintained that **the objectives of ensuring a level playing field and increasing transparency are still relevant**. In particular, the objective of ensuring a level playing field for all participating carriers in terms of access to and the use of CRS services remains pertinent. The evaluation found that the Code had not been fully effective in ensuring a level playing field. Some carriers expressed concerns about the inclusion of specific clauses, such as content parity clauses in their contracts with CRS providers, which might reduce airlines' and travel agents' ability to use alternative booking systems or technology. **The evaluation concluded that there was an ongoing lack of balance in the bargaining power of air carriers vis-à-vis CRS providers**. While the Code of Conduct had given airlines more freedom to negotiate contracts with CRS providers, this had not translated into lower booking fees on average. Overall, there are indications that the CRS Code of Conduct has not been fully effective in achieving the objective of ensuring a level playing field for all participating carriers for access to, and the

[10] Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act), OJ L 265, 12.10.2022, p. 1–66.
[11] Regulation (EU) 2022/868 of the European Parliament and of the Council of 30 May 2022 on European data governance and amending Regulation (EU) 2018/1724 (Data Governance Act), OJ L 152, 3.6.2022, p. 1–44.
[12] Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market For Digital Services and amending Directive 2000/31/EC (Digital Services Act), *OJ L 277, 27.10.2022, p. 1–102.*
[13] COM(2022)68 final
[14] Directive (EU) 2019/2161 of the European Parliament and of the Council of 27 November 2019 amending Council Directive 93/13/EEC and Directives 98/6/EC, 2005/29/EC and 2011/83/EU of the European Parliament and of the Council as regards the better enforcement and modernisation of Union consumer protection rules, OJ L 328, 18.12.2019, p. 7–28.
[15] SWD(2020)9

use of CRS services, because it has not managed to balance the bargaining powers of different-sized carriers vis-à-vis CRSs, which may have led to the use of certain terms and conditions by the CRSs that the carriers consider to be highly restrictive.

Travel agents, both offline and online, still rely heavily on the content provided by CRSs for bookings, particularly for business customers. However, increased fragmentation of content across multiple booking channels has led to reduced relevance. Travel agents also highlighted the negative effects of certain (larger) airlines imposing surcharges on tickets booked through traditional CRSs. **The evaluation also concluded that traditional CRS services' specific sectoral treatment may not be justified due to developments in air ticket distribution.** It recommended examining the CRS Code of Conduct's scope to ensure continued relevance. The objective of preventing distortion of competition between CRSs by parent carriers and ensuring fair competition between carriers owning CRSs seems less relevant for ex ante regulation. None of the three traditional CRSs in Europe are owned by air carriers, and while reinvestment is theoretically possible, there is no evidence of its likelihood. Consequently, provisions on parent carriers in the CRS Code of Conduct may be less relevant, but EU competition rules would still apply. **Finally, the evaluation concluded that the objective of promoting rail and multi-modal transport remains relevant. However, this objective should not be addressed specifically by CRS-focused legislation - indirect distribution channels only - but in the context of a wider initiative.** The integration of CRS retained elements in the MDMS initiative is specifically aimed at making it a more genuine multimodal initiative including both B2B and B2C sides of ticket distribution chain.

This report covers the following elements:

- Problem definition including an analysis of the problem drivers, affected stakeholders and expected development of the problem (Chapter 2).
- Rationale for EU action (Chapter 3).
- Policy objectives (Chapter 4).
- Policy measures and policy options as well as the baseline scenario in the absence of any further EU action (Chapter 5).
- Assessment of impacts (Chapter 6).
- Comparison of options (Chapter 7).
- Preferred option (Chapter 8).
- Monitoring and evaluation of impacts (Chapter 9).

Furthermore, few annexes are included, including a market report with the current status of the market situation across all modes, a methodological annex, the competitiveness check, the SME check, and the stakeholder consultation report.

2. PROBLEM DEFINITION

The Better Regulation Guidelines establish that a clear understanding of the problem is important for the development of policy measures that are both relevant and proportionate to the issues at hand (as noted in Tool #13 of the Better Regulation Toolbox). In doing so, the following set of issues needs to be addressed:

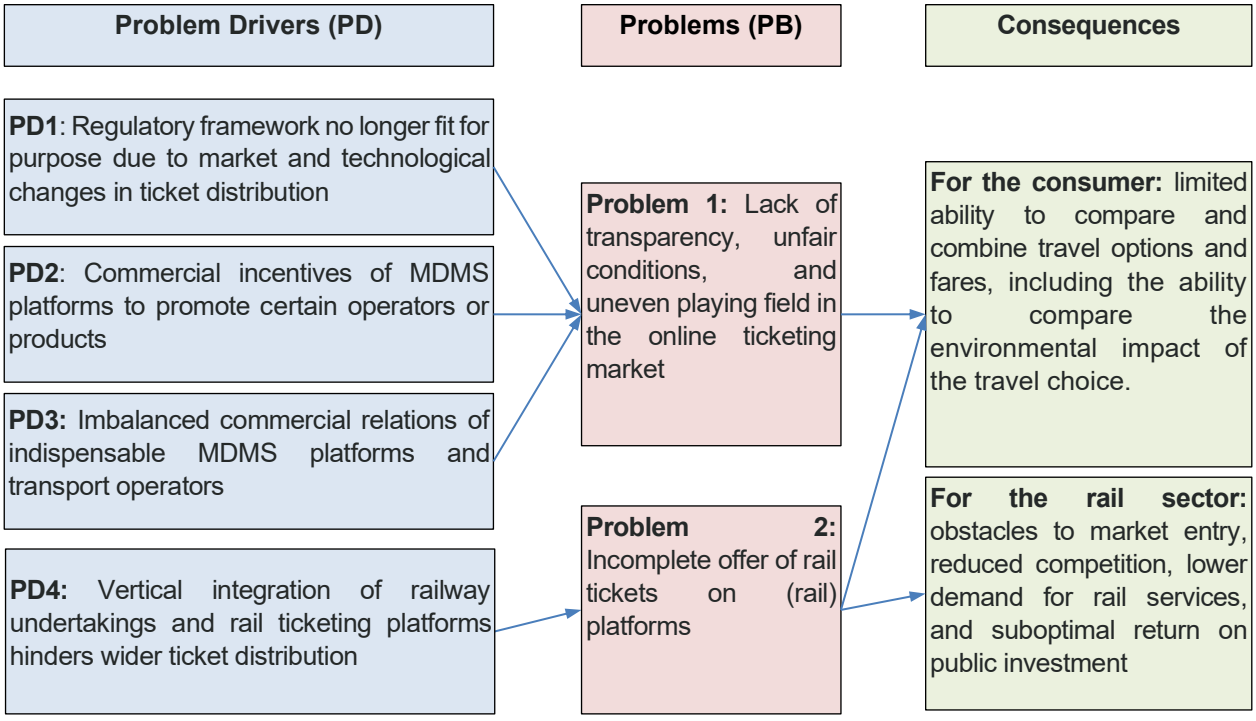
1. What is the problem and what are its consequences?
    - What is the size of the problem and its EU dimension?
    - What are its drivers and how important are they?
2. Who are the relevant stakeholders, including those that may cause the problem and those affected?
    - How likely is it that the problem persists?

The analysis presented in this section is a preliminary version based on the desk research and the initial stakeholder consultation findings. This is going to be updated with the conclusion of the field research actions including the analysis of the stakeholder survey and targeted interviews after their conclusion and the finalisation of the market analysis report (Appendix B) with the enhanced analysis based on data collected directly from stakeholders.

2.1 PROBLEM TREE

Figure 2-1 below presents the problem tree linking the problem drivers, the problems, and the consequences. These drivers, problems and consequences were developed by the study team in close consultation with the Commission. They are presented in detail in the following sections.

Figure 2-1 Problem tree



2.2 WHAT IS THE PROBLEM AND WHAT ARE ITS CONSEQUENCES?

Following the analysis, three main problems have been identified. They can be summarised as follows:

- **Problem 1:** Lack of transparency, unfair conditions, and uneven playing field in the online ticketing market This problem has three problem drivers associated with it.

- **Problem 2:** Incomplete offer of rail tickets on (rail) platforms. This problem has one problem driver associated with it.

2.2.1 Problem 1. Lack of transparency, unfair conditions, and uneven playing field in the online ticketing market

This problem refers to the disparity in how transport operators, ranging from large, established companies to smaller, regional operators, can access and be displayed on indispensable MDMS platforms and indispensable rail operators' platforms. In practice, uneven access can mean that some operators have full access to these platforms, allowing their services to be fully visible, bookable, and integrated with other modes of transport. In contrast, others may face barriers, which prevent or limit their participation, making it difficult for them to compete on equal terms. For instance, some booking platforms only show limited or indicative timetables for competing rail operators, while offering full booking functionality only for the tickets of operators with whom they are vertically integrated, an issue present in the rail sector, although not in the air sector. During the study's consultation, all five interviewed new entrant rail operators identified a range of discriminatory practices by MDMS platforms that limit or complicate access for certain operators. These include the refusal of dominant MDMS platforms to onboard competitors, the application of prohibitive fees or restrictive parity clauses (data from the open-ended questions of the survey).

The relevance of this problem[16] was also agreed by the majority of surveyed stakeholders as part of this support study. Out of 78 respondents of the survey, 34 agreed with the identification of the problem – 10 fully and 24 partially – while 28 disagreed, including 12 who disagreed fully and 16 partially. A further 13 stakeholders were either neutral (10) or uncertain (three). Views varied across stakeholder groups surveyed. Notably, MDMS providers were the least likely to recognise this issue: out of 20 respondents in this category, only three expressed agreement, while 14 disagreed, including five who disagreed fully and nine partially. In contrast, among transport operators, support was significantly higher: 16 agreed (three fully, 13 partially), while only eight disagreed (five fully, three partially). From these 16 transport operators who agreed, the large majority are airlines (11 airlines / airline association, three new entrant rail operators / rail association and one road transport association). From the eight transport operators who disagree with Problem 2[17], six are rail incumbent operators.

National authorities showed a similar trend, with eight agreeing (one fully, seven partially) and four disagreeing (two fully, two partially). 'Other' stakeholders were even more supportive, with seven in agreement (four fully, three partially) and only two partially disagreeing.

These survey results highlight a clear divide in perceptions of how common the problem is[18], particularly between MDMS providers and other stakeholder groups. The feedback suggests that while MDMS providers may be less inclined to view unequal access as problematic, a broader consensus among transport operators, national authorities, and other stakeholders, points to this issue as a significant barrier to fair competition and effective multimodal integration. This divide is also evident in the interview outcomes, where five out of 16 independent MDMS providers / associations (including EU Travel Tech and ADN Mobilités) consistently agree that the real barrier lies not in their willingness to integrate operator content, as alleged by other types of stakeholders, but in the unfavourable contractual terms imposed by incumbent operators.

In practice, uneven access typically manifests through:

- **Restrictive access conditions** imposed by CRSs and similar gatekeeping platforms, where smaller operators are required to accept unfavourable commercial or technical terms to be fully integrated.

[16] A previous formulation of the problem was presented to respondents. The original wording stated: *"Uneven access of operators to indispensable MDMS platforms."*

[17] A previous formulation of the problem was presented to respondents. The original wording stated: *"Uneven access of operators to indispensable MDMS platforms."*

[18] A previous formulation of the problem was presented to respondents. The original wording stated: *"Uneven access of operators to indispensable MDMS platforms"*

- **Denial of access** to dominant or vertically integrated platforms, particularly in the rail sector, where competing operators may be excluded altogether
- **Partial or limited access**, where operators are listed but with limited functionality (e.g. no booking, no real-time data) or reduced visibility.

These factors are facilitated by structural features of the MDMS market, including:

- **Control over indispensable distribution channels** by a limited number of platforms, which allow operators to reach travel agents, online travel agencies and corporate travel management companies;
- **Vertical integration**, creating conflicts of interest between platform and operator roles, particularly where platforms have incentives to prioritise their own transport services over competing operators;
- **Strong network effects**, whereby platforms become more valuable as more users and operators participate. As a platform attracts a larger user base, participation becomes increasingly essential for operators seeking visibility and sales. This reinforces the platform's dominance, increases operators' dependence on it as a distribution channel, and further limits the ability of smaller operators to negotiate fair access conditions.
- **Weaker bargaining power of smaller and new entrant operators**, who may lack the scale or resources to negotiate favourable terms and are therefore more likely to accept high fees, restrictive clauses or limited access in order to avoid exclusion.

This issue predominantly impacts new entrants and small to medium regional operators, which often lack the financial or technical capacity to create their own platforms. As a result of unfair fees, restrictive terms and unbalanced commercial relationships with dominant CRSs and MDMS platforms, their services may be excluded or underrepresented. This limits customer reach and hinders their ability to compete effectively in the transport market (European Commission, 2023).

In the stakeholder survey, AllRail noted the structural effect of this exclusion: *"Indispensable MDMS platforms are mostly the digital ticket retail channels (websites and apps) of state-owned incumbent railway operators... They dominate their respective national markets to a grossly disproportionate extent... This entrenched dominance gives indispensable MDMS platforms an outsized negotiating position when other rail operators seek commercial agreements — leading to either: unfavourable conditions (e.g. prohibitive fees, technical or marketing restrictions), or outright refusal to sell competitors' tickets."*

In air ticket distribution, Computerised Reservation Systems (CRS) contain information about schedules, availability and fares. They are used by travel agents (including online ones) for the sale of air and rail tickets and other travel-related services to end consumers (passengers). Unlike other MDMS platforms, CRSs do not directly offer distribution services to consumers. Instead, they act as intermediaries, empowering travel agents and TMCs to compare offers from competing transport operators and book tickets on behalf of their customers. In return for these services, CRSs often provide long-term loyalty incentives to travel agencies that maintain strong partnerships with them.

- **CRSs yield significant market power in specific aviation market segments**
    - CRS platforms control access to large networks of travel agents and TMCs.
    - Smaller airlines are often required to accept restrictive terms, high fees, or full content obligations to gain visibility.
    - Many travel agents engage in "single-homeing" meaning they rely on only one CRS to access the combined offers of all airlines. This reinforces CRS dominance because switching platforms is burdensome and time-consuming, and airlines must negotiate with multiple CRS providers to ensure broad visibility.

In the consultation stakeholders highlighted that CRS systems continue to be "indispensable service providers" while providing "crucial protections in the B2B sector, safeguarding airlines from discriminatory practices by GDSs". CRSs are indispensable for many smaller and medium-sized operators, their dominant

market position also allows them to set terms that smaller operators must accept, often under constrained bargaining power.

One airline association representing smaller carriers emphasised that certain protections embedded in the CRS Code of Conduct remain essential in the B2B distribution context. These provisions serve to safeguard airlines from discriminatory practices. According to the association, repealing such protections would expose carriers—particularly smaller and regional ones—to biased treatment and unfair competitive conditions. The association further noted that CRSs continue to function as gatekeepers to travel agencies, maintaining a dominant market position. This concentration of influence warrants targeted regulatory intervention. Given the significant role CRSs play in airline distribution, the association argued that safeguards against discriminatory practices must be retained to ensure fair competition.

Many carriers, including legacy carriers, maintain ties with CRSs not only to access corporate travel market, but to ensure broad visibility across a wide range of distribution channels. While the overall market share of air tickets booked directly via CRSs may have declined, their infrastructure continues to underpin a significant share of indirect sales. One transport operator surveyed in the context of this study, corroborated this view, emphasising that CRSs still hold significant market power, especially in corporate travel, and the need for the CRS Code of Conduct. Furthermore, another transport operator, a prominent airline, stressed in their survey response the continued importance of CRSs as the remain by far the largest single source of revenue for airlines due to being the gatekeepers to the business travel segment.

- **Uneven regulatory treatment of B2B ticket distribution channels**

The 2020 evaluation of the CRS Code of Conduct (CoC) (European Commission, 2020) identified how changes to the technological and market landscape have evolved the air ticket distribution system. The market is now characterised by new distribution channels and actors that compete with CRSs for indirect distribution of air tickets and other travel-related services, without being bound by the rules outlined in the CRS Code of Conduct (Regulation (EC) 80/2009). This leads to the question whether the current legislation continues to be fit for purpose and/or if it should be extended to new market players.

Differences between these regulated and non-regulated ticket distribution channels can lead to a distortion of competition in ticket distribution as actors operating certain distribution channels (CRS) are faced with a more restrictive regulatory framework than others that do not come under the scope of the CRS CoC. This results in an uneven playing field providing an unfair advantage to certain actors compared to others.

New NDC-enabled distribution channels are not bound by CRS CoC rules and ass

As a result of these dynamics, smaller airlines face higher costs and more restrictive conditions to access essential distribution networks, while non-regulated platforms can favour specific operators, distorting competition. Consumers may encounter higher fares, misleading promotions, and limited visibility of all available options. Overall, the current regulatory framework is no longer fit for purpose, leaving gaps that dominant and emerging players can exploit, which undermines a level playing field in B2B air ticket distribution. Also OTAs and MSEs can use biased ranking, pay-for-placement or opaque pricing, giving certain airlines an advantage and sterring consumer choice.

In the survey, stakeholders were asked to indicate the extent to which they agree with this part of Problem 1. Across all groups, 36 of 74 agreed (19 fully, 17 partially), whereas 7 stakeholders disagreed (3 fully, 4 partially). Thirty-one of 74 stakeholders neither agreed nor disagreed (7) or did not know (24). Among MDMS providers, 13 of 19 of those who responded agreed with the Problem, while 11 of 31 of transport operators agreed – 13 transport operators indicated they ‘did not know’ which could be attributed to them not forming part of the aviation sector. Six national authorities agreed (6 of 13) and six other stakeholders (6 of 11).

Both the 2007 impact assessment and 2020 evaluation of the CRS Code of Conduct reported that air carriers have divested their stakes in CRS providers with no evidence of them planning to re-establish such links which were amongst the original reasons for establishing the CRS Code of Conduct. Stakeholder consultations, via survey and interview, in the context of this study revealed that there is a continued shift away from CRS in favour of alternative distribution channels, notably a growing reliance on direct channels and an increased presence of metasearch engines, alongside third-party distributors such as OTAs .

2.2.2 Problem 2: Incomplete offer of rail tickets on (rail) platforms

Problem 2 refers to the challenges consumers face when trying to access and purchase tickets, particularly for rail travel, through Multimodal Digital Mobility Services (MDMS) platforms. This problem encompasses several issues, including:

- **Limited information** (lack of comprehensive and accurate information about travel options, schedules, and ticket availability)
- **Distorted information** (inconsistent and potentially misleading information about ticket prices, routes, and travel conditions)
- **Limited access to tickets** (This reflects the reality that it is not always possible to purchase an available offer. Also, limited access to discount cards, flexible ticketing options, and single-ticket solutions for multimodal journeys)

Stakeholder feedback collected through the targeted survey for this study showed mixed views on the definition of Problem 1: Of 78 responses, 47 agreed (23 fully, 24 partially), 21 disagreed (15 fully, six partially), six were neutral and four did not respond. Transport operators that responded mostly disagreed (six agreed and 19 disagreed, out of 30, while MDMS providers, 'Other' stakeholders, and most national authorities broadly supported the problem statement.

A key driver of limited and distorted information is the dependence of MDMS platforms on transport operators, particularly rail operators, for access to essential data. In many cases, platforms do not have access to operators' full catalogues, resulting in fragmented or incomplete information and uncertainty as to whether consumers are seeing all available options.

The issue is particularly pronounced in the rail sector, where many MDMS platforms are operated by incumbent rail operators with dominant market positions. These vertically integrated platforms tend to concentrate ticket searches and sales within their own ecosystems. While competing services may be displayed, they are often not enabled for booking, limiting effective comparison and choice.

Overall, limited and distorted information and restricted access to tickets on MDMS platforms reduce transparency and consumer choice, particularly in the rail sector, and may discourage multimodal and cross-operator travel.

Box 1 Stakeholder examples illustrating Problem 2 on specific rail routes

Stakeholders provided examples of specific rail routes illustrating problem 2

- Warsaw – Gdansk

  T&E cited the route between Warsaw and Gdansk as an example where third-party platforms appear unable to sell tickets for the incumbent operator.

  "One concrete example is with the Polish operator PKP. To travel with PKP between Warsaw and Gdansk you need to buy your ticket on PKP. Third party platforms (Trainline, Omio, RailEurope) don't have access to the data to provide those tickets to travellers."

- Copenhagen – Aarhus

  T&E also highlighted potential differences in fares available on operator platforms and third-party platforms for the route between Copenhagen and Aarhus.

  "Another practice of incumbent vertically integrated B2C MDMS is when railway companies do not pass on best price tickets to third parties… For example in Denmark, with DSB… passengers between KÃ¸benhavn H and Aarhus H (Denmark) can purchase cheap DSB Orange tickets from state railway company DSB while passengers searching for the same connection on the websites such as SNCB International or Rail Europe only show much higher prices."

- Nantes – Bordeaux

  The European Passengers' Federation reported an example relating to journey planning on the SNCF Connect platform for travel between Nantes and Bordeaux.

  "The example was given by EPF member FNAUT of the SNCF Connect App and vending machines, which usually only propose high speed TGV services and 'forget' to mention alternative itineraries by Intercity trains… One example is the trip from Nantes to Bordeaux: the SNCF systematically proposes a TGV ticket Nantes-Paris (Montparnasse)-Bordeaux, while there is a better alternative in terms of duration and price with the Intercity line Nantes-Bordeaux."

2.3 ANALYSIS OF THE PROBLEM DRIVERS

As presented in Figure 2-1, we have identified five problem drivers underlying the three problems. We present each of the drivers in the following section. The analysis is based on desk research as well as field research (via interviews and a targeted survey).

2.3.1 PD 1. Regulatory framework no longer fit for purpose due to market and technological changes in ticket distribution

This problem driver feeds into Problem 1, contributing to the potential distortion of competition between regulated CRS and non-regulated B2B distribution channels performing similar functions.

This problem driver reflects how significant shifts in the air ticket distribution landscape, driven by technological and market innovation and evolving consumer behaviour that have introduced new market players, are not covered by the CRS Code of Conduct. The share of tickets sold through traditional CRSs has steadily and slowly declined in Europe, while a growing number of bookings now occur through alternative digital platforms such as new content aggregators, OTAs, MSEs, and other MDMS providers. These new channels' popularity is driven in part by internet penetration. However, despite their growing usage, they are not subject to key CoC obligations, such as rules on neutral display, data transparency or fair treatment of carriers. As a result of this, the existing regulatory framework no longer ensures that consistent standards are applied to distribution channels that perform similar functions.

CRS market share and continuing relevance

Overall, the share of total air tickets booked in Europe through CRS platforms was found to be around 30% in 2019 and 22% in 2024 is projected to slowly continue declining overtime. This is due to a change in distribution channels, brought in part by the growth of internet penetration. The internet and direct access has made it easier for EU consumers to purchase air tickets directly, either via the airline website or through other distribution channels such as Online Travel Agents (OTAs) and/or Meta-Search Engines (MSEs). Furthermore, the decline can also in part be attributed to increased sales via alternative B2B platforms such as new content aggregators and DC systems. These channels are outside the scope of the CRS Code of Conduct, while the treatment of alternative distribution channels is unclear, as they share some of the main features of CRS platforms, but not all. This has resulted in the blurring of the boundaries between different distribution channels and the applicability of the Code of Conduct to these services.

Despite this decline, CRSs remain critical, particularly for business travel and smaller airlines. Airlines participating in a targeted consultation in 2021 reported varying dependency on CRS providers for air ticket bookings. One airline reported that 50% of their revenue comes from tickets sold through CRS systems, and two airlines associations reported that their members are still very reliant on CRSs. In a more recent consultation conducted over the 2024-25 period, two airline associations stated that CRS systems continue to be "indispensable service providers" while providing "crucial protections in the B2B sector, safeguarding airlines from discriminatory practices by GDSs". While the two airline associations did highlight the continued relevance of CRS, one of those associations claimed that CRSs were important but with less relevance than in the past. CRS platforms act as the intermediary between airlines and travel agents, who then book tickets on behalf of customers if those are brick-and-mortar travel agents. In particular, bookings for business travel continue to rely heavily on CRS systems due to their high volume of bookings and the quality of service and protections offered by travel management companies (TMCs). Two airlines who participated in a targeted survey in 2019 indicated that flight bookings via regulated CRS remain the largest single source of revenue, attributing this in part to bookings made in the context of business travel. CRS market reach for business travel can be attributed to their strong network of TMCs and regional and legacy airlines.

Traditional CRS providers (Amadeus, Travelport and Sabre) still hold a significant market power because of their strategic position in travel ticket chain. The EC Evaluation of the CRS CoC (European Commission, 2020) concluded that the CoC was not fully effective in achieving the objectives of achieving a level playing field for all participating carriers for access to, and the use of CRS services, because it has not managed to balance the bargaining powers of different-sized carriers vis-à-vis CRSs, which may have led to highly restrictive terms for some carriers. CRS providers benefit from a consolidated network of travel agents and TMCs, who **single-home** — i.e., use only one CRS to access all combined flight offers. Single-homing is reinforced by loyalty incentives, provision of technological equipment, and IT training. Switching CRSs is costly and cumbersome, especially for smaller carriers, while airlines must negotiate agreements with multiple CRS platforms to ensure broad exposure.

Emerging distribution channels

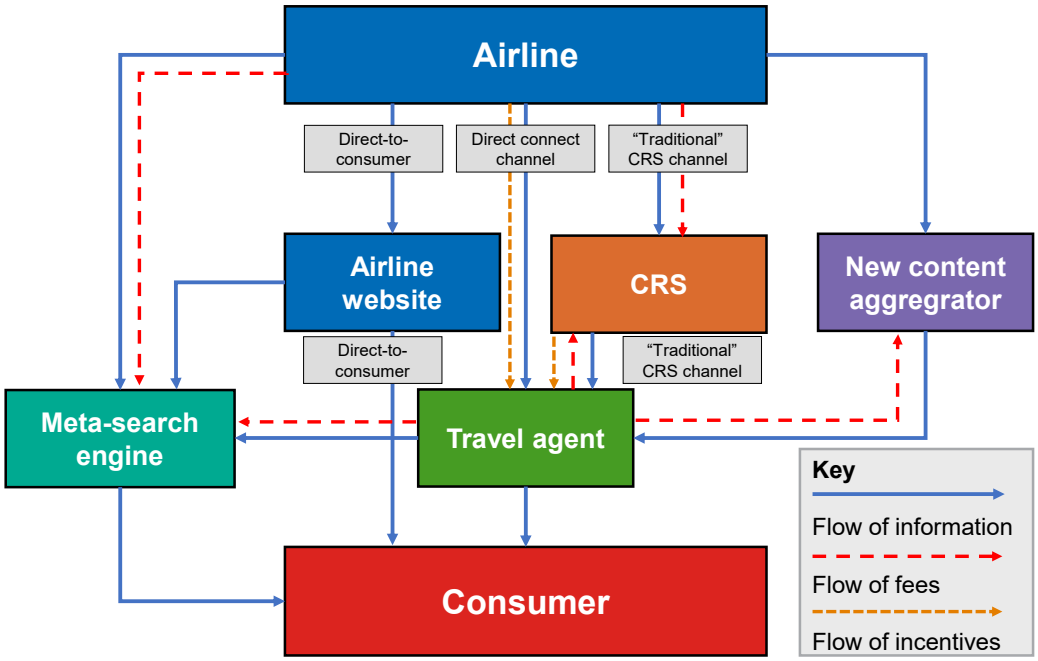
More recently, the B2B ticket distribution market has become increasingly complex with the establishment of new distribution channels that are not subject to the CRS Code of Conduct. This includes new content aggregators, direct connect services, meta-search engines. The sector is characterised by the following:

- Some tickets are sold directly to consumers ("direct distribution", mostly via the airlines' websites ("airline.com"), but also via the phone). Direct distribution is not subject to CoC rules.
- Some tickets are sold via travel agents ("indirect distribution"). This is the distribution channel that the CRS providers operate in. There are overlaps between some functions provided by CRS providers and new business models such as those offered by new content aggregators and Direct Connect (DC) systems[19].
- Travel agents, including online travel agents (OTA) and travel management companies (TMC), might need access to multiple channels (traditional CRS providers, new content aggregators, DC systems) if they are to provide travellers with a full range of flight options.

- Meta-search engines (MSEs) provide a “one-stop” solution for consumers to search for different flight options and respective price information, then directing consumers to the relevant website (be it an OTA or an airline’s website) to make the booking.

Figure 2-2 summarises all the relationships (in terms of data flows and fees/incentives) and how they connect to the final consumer / passenger.

Figure 2-2 Flows of information, fees and incentives in the airline distribution sector[20]



Stakeholders consulted as part of this study, raised concerns that with the growth of internet penetration and online distribution, the role of CRS has changed. Several stakeholders noted that airlines are increasingly withdrawing content from CRSs and distributing them through their own controlled channels, like NDC, while others highlighted the growth of independent platforms such as Omio as evidence of a competitive and changing market. Stakeholders emphasised both via interview and survey that as a consequence of these changes to the distribution network, a significant portion of the distribution landscape – especially newer digital solutions – fall outside the scope of the regulatory reach of the current CoC. One MDMS provider argued that this means that CRS content, which complies with neutral display requirements, never reaches consumers. Transport operators instead emphasised that the lack of comprehensive regulation across the distribution network could result in ranking algorithms and commercial agreements disadvantaging some airlines by limiting consumer choice and distorting competition.

Regulatory asymmetries and impact on innovation

These regulatory asymmetries also have implications for innovation and investment incentives across the air ticket distribution ecosystem. Non-regulated actors can implement pay-for-placement or preferential ranking, while CRSs face legacy obligations that limit experimentation. Travel agents and TMCs may be disincentivised from adopting new tools if this risks financial incentives or technological support tied to CRS use. Stakeholders consistently emphasized the need to extend CRS CoC protections to all distribution channels to ensure a level playing field, encourage innovation, and prevent anti-competitive practices.

A number of stakeholders consulted via survey for this study, including an MDMS provider, OTA, a major airline, and an association. Some specific examples raised include:

- Regulatory reform is necessary to promote innovation and service quality in the MDMS market.

[20] Please note that “travel agent” include both brick-and-mortar and online travel agents.

- Incomplete access to fair content can also have an impact on level playing field and MDMSs should compete only on technical innovation and user experience and that access to full content should be granted as a right to intermediaries (a major MDMS).

- Expanding the CRS Code of Conduct (CoC) to cover all MDMS platforms, regardless of their current regulatory classification, was proposed as a solution to encourage competition based on platform quality and innovation European Passenger Federation.
- Improving content accessibility for MDMS could drive innovation and competition, resulting in improved products and services for customers (an OTA).
- Universal and expanded application of CRS CoC protections is vital for fostering a competitive and innovative MDMS environment. Strong, non-discriminatory regulations to level the playing field and prevent anti-competitive practices like Full Content clauses and unjustified loyalty payments, which entrench incumbent players and deter market entry (a major airline)

CRS restrictions and airline distribution choices

The growth of alternative distribution channels could also be explained through the restrictive nature of some CRSs arrangements. One software supplier for airlines commented that airlines are often bound by full content agreements with CRSs. This requires airlines to offer the same content (fares, products) to CRS as they do their own websites, limiting customer offerings and constraining innovation. One large airline made a similar point, stating that airlines are actively moving away from CRSs towards NDCs due to the lack of innovation and flexibility offered by CRS. Airlines increasingly value customisable bundle fares and being able to offer a range of fares with different inclusions, which is limited by the agreements offered by CRSs. One MDMS provider delivering NDC mentioned during the interview that CRS platforms often have technical limitations that hinder the inclusion of more complex or dynamic bundled offers. This lack of adaptability is driving airlines to shift more sales to their own websites, where they can retain control over pricing and product design.

However, in the context of the evaluation of the Code of Conduct (European Commission, 2020), stakeholders (mainly CRSs, OTAs and consumer organisations) raised concerns that certain Direct Connect (DC) systems operated by airline groups that enabled the booking of flights across multiple carriers within the same group, may, in effect, perform similar functions to traditional CRS platforms. Some stakeholders argued that these DC systems could distort competition if they limit visibility or access to flight content for non-affiliated carriers.

According to MDMS provider SRF's response in the survey, especially strong airlines / airline groups remove content from regulated CRSs and push travel intermediaries towards using unregulated aggregators or airline own direct connects etc. at disadvantageous terms. However, airline stakeholders pushed back on this view, noting that because the carriers involved are commonly owned and under joint control, they should be treated as a single entity for distribution purposes. Moreover, in cases involving code-sharing arrangements with external carriers, airlines typically share flight numbers across partners, even if they operate different aircraft. The evaluation noted these divergent views but did not reach a definitive legal conclusion on the regulatory classification of DC systems. It is also worth noting that perceptions and market practices may have evolved since the time of the evaluation, underlining the need for regulatory frameworks to be adaptable to emerging distribution models. Stakeholder views collected from carriers and CRS providers in the context of the stakeholders interviewed as part of this study, indicated some concern about the potential risk of uneven regulatory treatment of B2B air ticket intermediation services. This is in line with the findings from the consultation that took place in 2022. Then, transport operators indicated that the CRS Code of Conduct, while effective for traditional CRSs, no longer reflects market realities such as the role of OTAs, MSEs and other MDMS platforms in distribution networks. As these new channels are not restricted by the CRS Code of Conduct, they can make use of biased ranking algorithms or pay-for-placement schemes that distort competition and limit consumer choice distribution needs to comply with neutral display rules in the sorting criteria for the display of flights, ensuring that small airlines have similar levels of exposure to that of larger carriers. This does not apply to other content aggregators, which could lead to a competitive advantage of non-regulated distribution channels who can potentially prioritise one transport operator over another one because of commercial agreements in place and use other searching criteria in a biased manner. CRSs interviewed agreed, commenting that

new and alternative distribution channels to CRSs, that perform similar functions, should comply with the same standards.

Consumer impacts and unfair practices

Furthermore, the introduction of new types of intermediaries in ticket distribution has transformed the consumer experience. While Online Travel Agents (OTAs) such as Edreams, Etraveli, Expedia, Kiwi, and Trip.com have enhanced access to travel services, recent research (A4E, 2024) highlights how some of these platforms can negatively affect consumers. The study by A4E[21] found that practices carried out by OTAs have compromised the consumer experience, with their analysis finding that they regularly offered higher fares than those on airline websites (on average 25% more). The report, while recognising the potential added value of OTAs as one-stop shops for travel-related services, shed light on practices carried out by some OTAs that have engaged in a range of untransparent and misleading practices such as opaque mark-ups, misleading promotions, 'bait and switch' tactics that entice consumers with initially low fares and offering services at a fee that airlines provide for free. Stakeholders from the aviation sector, including an airline association and 3 airlines, consulted as part of this study corroborated these findings, stating that OTAs and MSEs have in the past added non-transparent fees to tickets, charged consumers for services that are free via the airline website and modified airline terms and conditions. Beyond pricing practices, these platforms may also distort consumer choice through biased ranking of travel offers. Unlike CRSs, which are subject to neutral display obligations under the CoC, many OTAs and emerging B2B MDMS can alter their rankings based on commercial agreements. This has the potential to distort the market as transport operators who pay higher commissions or have preferential agreements may appear more prominently on those websites. This steering of consumer choice can undermine fair competition. Given the role that MDMS and OTAs now play in ticket distribution, extending display neutrality and transparency obligations could help prevent distortions in consumer choice and ensure a level playing field for all ticket intermediaries.

While a majority (13 out of 19) of MDMS providers agreed with the need for even regulatory treatment of all distribution intermediaries, a few (three out of 19) disagreed stating the real issue is not distortion, but rather, the imbalance between airlines and MDMS providers. Two of the MDMS providers that disagreed indicated that large transport operators favour the distribution of their air tickets through their own distribution channels, especially since the rollout of NDC that allows airlines to selectively control access to content or withhold content from traditional channels. This can result in certain tickets, or lower priced tickets, only being available through direct distribution channels. One MDMS provider pointed to other practices harmful to competition, such as surcharging independent booking channels, mandating restrictions on the marketing of their tickets or simply refusing the distribution of their tickets by third parties.

The blurring of the boundaries between B2B and B2C raises uncertainty around the applicability of Code of Conduct to these services, creating an opening for anti-competitive practices. Overall, this problem driver highlights how technological and market changes have outpaced the CRS regulatory framework, creating inconsistent obligations, distorted competition, reduced consumer transparency, and limited incentives for innovation across the air ticket distribution ecosystem.

2.3.2 PD 2. Commercial incentives for MDMS to promote certain operators or products

This problem driver feeds into both Problem 1, contributing to limited and potentially distorted information and access to tickets for consumers on MDMS, as well as uneven access of operators to indispensable MDMS platforms.

Commercial bias in MDMS search results and its impact on consumer choice

MDMS platforms are not always neutral intermediaries, as their operations are often influenced by commercial agreements with specific (in-house) rail operators or other transport operators and ticket providers. As a result, the travel options presented to consumers are frequently incomplete or not objectively ranked (Newton, 2023) (and according to interviews with a MDMS provider and two consumer organisations including T&E). There are no standardised rules governing the order in which search results

[21] A4E (2024) "Study on the impact of online intermediaries on consumers and carriers"

should be displayed, which means some platforms may prioritise services from operators with which they have agreements of paid-prominence and advertising providing them financial incentives. This can result in cheaper or more convenient options being either excluded or ranked lower in search results (Deruyck, 2024). Consequently, consumers may be misled into believing that the displayed options are the best available, when better alternatives may exist elsewhere. Additionally, MDMS providers may exclude certain products from their offerings, particularly those that are more complex or less profitable, such as services for passengers with bicycles or children.

In the study's stakeholder consultation, **nine out of 16 MDMS providers** (five new content aggregators/associations, plus ETT and the independent travel information website The Man in the Seat 61, one CRS and one OTA) and five out of 20 transport operators (four new entrant rail operators/associations including WestBahn, Snälltåget and AllRail) noted explicit concern about market dominance of incumbent rail operators. Despite the formal opening of the rail market, user behaviour remains largely unchanged, with most users continuing to rely on operators' own websites (e.g. ADN Mobilités, AllRail). While third-party services may appear on these platforms, they are frequently not enabled for booking, thereby limiting the effectiveness of competition. This assessment is supported by feedback from three recent rail market entrants, including WestBahn and AllRail, as well as one MDMS provider, one national authority, and four stakeholders classified under the "Other" category.

The availability and frequent use of MDMS beyond basic trip-planning functions also remain limited (T&E, 2022). Current systems often do not allow for effective comparison across modes or efficient booking of multimodal journeys. Analysis of 100 origin-destination pairs (see Market report for more details) shows that **multi-modal connections were possible in 76 out of 100 assessed routes (76%) when booking directly through operators. The lack of multi-modal booking functionality in MDMS could therefore be argued to limit options for consumers in 76% of routes.** Even within land-based travel, MDMS platforms missed rail or bus/coach connections in 32 out of 83 cases (39%) where such connections were possible through direct operator booking (in 17 cases no land-based routes were identified). Given that booking directly via operators provided faster connections than those available in an MDMS platform in 17% of the assessed routes, this is strong evidence supporting that **travellers cannot see all options available to them on MDMS platforms, and that these missed options are sometimes faster**, implying that travellers may be making suboptimal travel decisions (through no fault of their own).

While some initiatives have achieved local or national-level integration, helping to grow the MDMS market by fostering competition and offering more comprehensive platforms, passengers still lack access to fully integrated, EU-wide travel and ticketing information (Ricardo, 2023). Some existing solutions are:

- Intracity: Jelbi (Berlin), Trafi (e.g. Vilnius), BudapestGO (Budapest), MaaS Global (Helsinki, Birmingham, Vienna, Antwerp[22]),
- Short national, involving cities and surrounding area: VGN (Nurnberg), TLT (Talinn), QuiBus (Campania)
- Long national: Gaiyo (NL), ARGE OVV (AT), Fintraffic (FI)
- International: SNCF Connect (7 MS)

The results of the Flash Eurobarometer 551 (European Commission, 2024) show the extent of the problem and how it is perceived by users. Among those who said they do not book journeys online, 14% cited incomplete information, and 10% said they do not see all alternative travel options as reasons. These concerns reflect the consequences of uneven access to MDMS platforms, i.e., when some operators are not properly represented, users are left without the full picture, making booking harder and less transparent.

Further evidence comes from users who have experience booking combined journeys, whether involving different modes (e.g., flight plus rail) or different operators within the same mode (e.g., two rail companies). In both cases, over a third of respondents said these journeys were difficult to book (35–36%), suggesting that integration across services remains a challenge.

Finally, among those who rarely or never book such combined journeys, several reasons point directly to shortcomings in platform functionality and access. Excluding those who simply did not need to combine

[22] MaaS Global faced financial difficulties and filed for bankruptcy in March 2024. It is no longer operating in those cities.

services, 17% said they could not find a suitable combination, and 13% were discouraged by the need to buy multiple separate tickets and the risk of being stranded. A further 5% said they did not know where to search for such information, and another 5% noted they could not buy all needed tickets in one place. These responses underline the user-side consequences of uneven platform access (European Commission, 2024).

Distorted Pricing and Booking Transparency

Commercial agreements and considerations of MDMS platforms, such as bundling, price segmentation, commissions, and ancillary service fees, influence pricing resulting in consumers encountering inconsistent pricing depending on booking platforms (interview with and independent MDMS provider). As a result of potentially different agreements between MDMS platforms and operators, the same ticket may appear at different prices across platforms or may be unavailable on certain third-party services (quechoisir.org, 2024). Additionally, many discount schemes and special fare options are only accessible via operators' own websites, restricting consumer choice (quechoisir.org, 2024). Some platforms may mark up fares or fail to display discount options, making price comparison difficult for consumers (interview with CER; interview with Benerail). Moreover, the ticket price initially shown may differ from the final price at checkout undermining their confidence in data accuracy from platforms in general (Syntesia Policy & Economics, 2024).

Users may find that platforms show price discrepancies after selection, leading to frustration and mistrust (BEUC, 2024). In addition, search algorithms influence the results presented to users, sometimes prioritising certain routes and operators based on commercial arrangements rather than providing the best travel options (quechoisir.org, 2024), (Newton, 2023). While rules exist on transparency and advertised content[23], there are no clear rules governing the manner in which MDMS platforms should display search results (according to Benerail's interview). Supporting these findings, the recent Eurobarometer survey revealed that concerns about hidden costs are an important issue stopping people from booking journeys online, with 19% of respondents selecting this option (European Commission, 2024).

Furthermore, the presence of an offer in the market does not always guarantee its availability for purchase through third-party platforms. Despite being visible to users, some fares or services, particularly those offered by certain train operators, may be restricted due to commercial policies, lack of technical integration, or selective distribution practices (where operators may decide to make certain tickets available only on specific channels or limit their accessibility on third-party platforms). As a result, users may encounter offers they cannot actually book, undermining the transparency and effectiveness of MDMS platforms.

In the absence of integration within ticketing systems, multi-leg international tickets, though they do exist, are not made available to users, or MDMS focus only on those products which are less costly to integrate, omitting a substantive portion of the offer, thereby limiting access to seamless cross-border travel options.

A 2019 Eurobarometer survey found that only 11% of EU citizens had used a multimodal transport ticket in the previous 12 months, highlighting the limited uptake of these services. As shown in the survey, one of the reasons (although not the only one) for this limited uptake, is the limited availability. The 2024 Eurobarometer survey found that the use of single tickets for multimodal journeys remains limited at 11%, unchanged from previous years indicating a lack of progress in this field.

As a result of the lack of integration of travel offers in platforms, travellers often have to visit multiple platforms to compare prices and availability, resulting in a cumbersome booking experience (referred in the interview by one MDMS provider). The open public consultation conducted in 2022 found that 77% of respondents experienced difficulties when buying tickets combining different modes of transport (Ricardo, 2023). The lack of a standardised, integrated ticketing system discourages multimodal travel and may lead passengers to more expensive and less sustainable choices.

Table 2-1 below provides a list of example investigations and decisions by competition authorities concerning unfair access conditions related to MDMS platforms.

[23] Directive 2005/29/EC, Directive 2010/13/EU, amended by Directive 2018/1808, Regulation (EU) 2022/2065 (entered into force in 2024), Directive 2000/31/EC, Directive 2011/83/EU and Directive (EU) 2019/2161

2-1 List of example investigations and decisions by competition authorities related to vertically integrated MDMS platforms' unfair access conditions and practices

MDMS platform(s) involved	Operator(s) affected	Issue(s)	Outcome / Timeframe	Relevant authority
Partial visibility *– DB's "show fastest connection" search function* (Higher Regional Court of Frankfurt am Main, 2023)				
DB Navigator app / www.bahn.de	Local rail passenger transport provider (not named)	The "Show fastest connection" search function was misleading, as it did not always display the objectively fastest connections. Instead, the algorithm only showed options forward or backward in time from the fastest, possibly omitting faster alternatives overall. For departure searches, the algorithm would jump from the fastest available connection to the next fastest one, which may depart later, omitting faster connections with slightly different departure or arrival times. This led to a skewed view of available rail connections, with users not seeing the complete range of options. This selective presentation effectively limited users' access to the full range of rail connections, reducing the visibility of competing operators' services and skewing consumer choice in favour of certain options.	The Higher Regional Court (OLG) Frankfurt ruled the function was misleading and prohibited DB from offering it in its current form. Timeframe: ruling on 21 September 2023	Frankfurt am Main Higher Regional Court
Partial visibility *– DB mobility platform's restrictions on competition* (Bundeskartellamt, 2023)				
DB Navigator app / www.bahn.de	Competing transport operators	The issue centres around DB's abuse of its dominant market position to disadvantage rival transport operators in Germany. DB, as both a major rail operator and a competing mobility platform, restricted third-party platforms' access to crucial traffic data, such as real-time updates on train delays, cancellations, and schedule changes. By doing so, they made it difficult for smaller or competing transport operators to integrate their services effectively into these platforms, limiting their visibility and hindering their ability to compete. Furthermore, DB's restrictive commercial terms, including advertising bans and unfair pricing practices, put rival operators at a disadvantage by favouring its own services.	Bundeskartellamt ruled against DB and ordered changes to practices and contracts including lifting advertising restrictions, allowing partner discounts, and requiring equal, real-time data access. Timeframe: ruling on 26 June 2023	Bundeskartellamt (German Competition Authority)
Complete exclusion *– SJ exclusion of transport operators from its ticketing platform* (Swedish Competition Authority (Konkurrensverket) , 2019)				
SJ.se and SJ app (dominant MDMS platform for train tickets in Sweden)	Two unnamed competing train operators	SJ excluded rival operators from its ticketing platform.	Case closed: The Swedish Competition Authority (SCA) suggested a regulatory solution. Timeframe: Decision and update published on 4 June 2019	Swedish Competition Authority (Konkurrensverket)

MDMS platforms have commercial incentives to promote certain operators or services over others, often leading to uneven access for smaller operators. For example, a platform might steer customers toward operators or routes that generate more sales or higher revenues. By favouring certain operators, MDMS platforms can benefit in various ways – financially, strategically, and in terms of market dominance. This creates an uneven playing field, where smaller operators struggle to gain visibility and compete on equal terms (International Transport Forum, 2020). This driver covers the following:

- **Preferential commercial agreements**: MDMS platforms are incentivised to secure preferential agreements with certain operators.
- **Operational simplicity:** In some cases, MDMS platforms can reduce platform complexity and operational costs by favouring a smaller number of large operators. Many stakeholders underline that the **technical complexity** of integration should not be underestimated (referred in the interviews by the association of rail operators CER, one national authority, one MDMS provider, the Finnish Ministry and Polis). While this approach may streamline operations, it limits opportunities for smaller or new entrant operators to be included. However, there are examples of ecommerce platforms supporting a wide range of stakeholders, showing that it can be both feasible and commercially beneficial to have a more complete and comprehensive platform.

In addition to commercial agreements with certain operators, vertical integration also allows MDMS platforms to prioritise their own services, either through technical configurations or commercial incentives, undermining fair competition. This can result in increased visibility, prioritisation in search results or pricing advantages for the platform's own transport services, making it harder for independent or smaller operators to compete on equal terms. Such practices reinforce the commercial incentives of the platform and can reduce transparency, misleading consumers and limiting the visibility of independent or smaller operators.

MDMS platforms are incentivised to secure agreements with certain operators.

One of the main drivers behind MDMS platforms' preference for certain operators is the opportunity to secure more revenue through high-volume partnerships. Larger, established operators typically have a much larger customer base, which can translate into higher transaction volumes on MDMS platforms. As a MDMS (Benerail) explained in an interview[24]:

"If a small operator builds its own inventory system and only has limited amount of sellable tickets and market demand, these players are not very likely to be included in the MDMS platform compared to high volume OSDM standard compliant operators as they have a better business case. This may appear as uneven access, but this is driven by objective business logic as MDMS platforms are commercial organisations that need to break even or make profit."

Transport operators can be affected by this practice. A regional airline noted in the survey[25]:

"It is important to bear in mind that regional airlines do not benefit from the economies of scale that major carriers enjoy, which makes it increasingly difficult for them to assert themselves in a distribution market dominated by the major OTAs and meta-search engines. Many of these platforms operate as gatekeepers, prioritising certain airlines based on commercial agreements and often to the detriment of smaller carriers."

Additionally, a national authority, through the survey[26], highlighted the effect on smaller operators in bus and rail transport, noting that:

"Some transport operators may struggle to integrate with MDMS platforms due to technical, financial, or commercial barriers. This issue could be especially relevant for regional bus and rail services, where dominant platforms may favour larger operators."

[24] A previous formulation of the problem was presented to respondents. The original wording stated: *"Uneven access of operators to indispensable MDMS platforms."*

[25] A previous formulation of the problem was presented to respondents. The original wording stated: *"Uneven access of operators to indispensable MDMS platforms."*

[26] A previous formulation of the problem was presented to respondents. The original wording stated: *"Uneven access of operators to indispensable MDMS platforms."*

Another transport operator (national rail operator) agreed, commenting that *"in countries where non-integrated platforms are dominant, like in Spain, they tend to impose tough conditions and high commissions."*

By entering into agreements with such operators, MDMS platforms benefit from presenting an enhanced transport offering that can increase ticket sales and boost their revenue. While concrete data on the prevalence of these arrangements is limited, stakeholder feedback and market incentives suggest that such agreements may disproportionately involve large operators. However, part of such agreements could include preferential treatment of operators, such as prioritising the presentation of their offering over those of smaller or competing services.

This dynamic plays out differently depending on the transport mode. In the air sector, MDMS platforms are typically independent and commercial agreements with large operators are necessary to integrate their offers, enabling network effects that can also benefit smaller operators. MDMS platforms may enter into commercial agreements with transport operators that influence how services are displayed. Through paid prominence arragements and other commercial incentives, operators can secure more prominent placement or favourable presentation of their services relative to competitors. However, in the rail sector, many MDMS platforms are owned by incumbent operators. In these vertically integrated cases, the platform may naturally prioritise the services of its own operator, limiting the visibility of competing rail operators, especially where no access obligations apply (referred to in the interviews by two new entrants in rail sector, including WestBahn, but also by one MDMS provider, one national authority, and EPF, BEUC and two other stakeholders under category 'Other').

These agreements or ownership structures may limit the platform's ability or willingness to include other operators in their offerings. In some instances, the terms of the agreement may restrict the platform from distributing competing services, particularly when dealing with dominant rail operators. Even without formal restrictions, platforms might deprioritise or exclude other operators depending on what travel choice could be more favourable for them commercially. This practice can lead to reduced visibility or complete exclusion of certain operators.

However, it's also important to consider the consumer's perspective in relation to platform completeness. If a key operator is missing from a platform, it can reduce the platform's overall appeal and attractiveness. This could lead to a less user-friendly experience, as consumers may perceive the platform as incomplete. By limiting the availability, visibility and functionality of certain operators on the platforms, the market becomes less competitive, and consumers identify fewer choices. An example of these issues affecting consumers is highlighted in the recent Eurobarometer survey. It was found that, for respondents who needed to combine different collective transport modes or operators, but never or rarely did, 17% stated it was because they could not find a suitable combination. This reason was particularly prominent in Cyprus, Finland and Luxembourg (all 26%) (European Commission, 2024).

That said, even with such considerations, platforms may still choose to limit smaller operators' visibility in favour of more commercially profitable or strategic partnerships, which in turn may undermine competition and limit consumer choice.

2.3.3 PD 3. Imbalanced commercial relationship between indispensable MDMS and transport operators

This problem driver feeds into Problem 1 only, contributing to limited and potentially distorted information and access to tickets for consumers on MDMS.

Power asymmetries between MDMS platforms with significant market power and service operators can lead to unfair bargaining terms.

Air transport distribution via MDMS

In the air services sector, some MDMS platforms, notably CRSs and some larger OTAs, often act as gatekeepers to a significant share of the customer base, particularly for international or multi-leg journeys. Airlines, and in particular medium and smaller airlines, depend heavily on these platforms for market visibility and ticket sales, which creates an imbalance in bargaining power. CRSs and other MDMS, play a

crucial role for these airlines to compete on an equal footing with larger airlines, with stronger brand visibility and additional means to reach the customer directly. In relation to CRSs, smaller airlines struggle to negotiate fair terms and have to accept full content agreements in exchange of lower fees. As a result, MDMS platforms are able to impose unfavourable commercial terms, including high commission fees per flight segment ticket, charges for content distribution or access to airline data, and additional fees for preferred placement in search results. Compounding this issue, airlines often have limited control over how their offerings are presented on these platforms, which can lead to distorted fare comparisons—such as omitting baggage fees or ancillary services—reduced ability to upsell value-added products, and a dilution of brand identity and loyalty benefits. This ultimately undermines airlines' efforts to differentiate themselves and to cultivate direct relationships with customers. The 2009 revision of the Code of Conduct for CRS marked a significant shift in market dynamics by removing the obligation for airlines to comply with full content clauses. This regulatory change granted both airlines and CRS providers greater flexibility to negotiate the level of content made available in exchange for mutually agreed commercial terms, including fee levels. The imposition of full content clauses is widely regarded as a highly restrictive contractual practice, reflecting an imbalance in commercial relationships. As another example of imbalanced relationships, an airline association highlighted that the total cost of distributing through a CRS often includes not only CRS fees but also incentives paid to travel agencies. This cost structure, it argues, can make it economically unviable for airlines to offer low fares via these channels. According to the airline association, full content agreements serve to reinforce the dominant market positions of various players across both B2B and B2C distribution. On the B2B side, CRS providers benefit from guaranteed access to full content, limiting airlines' ability to negotiate differentiated terms. On the B2C side, platforms such as Google and Expedia stand to gain from unrestricted access to airline content without being required to engage in direct commercial negotiations, particularly where airlines have weaker bargaining power.

This dynamic, the association notes, risks further entrenching the market dominance of both B2B and B2C MDMS to the detriment of smaller carriers. The long-term effect, it warns, may be reduced competition in the airline sector and diminished consumer choice.

Rail transport distribution via MDMS

In rail, MDMS platforms play an increasingly important role in ticketing and journey planning, meaning that transport operators, particularly new entrant rail operators, rely on them to reach consumers. 76% of European citizens book their rail tickets online. However, in many cases this relationship is one-sided, with MDMS providers with significant market power being in a position to dictate the terms under which operators can list their services or otherwise risk being excluded from reaching the platform clientele. Service providers may avoid offering the full set of available products and skip those that are more operationally demanding or less profitable (such as services for passengers with a bicycle or a child), a behaviour commonly referred to in the industry as strategic omission" (according to interview with an MDMS provider). A court case between Flix and DB illustrates this "information fog" and "strategic omission". In December 2023, the Hamburg Regional Court ruled in favour of FlixTrain, finding that DB's preset filter **"Prefer fast connection"** unjustly excluded certain FlixTrain options. These services, considered fast from the customer's perspective, were omitted despite being legitimate – leading to anti-competitive outcomes, particularly on routes like Berlin–Stuttgart and Hamburg–Cologne.

In the rail transport sector, the prevailing digital platforms are predominantly owned and operated by incumbent railway operators. Within the European Union, independent platforms such as Trainline have only managed to secure a marginal share of the market, which remains largely dominated by platforms affiliated with national incumbents. This position enables incumbent operators to hinder or slow down the opening of both the ticketing and rail services markets. For example, by restricting access to their proprietary MDMS, thereby creating significant barriers for smaller and independent competitors, or by privileging their in-house MDMS in comparison with third-party platforms having an agreement to sell tickets of their operating branch. Ongoing and recent competition law cases underscore the systematic nature of such exclusionary practices. In some cases, operators have to accept restrictive commercial agreements that limit how they can present their ticketing options, resulting in distorted or incomplete information for consumers (Worth, 2024). Conversely, where a national rail operator is dominant in a specific market, it may deny MDMS platforms access to ticketing data, preventing full integration and forcing consumers to visit multiple websites.

Another key driver of uneven access to MDMS platforms is the imbalanced commercial relationship between these platforms and transport operators. These relationships are often skewed in favour of larger, more dominant operators, leaving smaller transport providers at a significant disadvantage. The power dynamics inherent in these commercial relationships exacerbate the difficulties that smaller operators face in gaining equal access to essential MDMS platforms, which are critical for visibility. This driver covers the following:

- Unequal bargaining power of transport operators
- Unequal data sharing and control over customer data
- MDMS platform control over visibility and search result rankings

Vertically integrated platforms exacerbate this uneven access. They can create significant barriers to entry for new or smaller operators, making it exceedingly difficult for them to access such platforms and compete. These barriers may include high fees for integration or contractual obligations that favour their own transport services or established players over new entrants (referred by one independent MDMS in an interview, as part of the study). Smaller operators may find themselves locked out of the MDMS platform entirely or entering into contracts with unfavourable terms and conditions (Montero, Finger, & de Abreu Duarte, 2023).

Unequal bargaining power of transport operators

Certain MDMS platforms, particularly those that are indispensable for operators to access large customer bases or distribution channels, hold a strong position when negotiating with new entrant or smaller transport operators.

In the context of the **aviation and air ticket distribution**, CRSs that act as intermediaries between airlines and travel agents hold a dominant position. In these cases, smaller airlines or operators may have limited negotiating power and may be forced to accept terms that heavily favour the platform, such as high commission rates, restrictive clauses. Other MDMS providers, which are not CRSs, may also face "pay-to-play" models where they must invest more in advertising or promotional placements to be noticed on these platforms, further exacerbating the imbalance in commercial relationships (International Transport Forum, 2020). In the survey[27], stakeholders in the air sector (A4E, one other aviation sector association, and four airlines) highlighted the role of contractual provisions such as full content obligations and parity clauses in reinforcing the commercial position of dominant CRSs. These mechanisms, in some cases, have limited flexibility and slowed the entry of new distribution models. As one airline noted, such conditions “placed commercial advantage with CRSs to maintain their incentive structures, locking agencies in,” and “there have not been any newcomers in EDIFACT distribution for decades.” It was observed that innovation in air ticket distribution has accelerated only with the rise of XML-based standards such as NDC.

At the same time, one airline association underscored the important role that the CRS Code of Conduct plays in safeguarding fairness and transparency in airline distribution. They cited provisions such as:

- Article 5, mandating a neutral and non-discriminatory display of flight options.
- Article 3, prohibiting ranking manipulation tied to ownership or commercial ties.
- Article 7, requiring transparent display of fare and schedule information.

These rules were seen as essential in helping smaller and regional carriers compete on a level playing field, ensuring that consumers and travel agents are presented with all available flight options. One respondent noted that *“without these safeguards, regional airlines risk being overshadowed by dominant players in the market, limiting consumer choice and distorting fair competition.”* One MDMS provider, four airlines / airline associations including A4E, Helsinki Region Transport also suggested during the interview[28] that the principles embedded in the CRS Code of Conduct could usefully be extended to other MDMS platforms, such as major online travel agencies and meta-search engines, as these are now central actors in ticket distribution. One MDMS provider, four airlines / airline associations including A4E, Helsinki Region

[27] A previous formulation of the problem was presented to respondents. The original wording stated: *“Uneven access of operators to indispensable MDMS platforms.”*

[28] A previous formulation of the problem was presented to respondents. The original wording stated: *“Uneven access of operators to indispensable MDMS platforms.”*

Transport noted during the interview that applying transparency and non-discrimination obligations more broadly could help reinforce fair competition across digital channels. At the same time, mainly airlines supported the exclusion of air transport operators from the scope of proposed MDMS policy interventions. They emphasised that the EU aviation market already functions in a competitive and transparent manner and argued that additional regulation could limit airlines' commercial flexibility. Others argue for broader modal inclusion: one CRS, one travel industry association and rail operators association CER advocate for the inclusion of the air sector within the scope of MDMS regulation These perspectives reflect a complex landscape: while certain regulatory safeguards are valued and seen as effective, ongoing structural and contractual dynamics continue to shape competition in ways that can disadvantage smaller or newer market participants.

In the rail sector, many MDMS platforms are owned by dominant incumbent operators, which control access to critical distribution channels (referred by two new entrant rail operators including WestBahn). These platforms often hold significant market power, and as a result, smaller rail operators may also find themselves facing unfavourable terms. Specifically, market players may face pressure to accept commercially restrictive conditions or enter into partnerships in order to gain access to essential sales platforms. One case cited by ALLRAIL as illustrative of this dynamic is the launch of the Brussels–Paris OUIGO Train Classique passenger service. Operational since December 2024, the service is a collaboration between the Belgian state-owned rail operator SNCB/NMBS and OSLO S.A.S (OUIGO Train Classique), the low-cost subsidiary of France's SNCF Voyageurs. According to ALLRAIL, despite SNCB/NMBS having the capacity to operate the service independently, it partnered with SNCF to ensure ticket visibility on SNCF's widely used distribution platforms. While this interpretation reflects ALLRAIL's view, further evidence may be required to assess the extent to which platform access influenced the partnership decision.

ADN Mobilités, two new content aggregators in the rail business, one travel tech association and ALLRAIL participating in the consultation consistently highlighted that smaller operators face structural barriers to accessing MDMS platforms that are vertically integrated. These include outright refusals to cooperate, opaque partner selection processes, and contractual terms that are prohibitively unfavourable. One stakeholder noted that many such platforms simply refuse to enter into agreements, even when operators are willing and able to integrate.

ALLRAIL described how new operators can only reach customers via the dominant MDMS, which often acts as both gatekeeper and competitor. Without access to these retail channels, new or niche services are effectively excluded from the market. One example cited was a new rail operator in Europe that only succeeded in establishing a nationwide retail presence after securing nearly €1 billion in backing. By contrast, most new entrants start with an investment of typically €20–€50 million, and therefore depend on integration with dominant MDMSs to survive commercially.

ALLRAIL added that there is a *"complete absence of access to indispensable MDMS platforms for most operators that are not part of the vertically integrated incumbent group."* This was seen not as a matter of isolated unfair terms, but as a deeper structural barrier linked to long-standing market position held by incumbent platforms and digital gatekeeping.

However, in some national rail markets, there are multiple platforms, and less power held by one single platform, providing smaller operators with more alternatives. For instance, in Spain, Trainline, Omio, and others operate as independent ticket distributors in the Spanish rail market, alongside the national incumbent Renfe, with significant usage. The share of train tickets in Spain sold through Trainline is estimated to be between 8% and 13% (SUR in English, 2024). This percentage reflects tickets booked for AVE, Ouigo, Iryo, and other fast services via the independent distributor and is expected to keep growing as market opening progresses and competition increases. A recent investigation by the European Commission has resulted in Renfe committing to open its data and ticketing content to third-party platforms, increasing competition and alternatives for smaller operators. Nevertheless, where dominant rail operators own or control the main MDMS platforms, smaller players may still face barriers in accessing fair visibility or terms.

In both sectors, the imbalance in bargaining power results in smaller operators being disadvantaged, forced to either accept high fees or limited visibility to be included on essential platforms.

Table 2-2 Examples of issues identified in investigations and decisions by competition authorities related to limited and distorted information / access to tickets for consumers

MDMS platform(s) involved	Operator(s) affected	Issue(s)	Outcome / timeframe	Relevant authority
Complete exclusion *– SNCF and Trenitalia on the Paris-Torino route*				
SNCF Connect, Trenitalia's website	Trenitalia, SNCF	Both operators engage in mutual exclusion by only displaying their own high-speed train services (TGV inOui for SNCF, Frecciarossa for Trenitalia) on their respective MDMS platforms. This practice prevents passengers from viewing, comparing, or booking the full range of available services on the Paris–Torino route, including combined or connecting journeys across operators. The lack of integration reduces transparency, limits intermodality, and restricts informed consumer choice. It may also distort competition by incentivizing modal shift away from rail (e.g., to car or air) due to the perceived lack of service frequency.	Ongoing issue; publicly highlighted by MEP Jakop Dalunde (Greens/EFA) in 2024. Third-party aggregators (e.g., Trainline, Omio, DB Navigator, NS International) provide partial remedy by displaying both operators' services. No formal enforcement outcome reported yet. (MEP Jakop Dalunde, Greens/EFA, 2024). Timeframe: 2024	European Parliament (via political advocacy); potentially relevant to European Commission (DG COMP for competition or DG MOVE for transport market regulation)
Limited functionality – limiting third-party mobility platforms' access to essential real-time data				
DB's proprietary MDMS and digital platforms (e.g., bahn.de, DB Navigator)	Third-party mobility and ticketing platforms operating in Germany	DB was found to have limited the functionality and competitiveness of third-party platforms by restricting access to essential real-time operational data (e.g., delays, cancellations, platform changes, major disruptions). DB itself used this data to enhance its services	In 2023, the Bundeskartellamt ruled against DB and required the operator to grant non-discriminatory access to real-time data and to remove anti-competitive contractual restrictions. (Bundeskartellamt, 2023).	Bundeskartellamt (Federal Cartel Office of Germany)

MDMS platform(s) involved	Operator(s) affected	Issue(s)	Outcome / timeframe	Relevant authority
		while denying equal access to competitors. Moreover, DB imposed contractual limitations on advertising and discounting by third-party platforms, creating further obstacles to competitive parity. These actions undermined non-discriminatory access and fair competition in the digital mobility market.	Timeframe: decision issued in 2023	
Renfe's digital sales platform(s) and MDMS	Third-party ticketing platforms operating in Spain	Renfe restricted third-party platforms' access to comprehensive travel content and real-time data, including ticketing options, pricing, and operational updates. This limitation reduced the ability of independent platforms to compete with Renfe's digital services on an equal footing. The lack of data sharing hindered both transparency for passengers and market openness for competing distributors. (European Commission, 2023), (European Commission, 2024).	In 2023, the European Commission launched an investigation. In January 2024, Renfe made formal commitments to provide full access to current and future data to third-party platforms by February 2024. The Commission accepted these commitments, closing the investigation. Timeframe: Investigation opened in 2023; commitments accepted January 2024, effective February 2024	European Commission (DG COMP)

Unequal data sharing and control over customer data

One of the most significant elements of imbalanced commercial relationships is the unequal control over customer data. MDMS platforms collect valuable data on consumer behaviour, booking patterns, and travel preferences, but they often do not share this data with transport operators (Montero, Finger, & de Abreu Duarte, 2023). This limits competing operators' ability to understand customer needs, optimise services, and implement targeted marketing strategies. Without access to this crucial data, smaller operators cannot

effectively compete with larger operators that benefit from insights into customer behaviour and preferences.

In some cases, also independent MDMS platforms may use the data they collect to prioritise certain operators or services, giving them a commercial advantage. For example, they can use customer data to create dynamic pricing, promotions, and even search result rankings that favour larger or more established companies (International Transport Forum, 2023). This can be commercially beneficial for the platform if these operators offer better commission terms or drive more bookings, which in turn increases platform revenue.

While specific evidence of such practices in MDMS platforms is limited, similar data-driven preferential treatment is well documented in other digital markets. Research and reports, such as the European Commission's Digital Markets Act impact assessments, highlight how platforms like Amazon use algorithms to prioritise sellers based on commercial agreements or sales performance. This allows the platform to favour its own or preferred sellers, demonstrating how control over customer data and platform algorithms can influence competition and market fairness—issues that may also arise in MDMS contexts.

However, the extent of data sharing obligations differs by sector. In the aviation sector, CRSs are subject to Article 7 of the CRS Code of Conduct (Regulation (EC) No 80/2009), which requires them to pass on specific marketing and booking data to participating airlines. This includes data on bookings made through the system, ensuring a certain level of transparency for participating operators. It is therefore important to distinguish CRSs from other types of MDMS platforms, such as those mainly operating in the rail sector, where no equivalent obligation exists. In rail, platforms may retain control over consumer data which can reinforce the competitive advantage of platform owners or dominant railway operators with a vertically integrated platform at the expense of new entrants and / or independent operators.

Conversely, some incumbent operators, particularly in the rail sector, may limit which MDMS platforms can access their content. One key reason for doing this is to maintain control over customer data. As a result, smaller or independent MDMS platforms often cannot get full access to these operators' offers. This limits the ability of smaller platforms to present all available options to consumers, giving an advantage to the dominant operators and the platforms they control (Montero, Finger, & de Abreu Duarte, 2023).

Adding to this, four independent MDMS providers such as DoHop, by consumer organisations, such as EPF, and by others such as ECTAA commented on the changing global distribution market in the aviation sector. They stated that airlines have diversified their distribution model, introducing alternative channels which they fully control. This results in MDMS systems needing to connect to each channel one by one in order to source accurate and complete content for consumers. Connecting to these channels adds both technical and financial burdens which can be particularly inaccessible to smaller or independent MDMS providers.

MDMS platform control over visibility and search result rankings

MDMS platforms also have significant control over the visibility and placement of transport operators' services in search results (referred in the interview by new entrants in the rail sector, such as WestBahn, but also and NGO like T&E). ALLRAIL highlighted in the interview that *"indispensable MDMS platforms (which most often are the vertically-integrated ones) often favour their in-house rail operators — displayed on top in an arbitrary manner, hiding the options of other rail operators, or refusing to show and sell them altogether."* They highlighted that this practice undermines access for smaller or new entrant operators, even when they offer better connectivity or lower prices for passengers.

This control over the digital marketplace significantly impacts customer bookings, as travellers are more likely to choose services that appear first or are most prominently displayed. FlixTrain cited a concrete example of Deutsche Bahn's (DB) platform practices, highlighting what it views as a significant barrier to fair competition. According to Flix, although DB displays FlixTrain services on its website and app, it neither includes ticket prices for those services nor offers the possibility of booking them. This omission is particularly relevant to the issue of limited access to tickets, as consumers are unable to purchase an available offer through the platform. Flix noted that most passengers are unlikely to search other platforms independently, meaning that the absence of a booking option effectively prevents consumers from accessing a potentially cheaper alternative. International travel adds further complexity as different rail

companies have separate ticketing policies, often requiring issuing multiple tickets for a single journey (quechoisir.org, 2024), each governed by different user policies (European Parliament, 2021). Uncertainty can deter travellers from undertaking multiple-leg or multimodal rail journeys (according to interview with an MDMS provider). According to AllRail, the real barrier is a lack of political will and discriminatory practices from incumbent rail operators. DB and others are satisfied with selling tickets from fellow state-owned incumbents (like OBB), but not from independent operators (like European Sleeper or Westbahn).

These concerns are supported by findings from the Eurobarometer 551 survey (European Commission, 2024) which highlighted key factors shaping regional or long-distance travel decisions. Respondents ranked cost (ticket price, fuel price, etc.) as the most important factor, selected by 61% of participants. This was followed by total travel duration (47%), departure or arrival time (36%), and comfort (seat space, noise levels, etc.) at 29%. Factors related to the booking experience—such as ease of finding travel options (17%) and ease of booking tickets (16%)—were also considered important by a significant portion of travellers. These results underline that beyond price and timing, the convenience and accessibility of travel options significantly influence consumer choices.

MDMS platforms can exert significant influence over transport operators' ability to reach potential customers. The preferential treatment given to large operators or services available on dominant platforms means that smaller or newer transport operators services may face substantial challenges in accessing MDMS and achieving visibility. An example of this in practice is the case of the Swedish Railway (SJ), a vertically integrated operator that provides train services and controls the online ticketing platform, sj.se. SJ was investigated twice by the Swedish Competition Authority (SCA) over allegations of abusing its market position, specifically by refusing to sell competitors' tickets and/or manipulating the visibility and search rankings of rival services on its platform. In the 2018 investigation, the SCA noted that SJ's strategy was not business neutral and pointed to signs of self-favouring, where SJ appeared to promote its own services while excluding or downranking those of competitors (Swedish Competition Authority, 2022). ALLRAIL argue that this control over the digital platform environment, where services that appear higher in search results or are given prime promotional space are more likely to be booked, underscores how MDMS platforms hold substantial power in determining the success of rail operators (ALLRAIL, 2025).

A similar dynamic exists in the airline sector, where small and medium-sized airlines heavily depend on CRSs and dominant MDMS platforms for visibility and bookings. Due to the strategic position of these platforms, many OTAs and MSEs rely on data feeds from CRS. Consequently, airlines not present in the CRS often lack presence in these other channels, further limiting their market reach.

Imbalance in commercial relationship between CRSs, some travel agents, and smaller carriers

CRS platforms continue to play a central role in air ticket distribution across both business and leisure segments. While they remain a dominant channel for business travel (which makes up an important portion of air travel in Europe[29]), particularly through their integration with TMCs, they also provide a critical data feed to a wide range of OTAs, MSEs and brick-and-mortar travel agents. A MDMS provider working in the air sector noted that "smaller carriers want and need MDMS platforms in order to help them sell their offering and "compete" with other larger airlines". An airline indicated during an interview, as part of the study, that the big three CRSs account for 50% of the airline revenue and that, during the pandemics, they were about to exit contracts with two of the big three due to "unacceptable conditions".

In the Commission Staff Working Document Evaluation of Regulation 80/2009 on a Code of Conduct for computerised reservation systems (2020), stakeholder consultations highlighted several key points relevant to this problem:

- Smaller airlines, in particular, continue to rely heavily on CRSs as a primary means for ticket distribution, despite an overall decline in CRS booking volumes since 2007.

[29] According to T&E, 30% of all air travel in Europe is corporate travel. Available here: https://www.transportenvironment.org/topics/planes/corporate-travel#:~:text=Business%20travel%20represents%20approximately%2030%25%20of%20all%20air%20travel%20in%20Europe.

- Smaller carriers specifically noted that CRSs' neutral principal display obligations have been crucial in enabling them to compete fairly with larger airlines, underscoring the importance of maintaining a level playing field.
- Travel agents, especially traditional brick-and-mortar ones, view CRSs as the best solution for consolidating flight options and facilitating bookings, due to their centralised access to multiple providers. Smaller agents, lacking the resources to develop their own technology, depend heavily on CRSs to reach customers.
- Despite the rise of direct and alternative booking channels, CRSs maintained a substantial share of ticket bookings (estimated between 34% and 49% in 2016 depending on the source), illustrating their ongoing market relevance (European Commission, 2020).

These findings from the 2020 evaluation support the view that while CRSs are indispensable for many smaller and medium-sized operators, their dominant market position also allows them to set terms that smaller operators must accept, often under constrained bargaining power.

One airline association representing smaller carriers emphasised that certain protections embedded in the CRS Code of Conduct remain essential in the B2B distribution context. These provisions serve to safeguard airlines from discriminatory practices. According to the association, repealing such protections would expose carriers—particularly smaller and regional ones—to biased treatment and unfair competitive conditions.

The association further noted that CRSs continue to function as gatekeepers to travel agencies, maintaining a dominant market position. This concentration of influence warrants targeted regulatory intervention. Given the significant role CRSs play in airline distribution, the association argued that safeguards against discriminatory practices must be retained to ensure fair competition. It recommended extending the core principles of the CRS Code of Conduct to MDMS platforms, including large OTAs and MSEs, to promote equitable access and usage conditions across all digital travel platforms.

Additionally, the association highlighted that MDMS selection by airlines is often based on factors such as service quality and cost efficiency. Airlines must retain the flexibility to withhold certain fare types (e.g. light fares) when distribution costs through specific channels—such as CRSs—exceed the commercial benefits. The association cited that the total cost of CRS distribution, including CRS fees and travel agency incentives, frequently renders the provision of low fares economically unviable.

The association also raised concerns regarding full content agreements, which, according to that association, reinforce the market dominance of key players. In the B2B segment, CRSs benefit from exclusive access to full content, while in the B2C segment, platforms such as Google and Expedia gain competitive advantage through unrestricted content access without the need for negotiated commercial terms. This dynamic, coupled with the limited bargaining power of smaller airlines, risks further entrenching the market power of both B2B and B2C MDMS providers. The association concluded that such developments could reduce market competition and negatively impact consumer choice.

Many carriers, including legacy carriers, maintain ties with CRSs not only to access corporate travel market, but to ensure broad visibility across a wide range of distribution channels. While the overall market share of air tickets booked directly via CRSs may have declined, their infrastructure continues to underpin a significant share of indirect sales. One transport operator surveyed in the context of this study, corroborated this view, emphasising that CRSs still hold significant market power, especially in corporate travel, and the need for the CRS Code of Conduct. Furthermore, another transport operator, a prominent airline, stressed in their survey response the continued importance of CRSs as the remain by far the largest single source of revenue for airlines due to being the gatekeepers to the business travel segment. While new B2B intermediaries are performing some of the same functionality, they do not currently cater to all airlines who want to be in the platform in a timely manner. This is particularly important for smaller or carriers that are non-dominant in particular markets. These carriers benefit from the neutral display requirements of the CRS Code of Conduct, enabling them to appear alongside larger carriers on equal footing in travel search results.

Furthermore, CRS platforms also provide technological infrastructure to some smaller travel agents that allows them to book tickets, and in some cases, also controls their front and back-end technology. This can

result in 'single homing' where smaller travel agents will only subscribe to one CRS and dependent on their technological infrastructure. Despite rules in the Code of Conduct designed to facilitate switching between CRS providers (Article 6), smaller travel agents may have more difficulty investing in new technology to facilitate the switch, resulting in them being 'locked in' to their existing provider. Moreover, they would also lose the financial incentives that they receive from CRSs as a loyalty fee to only subscribe to one CRS.

2.3.4 PD 4. Vertical integration of railway undertakings and rail ticketing platforms hinders wider ticket distribution

This problem driver feeds into Problem 2 only, contributing to limited and distorted information and access to tickets for consumers on MDMS.

In the survey as part of the study, MDMS providers highlighted that transport operators limit and distort access to content. Many transport operators, particularly dominant rail companies with vertically integrated MDMS, restrict access to real-time timetable, ticketing, and delay information available to platforms, creating information asymmetries that disadvantage passengers (BEUC, 2024) (quechoisir.org, 2024). An example is illustrated in the antitrust investigation into Renfe, Spain's state-owned rail incumbent, for allegedly refusing to supply full ticketing content and real-time data (including pre-journey, on-journey, and post-journey information) to rival ticketing platforms, launched by the European Commission.

The following identified rail operator behaviours illustrate this limited willingness of rail operators to share their complete offering to MDMS platforms, which results in limited and distorted information and access to tickets for passengers.

Vertically integrated MDMS favouring their own services

In cases where certain MDMS platforms are vertically integrated with specific transport service providers, there is a high risk that information about other operators may be limited or distorted (Worth, 2024). This risk was also highlighted in the interviews with a consumer organisation and an NGO (T&E). For example, a rail-owned MDMS may only display its own train services, hiding or de-prioritising competing operators even if the competitor's services are cheaper or more convenient for passengers. They may also choose to present only the part of a competitor's services that they consider complementary to their own, excluding directly competing service offerings. This practice reduces consumer choice and prevents travellers from accessing a full range of available transport options. Restrictions may also arise from the imposition of stringent integration requirements or service fees (Worth, 2024). In France, the ART report *"Ouverture et utilisation des données de mobilité"* (February 2025) highlights two key findings: (1) SNCF accounts for the majority of tickets sold in the French market, and (2) SNCF Connect is the only MDMS platform operating in France that displays exclusively its own tickets.

When passengers use an incumbent operator's website (vertically integrated MDMS), they may also underestimate the total frequency of services on a given route. If the preferred train time is not displayed, they are more likely to choose alternative modes of transport, such as cars or aviation.

Additionally, vertically integrated MDMS that do list competing services may further reinforce these effects through its search algorithms (Worth, 2024). For instance, the platform may place its own services at the top of results, present journey times and prices in a way that makes them appear more attractive, or exclude multimodal alternatives that combine other providers. Such practices reduce transparency and mislead consumers, making it harder for travellers to make fully informed decisions.

An MDMS provider, EU Travel Tech, noted in the stakeholder survey that, "*There is indeed an evidenced refusal by certain vertically integrated MDMS to distribute the services of third parties. Certain new entrant railway operators have raised such practices as problematic and called for a regulated right for their tickets to be distributed by the vertically integrated sales channels of nationally dominant railways.*"

In the stakeholder survey, the European Passengers' Federation indicated that *"DB Navigator, which has a pre-eminent market share in the German ticket sales market, does not sell services of DB rivals like Flixtrain or European Sleeper. For customers using DB Navigator as their go-to platform to buy tickets, this means they won't be able to see any offers from rivalling new entrants, while for such new entrants, it makes it harder for them to gain visibility and sell tickets."*

Barriers to comprehensive travel information

Rail operators may withhold or selectively share essential travel data such as timetables, ticket prices, and real-time updates. Consequently, third-party MDMS providers are unable to offer a complete and transparent view of available travel options, leading to fragmented and inconsistent information for consumers. The lack of integrated services—characterised by the absence of through tickets, non-integrated timetables from different operators, and the unavailability of shared journey planning tools—was cited during the interviews by one MDMS provider (out of sixteen), two new entrant rail operators/associations (Snälltåget and AllRail, out of five), a metropolitan transport authority (Helsinki Region Transport), the NGO Transport & Environment (T&E), and one expert (The Man in Seat 61) from the 'Others' stakeholder category (out of eight). This issue is particularly pronounced for international journeys, where multiple operators are involved, each with **different booking systems, data standards, ticketing rules, refund policies, and real-time information protocols**, complicating the planning of seamless multimodal travel (according to the interviews with CER and a MDMS provider).

Fragmented and inconvenient ticketing systems

Incumbent rail operators claim that technical challenges and the high costs of integrating specific ticketing systems into MDMS platforms—especially proprietary interfaces—often prevent MDMS from displaying the full range of available offerings (interviews with DB, based on their role as MDMS, and CER) as rail operators might be unwilling to undertake such costs to facilitate the distribution of their tickets through third party platforms. Some rail operators insist that the main barriers for integration are commercial interests and not technical aspects (interviews with two rail operators including WestBahn).

Limited Ticket Availability and Fragmented Booking Experience

Commercial arrangements between MDMS platforms and rail transport operators can restrict access to certain tickets, particularly flexible fares, discount cards, or options for multimodal travel (interviews with MDMS provider and a consumer organisation). This forces consumers to visit multiple websites to find the best deal, complicating the booking process and discouraging seamless multimodal travel. Additionally, strong commercial ties between MDMS providers and specific operators can reduce the integration of competing services, limiting consumer choice and reinforcing market concentration.

Omio and Trainline serve as examples of MDMS platforms that provide a certain degree of content aggregation; however, they remain limited in their capacity to deliver a comprehensive and integrated offer. An interview with ADN Mobilités, association representing OMIO and Trainline (together with Kombo and BlaBlaCar) confirmed this difficulty claiming that: "…all companies in our association need access to capacity data of railway operators, and this is not tackled everywhere". The absence of fully integrated long- and short-distance mobility services, further hampers the system's potential and, overall, leads to a lower demand for rail services than optimal.

Without adequate integration of data between operators and digital platforms, users cannot access complete and accurate travel information, limiting their ability to compare routes, prices, and services effectively. According to rail incumbents, measures are being implemented to meet the relevant objectives set out in the periodic updates of the CER Ticketing Roadmap (CER, 2025)[30]. As part of the analysis is relevant to mention that the Ticketing Roadmap is a commitment exclusively made by CER members. The recent Flash Eurobarometer survey underscores the significance of clear and accessible travel information for many across the EU. The Eurobarometer is based on a scientifically selected, representative sample, allowing its results to reflect the views and experiences of the broader EU population, not only those who responded directly. According to the findings, 17% of EU citizens consider the ease of finding travel options a key factor when booking a journey. Furthermore, 14% expressed concerns about the completeness of information—particularly the availability of all fares, including special offers—while 10% highlighted concerns about availability of all alternative travel options online. These issues were cited as barriers that discourage people from booking travel online (European Commission, 2024).

[30] The CER Ticketing Roadmap, especially its periodic updates after 2021, sets out industry commitments to improve digital ticketing, information availability, and customer experience in rail. By 2025 (with ambitions to 2030), CER and its members committed to modernising timetable and fare data, extending the booking horizon, enabling through-tickets, creating a European-wide ticketing API, harmonising ticket conditions, fully digitalising tickets, providing real-time journey information, and improving passenger support during disruptions

Box 2 Example of rail company restricting access to information needed by MDMS platforms

As an example, the Germany's national competition regulatory agency's decision of 26 June 2023 established that Deutsche Bahn was in violation of the competition law due to abusing its market power in relation to mobility platforms. The Bundeskartellamt has ordered Deutsche Bahn to change certain practices and contractual clauses concerning data sharing, bans on advertising, vertical price specifications, far-reaching bans on discounts and the withholding of different commissions for third-party platforms. Link: Bundeskartellamt - Homepage - Open markets for digital mobility services – Deutsche Bahn must end restrictions of competition

2.4 AFFECTED STAKEHOLDERS

The extent of the problems described above leads to a number of impacts for relevant stakeholders as presented in the following sections:

- *Impact on passengers*

When either certain operators have uneven access to the platforms, or platforms are only able to present limited and distorted travel information, passengers are expected to face significant consequences. The end result is that travellers are often unaware of the full range of transport options available to them or that they need to put substantial effort to collect and compare different travel options. The lack of comprehensive information leads to a distorted picture of the market, where passengers may end up opting for suboptimal or more expensive travel choices simply because they do not have access to a complete comparison of services, in particular for rail services (European Commission, 2024)., and Austrian academic research31)

The absence of more comprehensive and transparent service information also has a direct impact on pricing. When consumers are unable to easily compare ticket prices across multiple operators, competitive pricing pressure decreases. Service improvements and price reductions are not encouraged due to the difficulty to directly compare transport service offerings. This dynamic disproportionately affects cost-conscious travellers who would otherwise benefit from greater competition.

Beyond price and choice, the consumer experience itself suffers when access to MDMS platforms is uneven. Limited functionality, such as the absence of real-time updates, route integration, or direct booking options, forces travellers to navigate multiple websites or apps to gather information or purchase tickets. This fragmented approach makes planning a trip unnecessarily complicated and time-consuming. Instead of benefiting from a seamless, user-friendly experience, where relevant options are easy to obtain and compare, passengers are left piecing together their journeys across different channels, increasing the risk of confusion, missed connections, and last-minute disruptions (BEUC, 2023). Ultimately, this complexity may result in travellers opting to use private cars. Travelers may need to purchase multiple tickets across different platforms for a single journey, discouraging multimodal and multi-operator travel and reducing rail's competitiveness with other transport modes like air or road (BEUC, 2024). Some platforms only display partial information, requiring users to visit multiple websites to complete their bookings (BEUC, 2024).

This lack of easy access to combinations of tickets from different modes/operators may lead passengers to use different modes of transport such as private cars or air travel or even avoid making a trip altogether. The Flash Eurobarometer 551 survey highlights these issues. Among respondents who never or rarely booked journeys combining different collective transport modes or operators, and excluding those who answered that it was not needed, 20% cited that the journey would have been more expensive as a key barrier, while 17% indicated they could not find a suitable combination of services. Furthermore, 13% expressed concern about having to buy several separate tickets and risk being stranded if they missed a connection. In rail, these barriers are reported to be even more significant (European Commission, 2024). These findings show that complicated ticketing and limited access to booking platforms make travel more difficult, increase costs, and stop passengers from using different transport modes and/or operators.

31 https://science.apa.at/power-search/4468993315361675860

- *Impact on travel agents*

The major impact for travel agents is seen among smaller travel agents. As alternative distribution channels emerge, smaller travel agents can become disadvantaged for a number of reasons. Smaller agencies may not be able to afford access to multiple sources of information efficiently and are often dependent on the strong network effects provided to them by CRS systems. These systems give them greater visibility, access to customers and lower search costs. They are also further limited in their options due to technology ties and the incentives structures.

They may also be dependent on the technological infrastructure provided to them by CRS providers and are likely to only subscribe to one system, known as 'single homing'. Single homing occurs when a user **uses only one platform** or service provider rather than participating across multiple competing platforms. Agents receive economic incentives to remain loyal and this has an impact on the fees paid for each flight segment. The CRS systems will provide travel agents with the infrastructure to book tickets, and in many cases, their front-end and back-end technology. This may not be the case for larger travel agencies who may use multiple channels (e.g., more than one CRS provider or new content aggregators or DC systems from other carriers).

Therefore, the technological changes that have enabled new distribution channels to emerge has impacted in particular smaller travel agents who may be more reliant on CRS systems – if larger carriers choose to remove their services from CRS systems, smaller agents will have a restricted access to airline bookings or need to invest in new technology to enable them to make bookings through new channels.

- *Impact on transport operators*

For transport operators, particularly smaller or independent providers, restricted access to MDMS platforms poses a challenge to their ability to compete. Without equal visibility on widely used CRSs and booking platforms, these operators may struggle to reach potential customers, reducing their market presence (mentioned during the interview by four new entrant rail operators/associations including AllRail, Snälltåget WestBahn, and two consumer organisations out of five, including T&E). This lack of exposure directly translates to lower ticket sales and revenues, making it more difficult for them to maintain or expand their services.

This is issue is also especially problematic for small and regional airlines. Restricted access to MDMS platforms presents a significant competitive disadvantage. These regional carriers often operate in niche markets or underserved routes, where visibility is crucial to maintaining viable passenger volumes (mentioned in the survey by Jernbanedirektoratet from Norway, a regional airline and ERA). Without equal representation on widely used CRSs and online booking platforms, such as Amadeus or Sabre, or large OTAs and MSEs these airlines may struggle to reach potential customers who rely on integrated search and booking tools. For example, a traveller booking a multi-leg journey involving a major airline and a regional connector might never be shown the latter's options if the smaller airline is not integrated into the platform. This lack of exposure leads to reduced ticket sales and revenue, hindering their ability to sustain operations, invest in service improvements, or expand to new routes. Over time, this can exacerbate market concentration and limit passenger choice, especially in remote or less-profitable regions.

The issue is especially problematic for new entrants trying to establish themselves in a market dominated by long-standing players, such as the rail market. If a new rail operator or mobility provider cannot secure fair access to a dominant vertically integrated MDMS platform, they face substantial barriers to entry (mentioned during the interview by nine out of 16 MDMS providers - five new content aggregators/associations, plus ETT and the independent travel information website The Man in the Seat 61, one CRS and one OTA- and 5 out of 20 transport operators - four new entrant rail operators/associations including WestBahn, Snälltåget and AllRail. Even if they offer competitive pricing or good quality service, they may still struggle to attract customers simply because customers do not see their services listed in the most commonly used booking systems or because they find it difficult to combine their offer with that of another operator for a multi-leg trip (BEUC, 2023).

Moreover, operators who do manage to gain partial access to MDMS platforms often find themselves at a disadvantage compared to better-integrated competitors. When key functionalities such as real-time updates, pricing information, or intermodal ticketing are withheld from certain operators, their services become less appealing to consumers. A traveller may see an operator's schedule but be unable to book a

ticket directly through the MDMS platform, leading them to choose a competitor that offers a more seamless booking experience. In such cases, even when an operator is technically included in an MDMS system, they remain functionally marginalised (European Environment Agency, 2022).

Some operators also face a growing dependency on dominant MDMS platforms, which leaves them vulnerable to restrictive policies and unfavourable commercial terms. An airlines association clearly states that airlines are dependent on indispensable MDMS, being these CRS and also new large OTAs. If access to a major MDMS platform is controlled by a competitor, independent operators could be further subjected to partial behaviour in the presentation of their offer compared to that of their competitors (lack of neutral display).

Such a dependency has several significant consequences. One possible consequence of this is the financial strain. If MDMS platforms charge high access or distribution fees, this could reduce operators' profit margins and make it more difficult for them to remain competitive. While larger, well-established operators may be better positioned to absorb or offset such costs, smaller players might face a choice between raising ticket prices or accepting lower margins, both of which could affect their ability to compete effectively (European Commission, 2023). Another major consequence is limited market visibility. Many MDMS platforms serve as a primary point of discovery for travellers, so restrictions on advertising and promotional campaigns make it harder for independent operators to attract passengers. If they are unable to promote competitive fares or highlight service advantages, they struggle to gain market share, making it even more difficult to compete with dominant operators.

- *Impact on MDMS platforms*

The identified problems offer several challenges that impact MDMS platform providers. One of the key issues lies in the technical and commercial barriers associated with integrating the offering of diverse operators into MDMS platforms. These challenges often result in incomplete information in the hands of MDMS providers, then translated into incomplete information for users. This limits the visibility of the full range of travel options. This impacts independent platforms, as they are likely to suffer from the hesitance of transport operators to share their full offer through third party distribution channels. Uneven access for operators to MDMS platforms can also undermine the effectiveness of MDMS itself, eroding consumer trust and compromising the core value these systems aim to deliver: seamless and integrated travel planning.

MDMS platforms are also affected by the limited sharing of supporting data that are relevant to improve trip planning or real-time travel experience. Examples of such data include information related to station layouts relevant to planning transfers, information on accessibility of infrastructure and real-time travel information on delays. This creates information asymmetries that disadvantage certain MDMS platforms and, by extension, the end users who rely on them for comprehensive and accurate travel planning. The lack of such information may result in inferior trip and planning experience for passengers, potentially affecting their willingness to perform multi-modal or multi-operator trips.

The impact of the potential distortion of competition between CRS and non-regulated B2B platforms affects both platforms in different ways. Non-regulated entities may not be subject to the same requirements and restrictions as CRS platforms under the Code of Conduct, e.g., neutral display and transparency requirements making them more flexible in the way they market their services as they do not need to comply with the same rules meant to protect their clients. This places CRSs in a competitive disadvantage potentially resulting in an 'opportunity cost' where CRSs lose business to alternative channels resulting in a loss of market share and revenue.

In contrast, non-regulated B2B platforms can operate with greater flexibility as they are not bound by the CRS Code of Conduct and as such they can be expected to continue to experience market growth in the air ticket distribution market. However, B2B platforms may also be affected by the rise of alternative distribution channels, such as B2Cplatforms . Therefore, market and technological changes in the air ticket distribution have meant that there is increased competition and complexity – including the possible interlinkages between some B2B and B2C platforms. This means that distorted competition and lack of transparency could negatively impact B2B platforms operating under the CoC compared to other distribution channels .

- *Impact on the transport and mobility market*

Beyond the challenges faced by individual operators, uneven access to MDMS platforms has far-reaching implications for the mobility market as a whole, particularly by reducing competition. However, the nature and impact of this problem differ depending on the market segment in question—namely the transport service market and the distribution (or retail) market—as well as between the rail and non-rail sectors.

1. Transport service market: rail vs. non-rail

In the transport service market, the level of competition varies significantly. In aviation, market liberalisation has led to high levels of competition among carriers, with multiple operators often serving the same routes and competing on price, frequency, and service quality. In contrast, the rail sector remains partially liberalised, and in many Member States it is still dominated by national incumbent operators. These rail incumbents often maintain a strong position through their position as manager of the national rail infrastructure, ticketing systems, or preferential treatment in public service obligations (PSOs), which limits the ability of new entrants or smaller regional operators to compete on equal footing.

Less competition also affects pricing. When a few larger entities control the market, they have less incentive to innovate and charge competitive fares/fees for their services. Over time, this can lead to higher ticket prices, fewer service options, and lower service quality. (Ultimately, this may deter passengers from using public transport.)

Finally, unequal access to MDMS platforms creates a fragmented and inefficient use of the transport system by travellers. A well-functioning mobility network should offer smooth connections between different modes of travel. But when certain operators are left out of integrated booking and real-time information systems, passengers have to switch between multiple platforms to plan their trips. This makes travel less convenient and discourages people from using public or shared transport (European Environment Agency, 2022).

2. Distribution market: CRSs and MDMS platforms

In the distribution market, dominance can also be observed—but this time by CRSs and large, vertically integrated MDMS platforms. These platforms act as essential intermediaries in how transport services are displayed and sold to consumers. When small or independent operators and MDMS platforms face barriers to participating in these distribution channels—either due to high integration costs, lack of access to technical interfaces, or discriminatory commercial terms—they are effectively excluded from a major part of the market.

This concentration of market power in both distribution and transport services reduces consumer choice, limiting visibility into the full range of mobility options available. Travelers may be unable to compare offers from smaller or regional providers, find the best prices, or access multi-leg journeys that require coordination across operators and modes.

Another key issue is that the problem may cause slower innovation. Smaller MDMS platforms with new ideas may struggle to gain clientele if they have a limited or less detailed offering. Meanwhile, dominant operators, without strong competition, have less pressure to improve their services (European Commission, 2023).

2.5 EXPECTED EVOLUTION OF THE PROBLEM

Without any further action, the two problems identified are likely to persist. For B2C-oriented platforms, it is likely that the development and deployment of MDMS will remain slow and relatively fragmented. While national, local or mode-oriented platforms are expected to still be developed, such initiatives are expected to fall short of comprehensively integrating all relevant transport options from a passenger perspective or include advanced services such as allowing the full purchase of tickets without relinking to separate website.

For platforms used in B2B operations, the steadily increasing importance of non-CRS players is expected to exacerbate the issue of different actors being subjected to different rules although having overlapping operations, resulting in uneven regulatory treatment.

In both cases, the differences in bargaining power between operators and MDMS platforms with significant market power will continue to be a barrier for equal access to and use of distribution, booking and ticketing services.

2.5.1 Problem 1: Lack of transparency, unfair conditions, and uneven playing field in the online ticketing market

The lack of transparency, unfair conditions, and uneven playing field in the online ticketing marketis expected to continue being an issue. Although, national frameworks regulating the integration of transport operator offerings into MDMS platforms have emerged in some EU countries[32], these frameworks come with different scopes and also bring different sets of provisions resulting in an increased regulatory fragmentation. The evaluation of the current CRS Code of Conduct concluded that it has not been entirely effective in ensuring a level playing field for access to and use of ticket distribution services. As more and more MDMS are developed, more regulations and initiatives could be put forward at local, regional or Member State level, which might lead to higher levels of access of transport operators into MDMS platforms. The patchwork of national frameworks, or the lack thereof in certain Member States, that is expected to be the case, will result in an uneven and imbalanced access of operators and of their transport offering to MDMS platforms. As such, the emergence of these national frameworks would still not result in a comprehensive coverage of relevant services across the EU. Moreover, the development of a variety of such initiatives independently can be expected to further increase regulatory fragmentation making the penetration of different national markets by MDMS platforms more challenging.

In parallel, CRSs are expected to remain important channels for access, especially in the aviation sector. Although the share of bookings made through alternative distribution channels appears to be increasing in recent years, there are specific segments of the aviation market that rely heavily on CRSs for ticket distribution. Therefore, even for large airline groups, visibility on CRSs remains important to ensure presence across all platforms, including those used by business travellers, leisure agencies and consumers in markets where the airline's brand is less well known. Similarly, for smaller airline carriers, CRSs are expected to remain an important tool to achieve visibility by wider audiences, with smaller air carriers noting in the CRS evaluation support study, the importance of CRS platforms in enabling them to compete with larger carriers. However, smaller carriers may face uneven access or competitive disadvantages compared to larger carriers, despite the neutrality obligations in place. For these reasons, CRSs are expected to continue playing an important role for ticket distribution.

All in all, while provisions such as those under the Digital Markets Act (DMA) exist to address market power abuse, they are unlikely to apply effectively as the thresholds defined to designate gatekeepers would be too high for the context of MDMS, and the practices described in Problem 2. As such, without further targeted regulatory intervention, the barriers to access and the exclusionary practices elaborated earlier in the description of Problem 2 are expected to persist, particularly in cases where platforms have close and strategic commercial links or vertically integration, providing a disincentive to integrating the transport offer of operators perceived as competitors.

In the case of uneven treatment of different distribution channels performing similar functions, a level-playing field becomes even more important as actors entering the field from different perspectives may not be covered by the same regulations and therefore maintain uneven advantages (as is currently the case with distribution channels not under the CRS CoC).

As such, in the absence of any further action, the current distortion of competition in the B2B market can be expected to remain as CRSs and currently existing and future alternative B2B ticket distribution channels face different regulatory requirements. In the B2C context, when an MDMS provider possesses SMP, it can exert considerable influence over market conditions, including pricing, product visibility, and consumer choice. First, MDMS providers with SMP may prioritise their own offerings or those of preferred partners, disadvantaging smaller competitors or alternative service providers who rely on open and non-discriminatory access to consumers. Second, these platforms might leverage their dominant position to impose unfavourable commercial terms or restrictive contractual conditions, thereby raising barriers to entry and limiting innovation in the distribution ecosystem. Third, consumer choice may be constrained by

[32] Indicative examples include France, Finland and the Netherlands

algorithmic biases or opaque ranking mechanisms that reduce market transparency and the ability for consumers to make fully informed decisions.

Finally, the current state where the CRS CoC applies to only part of the B2B ticket distribution channels (CRSs) while it does not regulate other B2B channels, causes a distortion of competition that is not expected to subside as long as both CoC regulated and non-regulated channels compete for the air ticket distribution market.

2.5.2 Problem 2: Incomplete offer of rail tickets on (rail) platforms

Without further action to address the underlying drivers of the problem, the current challenges are broadly expected to persist.

While some MDMS platforms may continue to expand their service offerings, such developments are likely to remain confined to cases where commercial and technical cooperation is feasible and mutually beneficial. Limited cross-border integration of long-distance rail services may occur between select operators, but this is unlikely to include the full range of players due to competition and market control concerns.

Voluntary efforts to improve the situation have so far yielded limited results. One such initiative is the CER Ticketing Roadmap, which outlines a number of voluntary actions by CER members, such as:

- i) enabling the sale of tickets through a wide range of sales channels (including websites and apps) with the aim of achieving EU-wide availability.
- ii) improving the accessibility of up-to-date multimodal travel information to passengers.

While these targets extend to 2030 and could support a more integrated trip planning and booking experience if implemented on time, the roadmap remains a non-binding initiative limited to CER members. The broader EU rail sector is highly fragmented, with many railway undertakings offering passenger services. Therefore, meaningful progress would require engagement far beyond the CER membership.

Moreover, the roadmap indicates that ticket distribution through other channels would rely on commercial agreements, but offers no clarity on their structure or safeguards. This creates a risk that MDMS providers or transport operators with significant market power could impose uneven terms or block access, undermining fair market conditions and limiting integration of content from smaller or alternative operators.

Thus, in the absence of a binding EU-level legal framework, initiatives are expected to continue on a fragmented basis—nationally, locally, or within specific commercial groupings. While such efforts may bring some improvements, they will not be sufficient to create a coherent, fair, and passenger-friendly EU-wide ticketing ecosystem. Only a clear and enforceable legal framework can ensure equitable access to ticketing systems, prevent market abuse, and support the inclusion of all relevant actors, including smaller players and consumers.

3. WHY SHOULD THE EU ACT?

3.1 LEGAL BASIS

Title VI (Articles 90-100) of the Treaty on the Functioning of the EU (TFEU) establishes the EU's prerogative to make provisions for the Common Transport Policy. With this legal framework in mind, EU action allows better coordination for widespread deployment of MDMS services and ticketing policies, instead of relying on Member States only. This facilitates travel across the EU for passengers. It also helps to avoid fragmentation of MDMS deployment and ticketing practices, and encourages private service providers to commit to deployment, knowing the legal framework is in place.

On the competition cases made against abusive practices regarding ticketing and other matters in the rail sector, several legal provisions have been invoked that also support the intervention by this initiative. These include Article 102 of the TFEU on the abuse of dominant position within the internal market and its implementation in the Antitrust Regulation (Regulation 1/2003), Regulation 2021/782 on rail passengers' rights and Directive 2016/2370 as regards the opening of the market for domestic passenger transport services by rail.

3.2 SUBSIDIARITY: NECESSITY OF EU ACTION

While MDMS services and rail ticketing policies can be developed at regional or national level, the continuity of the EU transport system requires an EU-wide approach to deal with the problems at stake. Discrepancies between Member States and local authorities in support measures for the deployment multimodal offerings and MDMS platforms, including on standards, could lead to a fragmented market leading to increased costs and reduced benefits for all stakeholders, including service providers, Member States, local authorities and transport system users. EU-level intervention is necessary to avoid Member States imposing divergent rules and pursuing divergent strategies, with negative unintended effects.

3.3 SUBSIDIARITY: ADDED VALUE OF EU ACTION

EU-level action is expected to help set a clear framework for the whole ticket distribution value chain, both for direct and indirect services. This initiative would enable end users and business consumers to benefit from a more comprehensive and neutral offer from transport operators as well as a better choice between transport modes, improving the functioning of the internal market. This should in turn enhance the efficiency, resilience and sustainability of the transport system across the EU.

4. POLICY OBJECTIVES

As part of the intervention logic a set of general and specific objectives was identified. These specific objectives are linked to the problem drivers. These objectives aim to establish the level of ambition of the intervention and provide the benchmark against which to assess the effectiveness of considered policy options. These objectives were also mapped to the SDGs, to indicate their potential impact on the achievement of these goals.

4.1 GENERAL OBJECTIVE

The initiative has the following two General Objectives (GO) of:

- **GO1:** Promote rail single ticketing for multi-operator journeys and thereby enhance attractiveness of rail to increase sustainability of the transport system and support modal shift
- **GO2:** Better functioning of the online ticket distribution market, contributing to the competitiveness and functioning of the transport services market

These general objectives aim to contribute to the two key priorities of the Sustainable and Smart Mobility Strategy (SSMS)[33]:decarbonisation and digitalisation of the EU transport sector. These are meant to be supported by increasing the deployment and operational use of MDMS across the EU.

4.2 SPECIFIC OBJECTIVES

The general objectives are further specified into three specific objectives (SOs) defined to each address one of the three main problems identified and the five underlying problem drivers as seen in Table 4-1 below.

Table 4-1 – Summary of draft specific objectives and link with the problem driver according to the ToR

Objective		Driver	
SO1	Improve transparency and establish a level playing field for transport operators in terms of access and use of indispensable MDMS	PD1	Regulatory framework no longer fit for purpose due to market and technological changes in ticket distribution
		PD2	Commercial incentives of MDMS to promote certain operators and products
		PD3	Imbalanced commercial relationships between indispensable MDMS and transport operators
SO2	Improve completeness of rail offer on MDMS plat-forms, including indispen-sable RU platforms	PD4	Vertical integration of railway under-takings and rail ticketing platforms hinders wider ticket distribution

[33] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0789

4.2.1 SO 1: Improve transparency and establish a level playing field for transport operators in terms of access and use of indispensable MDMS

This specific objective relates to problem drivers PD1Regulatory framework no longer fit for purpose due to market and technological changes in ticket distribution, PD2: Commercial incentives of MDMS to promote certain operators and products and PD3: Imbalanced commercial relationships between indispensable MDMS and transport operators

More broadly it is meant to contribute to Flagship 3 of the SSMS, which aims to make interurban and urban mobility more sustainable and healthier by enhancing the public transport option combinations available and accessible to passengers and thus increasing the probability of these options being used. In addition to promoting long-distance and cross-border passenger rail services, the flagship also aims to make cross-border multi-modal tickets easier to buy and use, providing real door-to-door options for passengers. To achieve this, a regulatory framework is needed to facilitate further the integration and distribution of multimodal offerings in digital platforms. This will support the use of multi-modal, more sustainable transport options such as rail and bus/coach taking passengers away from road and aviation and contribute to an improved performance for the transport system across the EU.

This objective is also aligned with Flagship 8 of the SSMS “Reinforcing the single market” and the prescribed goal to improve the competitiveness of the EU transport sector by modernising EU rules governing computer reservation systems and safeguarding the integrity and level playing field for operators and service providers across the EU transport area. Fostering intermediary competition complements the objective of bringing more market forces in the compilation and distribution of multimodal services, as more competitive offerings are likely to develop that may lead to further deployment and use of MDMS, augmenting the potential benefits of multimodal mobility. Ensuring a level playing field for access to and use of indirect distribution for all carriers creates synergies with the goal of lifting competition distortions between B2B intermediaries.

4.2.2 SO 2: Improve completeness of rail offer on MDMS platforms, including indispensable RU platforms

SO2 is linked to problem drivers PD4: Vertical integration of railway under-takings and rail ticketing platforms hinders wider ticket distribution This initiative aims to ensure that rail offers are fully and fairly displayed on MDMS platforms, including on indispensable RU platforms. To achieve that, it aims to remove practices where indispensable RU platforms exclude, deprioritise or apply discriminatory conditions to rail services not operated by the RU that owns them, even when such alternatives may offer better prices, faster connections, or greater convenience for passengers. By doing so, the initiative intends to remove market distortion and enhance fair competition in the railway services market and thereby facilitating seamless access to multi-operator and cross-border rail journey options for end-users. The initiative also aims to ensure RU do not withhold their offer from MDMS platforms to maintain the dominant position of their in-house ticket distribution platformSustainable Development Goals (SDGs)

As per the Better Regulation Guidelines, it is also important to identify the relevant sustainable development goals (SDGs), and where possible, outline how the initiative contributes to their implementation. Specifically, the initiative is expected to contribute towards SDG#3 (“Ensure healthy lives and promote wellbeing for all at all ages”), SDG#9 (“Make cities and human settlements inclusive, safe, resilient and sustainable”) and SDG#13 (“Climate Action”) by promoting a more multimodal and sustainable transport system.

5. POLICY MEASURES AND POLICY OPTIONS

This chapter presents the baseline scenario to be used for the assessment of the impacts of the policy options. Additionally, in this chapter we present the list of policy measures considered and their packaging into policy options elaborating also on their linkage with the relevant problem drivers and specific objectives they are meant to address.

5.1 BASELINE SCENARIO

The Baseline Scenario provides a description of the current situation as well as a dynamic projection of the likely evolution of the problem and its drivers in the absence of further action at the EU level, beyond what is already planned and adopted outside of the RMB and RTR initiatives. Presented first are elements which were assessed quantitatively (and therefore serve as inputs or outputs of modelling performed as part of this IA framework). Qualitative elements are presented afterwards.

5.1.1 Quantitative baseline

The baseline of the European-scale modelling tool ASTRA is calibrated on baseline scenario reported in EUR-Lex - SWD:2025:1060:FIN - EN - EUR-Lex (Annex 4), for the impact Assessment on the Clean Corporate vehicles[34]. These produce quantitative baselines for:

- GDP and population,
- Passenger transport activity by main mode (including modal shares, passenger-kilometres, etc.),
- GHG emissions and air pollutant emissions (CO, NOx, VOC, PM2.5) for passenger transport, for all relevant transport modes,
- Road fatalities and injuries.

Projections of the transport activity growth (in passenger-kilometres) and associated costs from the PRIMES-TREMOVE and the ASTRA models are combined with historical data on the number of passengers from Eurostat, to derive baseline results for the:

- Number of passengers carried by air, bus and coach, rail and waterborne transport,
- Multimodal passengers carried.

Then, baseline projections on the number of MDMS platforms are generated combining a review of currently active platforms and the multi-parameter analysis (MPA) model.

To complement the baseline scenario, projections on the number of tickets sold and ticket fares are reported.

5.1.1.1 Macro-economic projections

Projections on EU-wide GDP, population, and fuel prices serve as inputs to the ASTRA modelling framework and are therefore presented first. These have been aligned with the baseline scenario for the IA on the Clean Corporate vehicles.

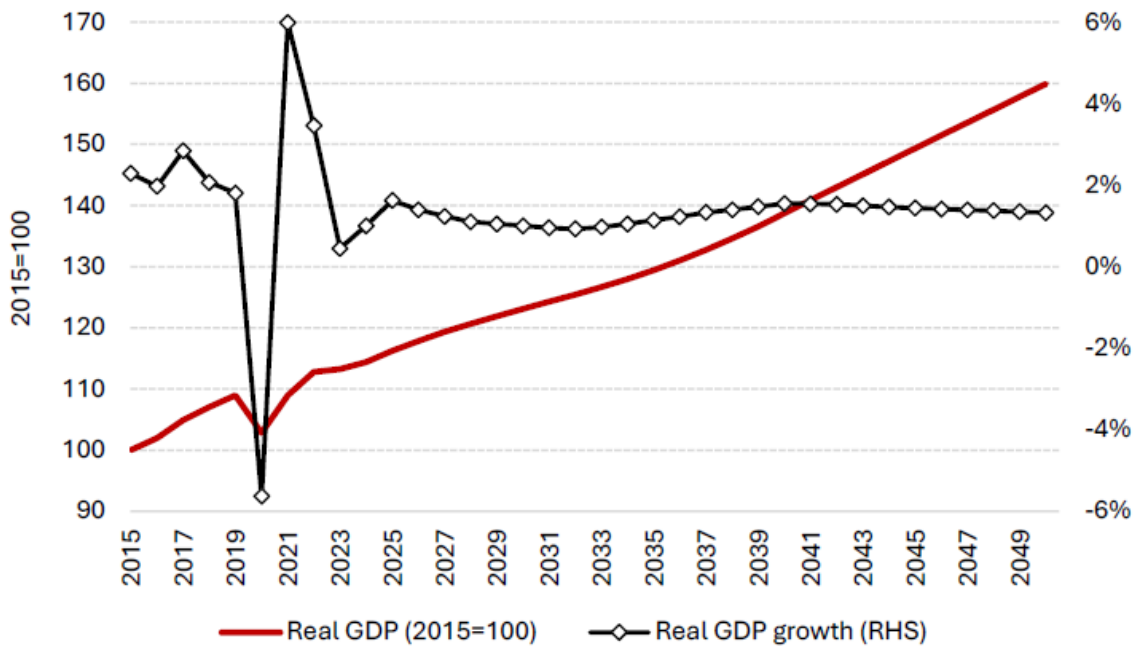
Economic projections have taken place in an unusually unstable context in the past few years, as the EU and world economies were hit first by the COVID pandemic and second by Russia's war of aggression against Ukraine, with the ensuing sharp increase in international energy prices. The GDP projections for 2025 rely on the Spring Forecast[35] f the Directorate General for Economic and Financial Affairs (DG ECFIN). From 2025 onwards, the GDP growth projections converge to those prepared by DG ECFIN for the 2024 Ageing Report[36]. At EU level, real GDP is projected to be 23% higher in 2030 than in 2015, 39% higher in 2040, and 60% higher in 2050 compared to 2015.

[34] EUR-Lex - SWD:2025:1060:FIN - EN - EUR-Lex

[35] DG ECFIN, European Economic Forecast. Spring 2024.

[36] DG ECFIN, 2024 Ageing Report. Economic and budgetary projections for the EU Member States (2022-2070).

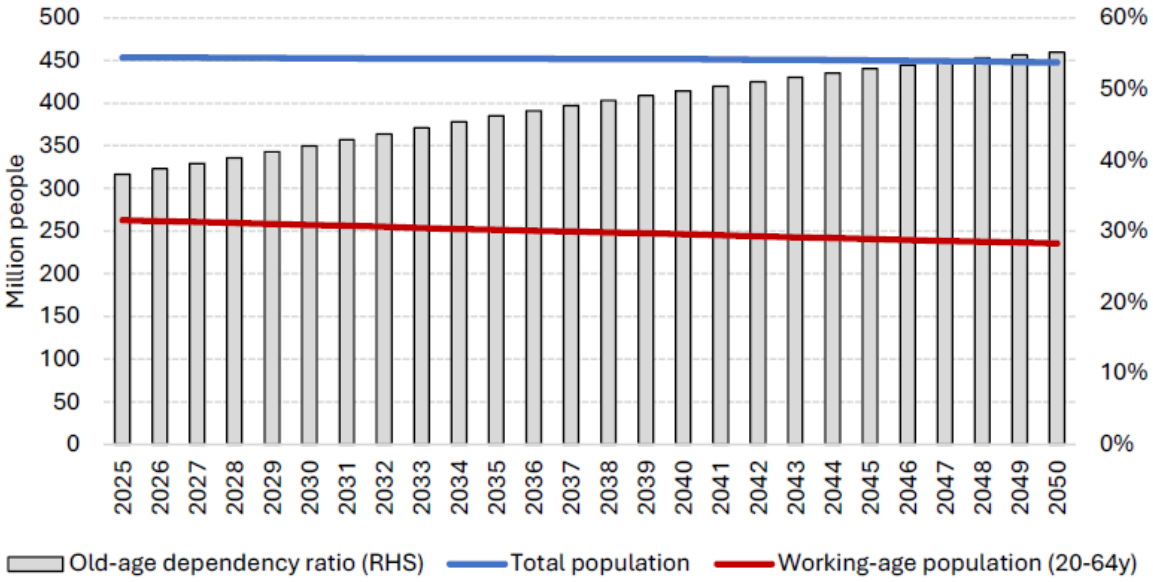
Figure 4-1: EU GDP (2015 = 100) and GDP growth (%)



Source: DG ECFIN

Population projections rely on Eurostat's long-term projections (EUROPOP2023)[37]. The EU population is projected to remain broadly stable over the projection period to 2050. However, there is a noticeable trend towards the ageing of the population, with a 10% decline in the working-age population aged 20 to 64 between 2025 and 2050 and an increase in the old-age dependency ratio from 38% to 55.2%

Figure 4-2: EU population assumptions



Source: Eurostat

[37] EUROPOP2023 (proj_23n).

The table below shows the **oil price** assumptions of the baseline used in this study.

Table 4-2: Oil prices assumptions

Parameter	2015	2028	2030	2040	2050	2015-2030	2015-2040	2015-2050
Oil price (€'23 per boe)	57.5	81.5	85.2	97.0	120.7	48%	69%	110%

Source: PRIMES-TREMOVE modelling

Total employment is modelled endogenously with ASTRA and estimated to increase by 8% by 2030 relative to 2015 and by 3% for the period 2015-2050.

Table 4-3: EU 27 total employment in the baseline scenario for 2015-2050

Parameter	2015	2028	2030	2040	2050	2015-2030	2015-2040	2015-2050
Total employment (Mio. Pers.)	192	208	207	203	198	8%	6%	3%

Source: ASTRA model

5.1.1.2 Number of passengers by mode

The total number of passengers carried in the EU27 travelling by air, bus and coach (excluding local and suburban public transport), rail (excluding tram and metro) and waterborne transport is estimated to account for about 12.9 billion in 2019. After recovering from the COVID pandemic, the projections of total number of passengers carried is estimated to increase to about 14 billion in 2028 and then reach 15.4 billion in 2030 and almost 17.8 billion in 2050 (19.0% and 38.1% increase compared to 2019 for 2030 and 2050 respectively).

The number of passengers travelling by air within EU27 countries is estimated in about 515 million in 2019. This is estimated to increase to 538 million in 2028, 542 million in 2030 and increasing to 644 million in 2050. Compared to 2019, this represents a growth of 5.1% and about 24.9% for 2030 and 2050 respectively.

The number of passengers travelling by rail is estimated to be about 8.6 billion in 2019. Passenger transport by train is projected to increase faster than via air (to about 9.6 billion in 2028, 10.7 billion in 2030 and 12.5 billion by 2050). Compared to 2019, this represents a growth of 24% and 45% for 2030 and 2050 respectively. This strong growth is expected to be driven in particular by entrance to the market of new players, the completion of the TEN-T core network by 2030 and of the comprehensive network by 2050, supported by the Connecting Europe Facility (CEF), Cohesion Fund and European Regional Development Fund (ERDF), but also by measures of the 'Fit for 55' package and the revised TEN-T Regulation, as well as the initiatives part of the Greening Freight package, that increase to some extent the competitiveness of rail relative to road and air transport for passengers.

The number of passengers travelling by bus and coach (excluding local urban and suburban public transport) is estimated to be 3.3 billion in 2019 and projected to slightly increase to about 3.4 billion in 2028, reaching almost 3.7 billion by 2030 and 4.15 billion by 2050. Compared to 2019, this represents a growth of 9.0% and 24.1% for 2030 and 2050 respectively. Amongst these, the share of passengers travelling above 250 km represents around 11% of the passengers travelling by bus and coach[38].

[38] The share of bus and coach passengers travelling above 250 km is derived based on Steer (2021), Study on the EU Regulatory Framework for Passenger Rights. Part B, Evaluation of Regulation (EU) No 181/2011 on the rights of passengers travelling by bus and coach: final report, https://data.europa.eu/doi/10.2832/486038. In the baseline scenario, this share is assumed to remain stable over time.

In the baseline scenario, the number of passengers travelling by waterborne transport within EU countries would also increase. Maritime transport is largely the dominant mode, increasing from 418 million in 2019 to 465 million in 2028, 466 million in 2030, and then up to 518 million in 2050. Compared to 2019, this represents a growth of 11.4% and 23.8% for 2030 and 2050 respectively.

Table 4-4: EU-27 number of passengers in the baseline, by mode (million)

	2019	2028	2030	2040	2050	2019-2030	2019-2040	2019-2050
Total air, bus and coach, rail and waterborne passenger transport								
Bus and coach *	3345	3357	3646	3935	4152	9.0%	17.6%	24.1%
Rail transport *	8639	9639	10720	11864	12525	24.1%	37.3%	45.0%
Air transport	515	538	542	611	644	5.1%	18.5%	24.9%
Waterborne transport*	418	465	466	485	518	11.4%	15.8%	23.8%
Total number of passengers	12918	13998	15374	16894	17839	19.0%	30.8%	38.1%

** Bus and coaches (excluding urban and suburban transport), rail transport (excluding tram and metro), maritime transport.*

Source: Update of PWC, TIS and Steer (2023), Impact assessment support study with PRIMES-TREMOVE and ASTRA model

5.1.1.3 Multimodal passengers

Drawing on historical data collected in the context of the exploratory study on passenger rights in the multimodal context[39], the number of multimodal passengers is projected to increase from 91 million in 2019 to 91.6 million in 2028, reaching 94.4 million by 2030 and 130.8 million by 2050. Compared to the total number of passengers by air, rail, bus and waterborne reported in the previous paragraph, this accounts for a share of about 0.7% in 2019, dropping slightly to 0.61% in 2030 before increasing to 0.73% by 2050.

The air-rail passengers represented over 60% of the total multimodal passengers in 2019, air-coach passengers above 30%, while the share of rail-coach passengers was limited to around 1% of the total number of multimodal passengers. These shares are projected to evolve over time, with a slightly higher growth rate of air-coach.

In terms of market size, the air-rail passengers represented 11.8% of the total number of intra-EU27 passengers travelling by air in 2019 and their share is projected to slightly decrease to 11.3% in 2030, going up to 12.6% by 2050. In 2019, air-coach passengers represented around 0.9% of the total number of bus and coach passengers, rising to 1.2% by 2050 in the baseline scenario, while rail-coach passengers represented less than 0.05% of bus and coach passengers over the whole-time horizon [40]. It is estimated that at EU27 level the multimodal combination of modes involving waterborne transport and other collective modes is negligible.

Table 4-5: EU27 Number of multimodal passengers and the market share in the baseline

	2019	2028	2030	2040	2050	2019-2030	2019-2040	2019-2050
Number of multimodal passengers (million)	91.0	91.6	94.4	114.3	130.8	3.8%	25.7%	43.8%
Air-rail passengers	60.8	61.3	61.3	72.9	80.9	0.9%	20.0%	33.1%
Air-coach passengers	29.2	29.2	32.0	40.1	48.4	9.6%	37.5%	66.0%
Rail-coach passengers	1.0	1.0	1.1	1.3	1.5	9.6%	27.7%	45.4%

[39] EY (2019), Exploratory study on passenger rights in the multimodal context: final report, https://data.europa.eu/doi/10.2832/72925

[40] PWC, TIS and Steer (2023), Impact assessment support study on common rules for enforcement of passenger rights, passenger rights for multimodal journeys, and reimbursement of airline tickets bought via an intermediary.

	2019	2028	2030	2040	2050	2019-2030	2019-2040	2019-2050
Waterborne-other modes passengers	Negl.	Negl.	Negl.	Negl.	Negl.	Negl.	Negl.	Negl.
Market size								
Air-Rail (% of air market size)	11.8%	11.4%	11.3%	11.9%	12.6%	-0.5	0.1	0.8
Air-Coach (% of bus and coach market size)	0.9%	0.9%	0.9%	1.0%	1.2%	0.0	0.1	0.3
Rail-Coach (% of bus and coach market size)	0.03%	0.03%	0.03%	0.03%	0.04%	0.00	0.00	0.01
Share in multimodal transport								
Air-Rail (% of air market size)	66.8%	67.0%	64.9%	63.8%	61.8%	- 1.9	- 3.0	- 5.0
Air-Coach (% of bus and coach market size)	32.1%	31.8%	33.9%	35.1%	37.0%	1.8	3.0	5.0
Rail-Coach (% of bus and coach market size)	1.1%	1.1%	1.2%	1.2%	1.1%	0.1	0.0	0.0

Source: Update of PWC, TIS and Steer (2023), Impact assessment support study

5.1.1.4 Transport activity

Total passenger transport activity (excluding international navigation and non-EU27 aviation) is expected to increase by around 13% by 2030, 22% by 2040 and 28% by 2050, compared to 2015 levels. Rail transport shows the greatest relative increase in activity, rising by up to 103% by 2050. This is mainly driven by the revision of the TEN-T Regulation, CEF funding, the proposal to increase railway capacity usage, and the action plan to promote long-distance and cross-border passenger rail services. Intra-EU27 aviation is also expected to increase significantly, growing by 78% compared to 2015 by 2050, driven by sustained economic growth. Passenger car activity maintains a dominant share in transport activity by 2050, despite lower growth than other transport modes. Inland waterways and domestic maritime activity are also growing, with an expected increase of 18% by 2050 compared to 2015. Finally, bus and coach transport activity is projected to grow by around 41% by 2050 compared to 2015.

Table 4-6: EU-27 passenger transport activity (Gpkm) in the baseline scenario, 2015-2050

Mode	Per year					Delta from 2015 levels		
	2015	2028	2030	2040	2050	2015-2030	2015-2040	2015-2050
Passenger cars	4 078	4 359	4 346	4 480	4 567	6.6%	9.9%	12.0%
Buses and coaches*	497	526	562	638	704	13.0%	28.2%	41.5%
Rail**	468	651	707	825	948	51.1%	76.3%	102.7%
Air (intra-EU27)	446	593	604	739	795	35.6%	65.8%	78.5%
Inland waterways and domestic maritime***	12	14	15	16	17	22.3%	28.6%	40.6%
Total	5 501	6 143	6 234	6 697	7 032	13.3%	21.7%	27.8%

Source: ASTRA model, calibrated on PRIMES-TREMOVE model results;

*Note *including urban transport | ** conventional, HSR, tram and metro | *** PRIMES-TREMOVE model*

As a consequence of the trend and drivers described above, the evolution of mode shares in total passenger transport at EU27 level, based on passenger kilometres, highlights an evident shift towards rail transport (+2.8 p.p. in 2030 and +5 p.p. in 2050) as well as towards air transport (+1.6 p.p. in 2030 and

+3.2 p.p. in 2050) and buses in the long term (+1 p.p. in 2050). Correspondingly, there will be a reduction in the share of transport activity by private cars (-4.4 p.p. in 2030 and -9.2 p.p. in 2050 compared to 2015).

Table 4-7: EU-27 mode share on total passenger transport activity (pkm) in the baseline scenario

Mode	Per year					Delta from 2015 levels		
	2015	2028	2030	2040	2050	2015-2030	2015-2040	2015-2050
Passenger cars	74.1%	71.0%	69.7%	66.9%	64.9%	-4.4	-7.2	-9.2
Buses and coaches*	9.0%	8.6%	9.0%	9.5%	10.0%	-0.0	0.5	1.0
Rail**	8.5%	10.6%	11.3%	12.3%	13.5%	2.8	3.8	5.0
Air (intra-EU27)	8.1%	9.6%	9.7%	11.0%	11.3%	1.6	2.9	3.2
Inland waterways and domestic maritime***	0.2%	0.2%	0.2%	0.2%	0.2%	0.02	0.01	0.02
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	-	-	-

Source: ASTRA model, calibrated on PRIMES-TREMOVE results;

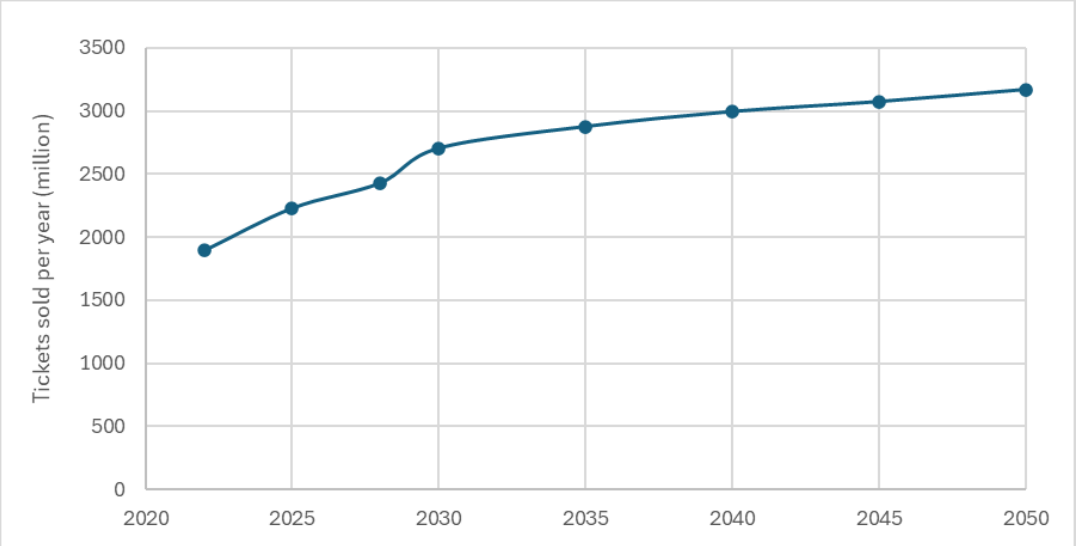
*Note * including urban transport | **: conventional, HSR, tram and metro | *** PRIMES-TREMOVE model*

5.1.1.5 Number of tickets sold

Rail

Limited and fragmented information on the number of rail tickets has been received as part of the stakeholder consultation process in this study. Therefore, the number of tickets sold (excluding seasonal passes) in the different Member States has been estimated by considering the number of railway passenger transported and by applying certain assumptions on the share of seasonal passes sold compared to the total number of tickets sold (see chapter 3.1.5 in the Market Report). Therefore, the trend in the number of tickets sold has been also estimated based on the projections of passengers carried by rail and considering the same assumptions over time. It is estimated that the rail tickets sold (excluding seasonal passes) in EU27 was about 2.2 billion in 2019. Following the recovery from the COVID-19 pandemic, this is projected to increase to about 2.4 billion in 2028, 2.7 billion in 2030 and 3.2 billion by 2050. Compared to 2019, this represents a growth of 24.6% and 46% for 2030 and 2050 respectively.

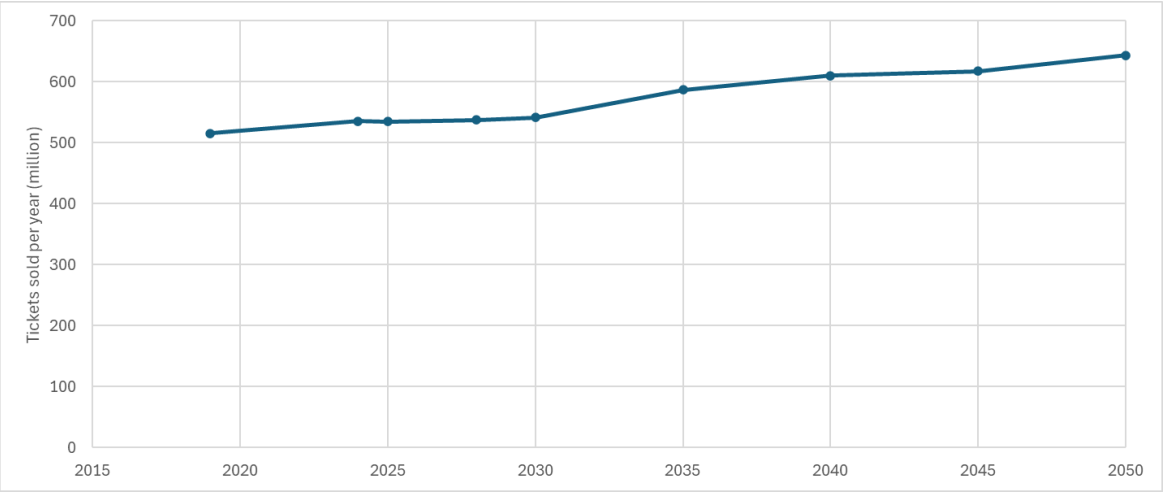
Figure 4-3: Estimated number of rail single tickets sold in the EU27 in the baseline scenario



Air transport

The number of tickets sold for domestic and intra-EU27 flights are assumed to be the same as the number of passengers identified by Eurostat[41] (see chapter 3.2.4 in the Market Report). The future projections in the number of tickets sold has been also estimated based on the projections of passengers carried by air transport. It is estimated that the air transport tickets sold in EU27 was about 515 million in 2019. Following the recovery from the COVID-19 this figure increased to about 535 million in 2024 and 2025 and is now projected to increase to about 537 million in 2028, 542 million in 2030 and 643 million by 2050. Compared to 2019, this represents a growth of 5.1% and 24.9% for 2030 and 2050 respectively.

Figure 4-4: Estimated number of air transport tickets sold in the EU27 in the baseline scenario

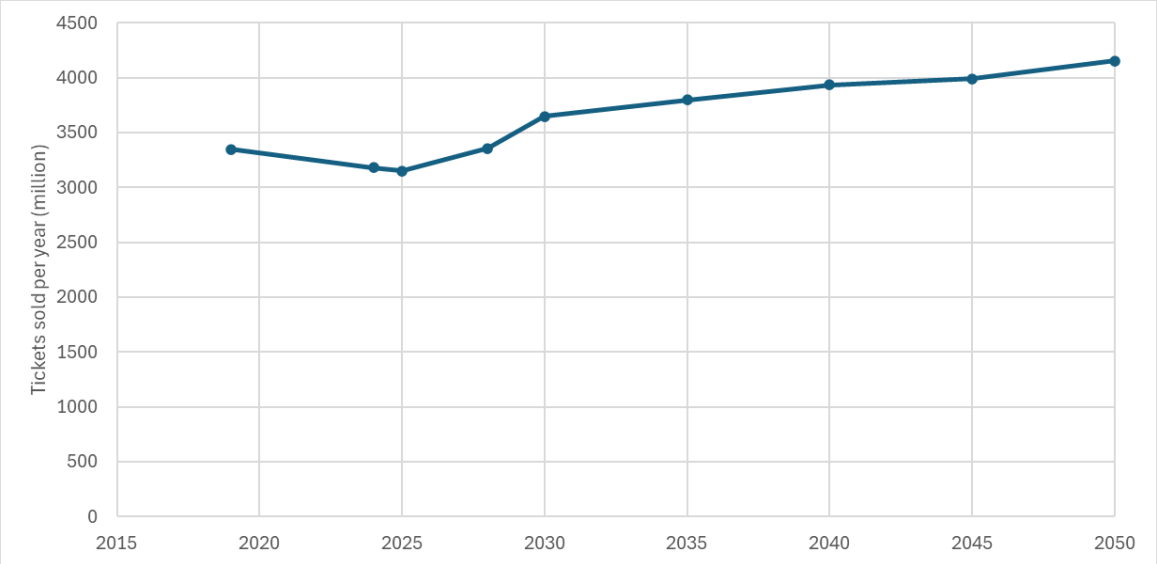


[41] avia_paoc - National + Intra-EU 27

Bus and coach

Very limited and fragmented information on the number of bus & coach tickets has been received as part of the stakeholder consultation process in this study with only three Member State statistical authorities providing relevant inputs. Therefore, the number of tickets sold in the different Member States has been estimated by considering the number of bus & coach passenger transported (see chapter 3.3.4 in the Market Report). Therefore, the trend in the number of tickets sold has been also estimated based on the projections of passengers carried by bus & coach and considering the same assumptions over time. It is estimated that the bus and coach tickets sold in EU27 was about 3.3 billion in 2019. Following the recovery from the COVID-19 pandemic where this figure dropped to about 3.1 million in 2025 and is now projected to increase to about 3.4 billion in 2028, 3.6 billion in 2030 and 4.2 billion by 2050. Compared to 2019, this represents a growth of 9.0% and 24.1% for 2030 and 2050 respectively. In 2024, about 10.4% of these refer to passengers travelling more than 250km (as seen in the Market report section 3.3.4).

Figure 4-5: Estimated number of bus & coach tickets sold in the EU27 in the baseline scenario

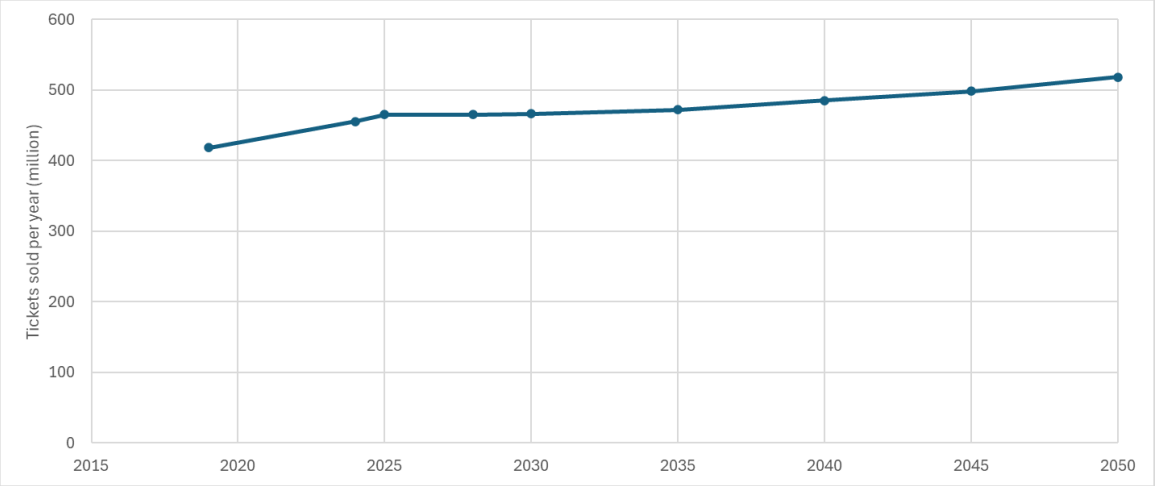


Waterborne transport

The number of tickets sold for waterborne transport are assumed to be the same as the number of passengers embarking and disembarking at European ports as identified by Eurostat[42] (see chapter 3.4.4 in the Market Report). The future projections in the number of tickets sold has been also estimated based on the projections of passengers carried by waterborne transport. It is estimated that the waterborne transport tickets sold in EU27 were about 418 million in 2019. Following the recovery from the COVID-19 this figure increased to about 456 million in 2024 and 465 million in 2025 and is projected to remain at that level until 2030 before increase to about 518 million by 2050. Compared to 2019, this represents a growth of 11.5% and 23.9% for 2030 and 2050 respectively.

[42] mar_pa_aa

Figure 4-6: Estimated number of waterborne tickets sold in the EU27 in the baseline scenario



5.1.1.6 Number of MDMS platforms

The increased digitalisation of transport services and the development of new business models for ticket distribution has already given rise to new and diverse MDMS platforms. A number of new MDMS concepts have already been developed, especially in the aviation market with the rise of OTAs and MSEs. The development of new MDMS platforms (including new concepts) with a focus on aviation is still expected to carry on albeit at a slower pace. However, there is still room for new MDMS concepts to develop especially with a focus on combining land-based modes. This is the case as, currently, services covering land-based modes, are not deployed to a similar extent across the EU. This is evidenced by the fact that although currently 364 MDMS platforms are identified in 2025 (see market report annex), in 14 out of the 27 EU Member States, there is a maximum of one platform operational providing more than simple travel information covering land-based modes. As such, the number of MDMS platforms is expected to gradually increase over time, with the focus of this increase being on platforms concentrating on land-transport modes combinations. This increase in MDMS platform deployment is expected to be hampered by the lack of a regulatory framework conducive to creating a level playing field that would further encourage such ventures (see also expected evolution of Problem 2 in section 2.5.2).

Table 4-8 below shows the sum of platforms across each country grouping projected forward to 2050, based on the outputs of the MPA model. The total number of platforms is expected to increase from about 364 in 2028 to 369 in 2030, 395 in 2040 and 421 in 2050, representing an increase of 8.5% in 2040 and 15.6% in 2050 when compared to 2028. Most of this increase is expected to come from the Planned Adopters country grouping that are currently more steeply increasing the density of MDMS platforms compared than the already more mature Front Runner grouping.

Table 4-8: Assumed evolution in number of platforms in the baseline (2028-2050)

Country Grouping	2028	2030	2040	2050
Baseline				
Front Runners	154	155	162	169
Planned Adopters	157	160	174	189
Followers	53	54	59	64
Total	**364**	**369**	**395**	**421**

The number of agreements between MDMS platforms and transport operators is also expected to increase, from 48,624 in 2025 to 49,321 in 2030, and 56,295 in 2050. This trend reflects the projected growth in ticket sales across all transport modes, alongside the rising share of online sales.

5.1.1.7 Tickets sold via MDMS

Rail

Based on the trend in the number of MDMS platforms and the (limited) information available on the market share of the existing platforms in terms of tickets sold, an estimation of the volume of rail tickets sold via MDMS platforms has been performed. The trend has been differentiated by Member State, considering the Country Grouping (Front Runners, Planned Adopters, Followers). It is estimated that the share of rail tickets sold via MDMS platforms in EU27 was about 3% in 2019, with a projected increase to 4.1% in 2030 and 7.3% in 2050. This corresponds to about 65 million of rail tickets sold via MDMS in 2019, increasing to 111 million in 2030 and 230 million in 2050 (due to both the increase in the MDMS market share and in total tickets sold).

Air transport

In air transport, the share of MDMS is a bit better documented (as can be seen in the Market Report section 3.2.7 and beyond). Further building on evidence collected from stakeholders, two separate trends are identified, characterising the B2B and B2C segments.

- **Tickets sold via MDMS platforms (B2B):** Although the volume of air traffic is expected to continuously grow over the next years, the relative number of tickets sold via B2B MDMS platforms can be expected to steadily decrease over time. This is underpinned by the market report identifying a number of trends resulting in an increased share of airline direct distribution channels and DC systems' distribution, while also the increasing market share of LCCs, that rely less on CRSs, is expected to further erode the share of CRSs in ticket distribution. Projecting from current trends, the share of all air tickets distributed via CRSs is expected to drop from 31.4% in 2019 to 16.8% in 2030 and 16.8% in 2050. These would represent a total of 162 million tickets sold in 2019, but rapidly declining to roughly 91 million in 2030 and about 108 million in 2050, a decrease of about 44% and 33% respectively when comparing to 2019. As new content aggregators (NCAs) are expected to grow, partially replacing the CRSs, sales via NCAs are expected to increase from 5.2% in 2019 to 13.4% in 2030 and 13.4% in 2050. These would represent 27 million tickets sold in 2019, rapidly increasing to 73 million in 2030 and 86 million in 2050, an increase of about 170% and 220% respectively when compared to 2019.

  Overall, the share of all air tickets distributed via B2B MDMS is expected to slightly decrease from 36.6% in 2019 to 30.2% in 2030 and 30.2% in 2050. This translates into 189 million tickets sold in 2019, 164 million in 2030 and 194 million in 2050.

- **Tickets sold via MDMS platforms (B2C):** As new and diverse MDMS platforms are developed, their developing deployment and coverage of transport services is expected to extend further. Combined with the increased use of digital services by transport consumers, it suggests that an increase in the usage of MDMS platforms can be expected in the future, especially motivated by an expected larger increase in the use of platforms in Member States where MDMS deployment and the relevant regulatory framework are still less mature. The share of all air tickets sold to be distributed via MDMS B2B platforms is expected to gradually increase from 18% in 2019 to 18.9% in 2030 and 18.9% in 2050. This translates to about 92.7 million tickets in 2019, increasing to 102.7 million in 2030 and 122 million by 2050. An increase of 11% in 2030 and 25% in 2050 when compared with 2019.

Bus and coach

Based on the trend in the number of MDMS platforms and the (limited) information available on the market share of the existing platforms in terms of tickets sold, an estimation of the volume of bus and coach tickets

sold via MDMS platforms has been performed. Similar to the assessment of rail tickets, the trend has been differentiated by Member State, considering the Country Grouping (Front Runners, Planned Adopters, Followers). It is estimated that the share of bus and coach tickets sold via MDMS platforms in EU27 was about 3% in 2019, with a projected increase to 3.5% in 2030 and 6.6% in 2050 indicating a somewhat slower ramp up compared to that of rail transport. This corresponds to about 83 million tickets sold via MDMS in 2019, increasing to 126 million in 2030 and 273 million in 2050 (due to both the increase in the MDMS market share and in total tickets sold).

Waterborne transport

For waterborne transport, a similar approach was adopted to that for rail and bus and coach ticket distribution via MDMS. Based on the trend in the number of MDMS platforms an estimation of the share and volume of waterborne transport tickets sold via MDMS platforms has been performed. This accounted for differentiated trends per Member State, considering the Country Grouping (Front Runners, Planned Adopters, Followers). It is estimated that the share of waterborne tickets sold via MDMS platforms in EU27 was about 2.5% in 2019, with a projected increase to 3.4% by 2030 and 6.7% in 2050. This corresponds to about 11 million tickets sold via MDMS in 2019, increasing to about 16 million in 2030 and 35 million in 2050 (due to both the increase in the MDMS market share and in total tickets sold).

Table 4-9: EU-27 estimated number of tickets sold via MDMS in the baseline scenario across modes (in million)

Mode		Per year					Delta from 2019 levels		
		2019	2028	2030	2040	2050	2019-2030	2019-2040	2019-2050
Rail	Tickets sold via MDMS	65	94	111	170	230	71%	161%	253%
	Share of total rail tickets sold	3.0%	3.9%	4.1%	5.7%	7.3%			
Air transport B2B	Tickets sold via CRSs	162	102	91	103	108	-44%	-37%	-33%
	Share of total air tickets sold	31.4%	19.0%	16.8%	16.8%	16.8%			
	Tickets sold via NCA	27	66	73	82	86	170%	204%	220%
	Share of total air tickets sold	5.2%	12.2%	13.4%	13.4%	13.4%			
	Tickets sold via MDMS	189	168	164	185	194	-13%	-2%	3%
	Share of total air tickets sold	36.6%	31.2%	30.2%	30.2%	30.2%			
Air transport B2C	Tickets sold via MDMS	92.7	101.5	102.7	115.7	122.0	11%	25%	32%
	Share of total air tickets sold	18.0%	18.8%	18.9%	18.9%	18.9%			
Bus & Coach	Tickets sold via MDMS	84	106	126	197	273	51%	136%	226%
	Share of total B&C tickets sold	2.5%	3.2%	3.5%	5.0%	6.6%			
Waterborne transport	Tickets sold via MDMS	11	14	16	25	35	45%	127%	218%
	Share of total waterborne tickets sold	2.5%	3.0%	3.4%	5.0%	6.7%			
	Tickets sold via MDMS	**441**	**483**	**520**	**692**	**854**	18%	57%	94%

Mode		Per year					Delta from 2019 levels		
All modes	Share of total tickets sold	**6.8%**	**7.1%**	**7.1%**	**8.6%**	**10.1%**			

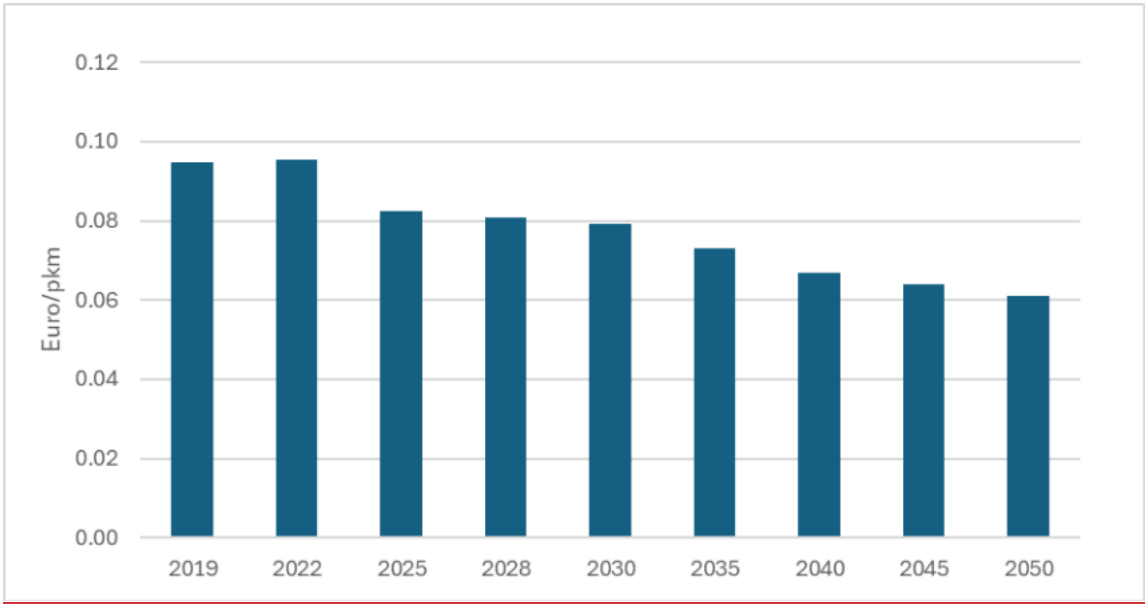
The total number of passenger tickets sold via MDMS platforms is projected to increase from 441 million in 2019 to 520 million in 2030 and 854 million by 2050. However, their share in the total number of tickets sold is projected to remain limited in the baseline scenario (7% in 2030 and 10% in 2050).

5.1.1.8 Ticket fares

Rail

Figure 4-7 presents the average rail cost per pkm for 2019 and 2022, with the projected trend until 2050. The average cost in 2019 and 2022 is estimated as the ratio between the total monetary value (see Appendix of the Market Research) and rail transport performances. The projection in the future is estimated using costs per passenger-kilometre from PRIMES-TREMOVE model- in the baseline scenario.

Figure 4-7. Average rail cost per pkm in EU27 in the baseline scenario



Source: Consortium analysis based on data from IRG (2024), EUROSTAT, PRIMES-TREMOVE and ASTRA model

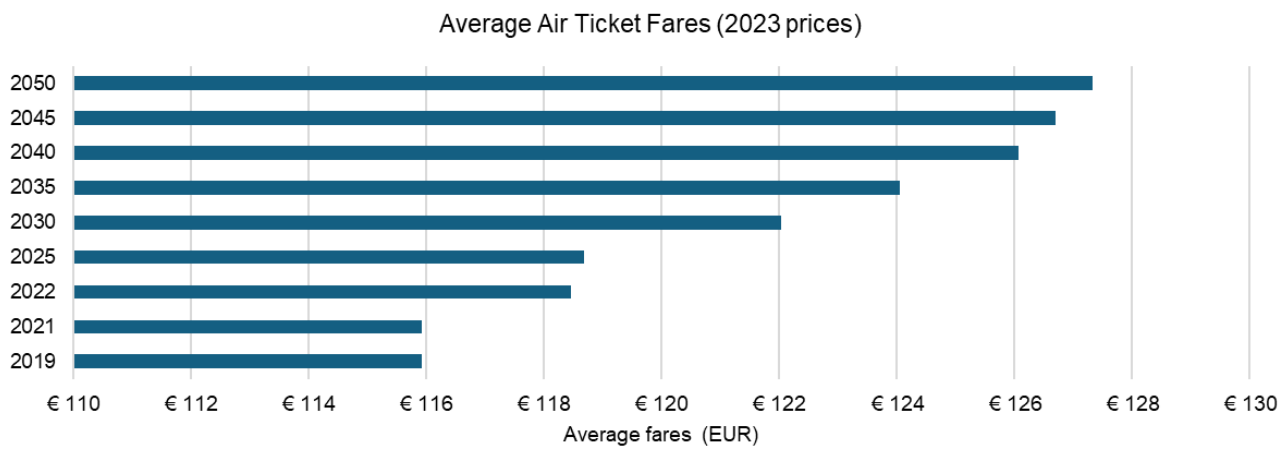
Air transport

Figure 4-8 displays the average ticket fares[43] for 2019, 2021 and 2022, as well as the expected price projections up until 2050. These figures are based on the average one-way fares of three major airline groups, a regional carrier and a large low-cost carrier, and include both intra-EU flights in the EU27[44]. Projections for 2025–2050 were estimated using costs per passenger-kilometre from PRIMES-TREMOVE. All values are expressed in 2023 prices and exclude taxes and surcharges.

[43] Ticket fares exclude taxes and surcharges.

[44] Data for 2022 (in 2019 prices) was obtained under NDA from a past Commission study, based on the average one-way fares of the selected carriers. The sample of airlines was retained as it was considered more representative of the market. For the MDMS support study, this methodology was applied and updated to 2023 prices. Projections were calculated considering the projections on the cost per passenger for domestic and international intra-EU flights.

Figure 4-8. Average air ticket fares for intra-EU flights in the EU27 (2023 prices)



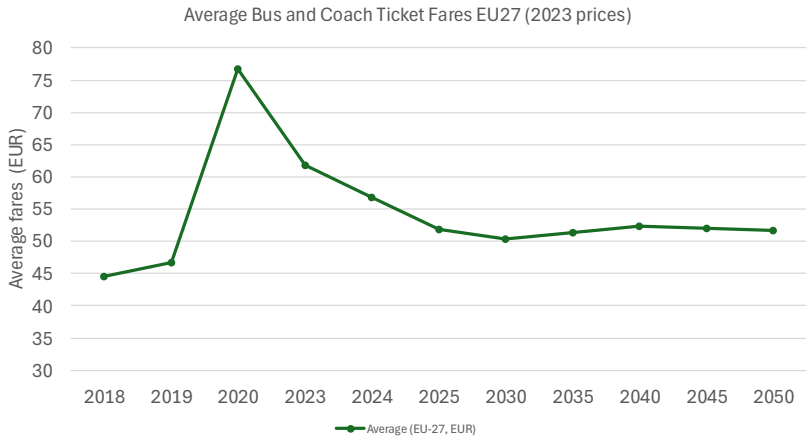
Source: Consortium analysis based on data gathered from a sample of airlines for a past study

This projection assumes that the sharp rise in average fares from 2022 to 2025 represents a temporary market dislocation driven by COVID and post-COVID supply constraints, elevated fuel costs, including initial SAF uptake, and high load factors. From 2025 onwards, Figure 4-8 shows that ticket prices are expected to continue to increase over time until 2050. However, industry forecasts indicate that fares will stabilise and align with demand growth, returning to the pre-2022 trend[45,46].

Bus & coach

Figure 4-9 displays the average ticket fares for the EU27 in 2019 and expected prices through 2050 for trips greater than or equal to 250 kilometres). The projection in the future is estimated using costs per passenger-kilometre from PRIMES-TREMOVE model- in the baseline scenario. The values shown suggest a general upward trend in average bus and coach ticket prices within the EU27, from EUR 46.77 in 2019 to EUR 50.41 in 2030 and EUR 51.64 in 2050[47].

Figure 4-9. Average bus and coach ticket fares for EU27 trips greater than 250km (2023 prices)



Source: Consortium analysis based on data gathered for a past study and updated based on the PRIMES-TREMOVE projections

[45] IATA, Global Outlook for Air Transport, June 2024. https://www.iata.org/en/iata-repository/publications/economic-reports/global-outlook-for-air-transport-june-2024-report/

[46] EUROCONTROL, Aviation Long-Term Outlook 2024–2050. https://www.eurocontrol.int/publication/eurocontrol-forecast-2024-2050

[47] All fares are in 2023 prices.

Similar to rail, as these ticket fare projections are developed based on cost of transport projections, the sharp spike in 2020 represents the impact of COVID-19 in increasing the average cost per passenger-km, without this necessarily translating to similarly steep ticket fare increases.

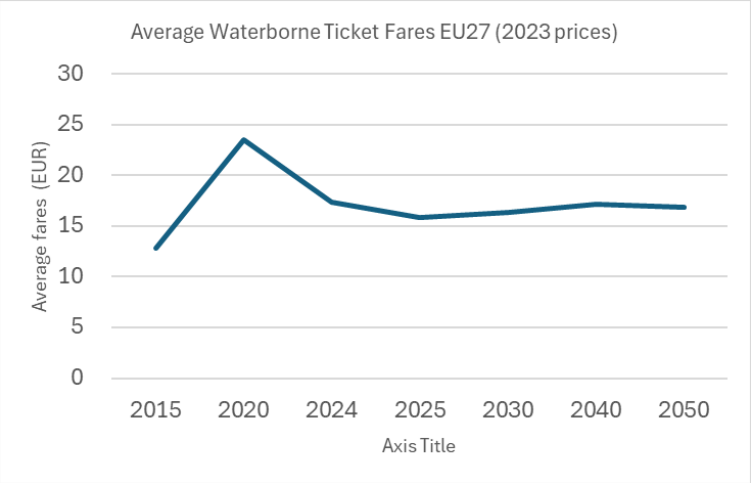
Waterborne transport

Figure 4-10 displays the average ticket fares for the EU27 in 2019 and expected prices through 2050 for waterborne transport trips. The projection in the future is estimated using costs per passenger-kilometre from PRIMES-TREMOVE model- in the baseline scenario.

The values shown suggest a general stabilisation and slight upward trend after the spiked due to COVID-19. Similar to rail, as these ticket fare projections are developed based on cost of transport projections, the sharp spike in 2020 represents the impact of COVID-19 in increasing the average cost per passenger-km, without this necessarily translating to similarly steep ticket fare increases.

The average waterborne transport ticket fare within the EU27, rose from EUR 12.87 in 2015 to EUR 16.38 in 2030 and EUR 16.82 in 2050[48].

Figure 4-10: Average waterborne transport ticket fares for EU27 (2023 prices)



Source: Consortium analysis based on data gathered and updated based on the PRIMES-TREMOVE projections

5.1.1.9 CO_2 and air pollutant emissions

CO_2 emissions from passenger transport[49] are projected to decrease by around 27% by 2030 and by 96% by 2050 compared to 2015 levels. This is largely driven by the reduction in emissions from passenger road transport, but also by the reduction in the intra-EU air transport CO2 emissions. The main drivers are the CO_2 standards for light duty vehicles, supported by Alternative Fuels Infrastructure Regulation (AFIR), the Renewables Energy Directive and the ETS2 for road transport. The ReFuelEU aviation Regulation, together with the EU ETS, also leads to significant reductions in intra-EU27 air transport emissions.

NOx emissions are projected to decrease by around 56% between 2015 and 2030 (and by 94% by 2050), primarily due to the electrification of road transport. Exhaust particulate matter (PM2.5) emissions are expected to decline even more over the long term (-34% by 2030 and -89% by 2050). CO emissions are projected to show an even steeper decrease in the long term, by around 62% in 2030 and 97% in 2050. VOC emissions are estimated to decrease by -49% in 2030 and by around 90% in 2050.

[48] All fares are in 2023 prices.

[49] Related to land modes, inland waterways, domesrtic maritime and intra-EU27 aviation

Table 410: EU-27 passenger transport emissions from passenger transport (land modes, Inland waterways, domestic maritime and intra-EU aviation in the baseline scenario (1000 Tons), 2015-2050

Pollutant	Per year					Delta from 2015 levels		
	2015	2028	2030	2040	2050	2015-2030	2015-2040	2015-2050
CO2 eq.	600 107	505 609	439 217	168 579	22 383	-26.8%	-71.9%	-96.3%
NOx	2 211	1 152	976	423	125	-55.9%	-80.9%	-94.3%
PM2.5 (exhaust)	71	59	47	21	8	-33.7%	-70.9%	-88.5%
CO	3 353	1 760	1 280	387	106	-61.8%	-88.5%	-96.8%
VOC	258	171	132	55	25	-48.9%	-78.6%	-90.5%

Source: ASTRA model, calibrated on PRIMES-TREMOVE results (except for VOC not available from PRIMES)

Table 4-11: EU-27 passenger transport emissions from road transport only in the baseline scenario (1000 Tons), 2015-2050

Pollutant	Per year					Delta from 2015 levels		
	2015	2028	2030	2040	2050	2015-2030	2015-2040	2015-2050
CO2 eq.	541 717	442 631	377 626	127 532	5 636	-30.3%	-76.5%	-99.0%
NOx	1 744	769	609	186	23	-65.1%	-89.3%	-98.7%
PM2.5 (exhaust)	57	45	35	12	4	-38.2%	-78.0%	-93.0%
CO	3 201	1 661	1 210	356	102	-62.2%	-88.9%	-96.8%
VOC	251	165	125	49	19	-50.0%	-80.4%	-92.3%

Source: ASTRA model, calibrated on PRIMES-TREMOVE results (except for VOC not available from PRIMES)

5.1.1.10 Road fatalities and injuries

Based on the evolution of road transport activity and the implementation of road safety initiatives, the projections show a decreasing trend in road fatalities and injuries over time. The following table shows this evolution in relation to fatalities and injuries occurring in road crashes, i.e. related to both passenger and freight vehicles and including also powered-two-wheelers (P2W) and slow modes. Compared to 2015, the number of fatalities is expected to fall by 25% by 2030 and by around 36% by 2050. Similarly, the number of people affected by serious injuries is expected to decrease by 25% by 2030 and by 32% by 2050, while the number of people with slight injuries is expected to decrease by 23% by 2030 and by around 32% by 2050.

Table 4-12: EU-27 Road fatalities and injuries (number) in the baseline scenario, 2015-2050

Number	Per year					Delta from 2015 levels		
	2015	2028	2030	2040	2050	2015-2030	2015-2040	2015-2050
Fatalities	24 151	18 675	18 082	16 702	15 447	-25.1%	-30.8%	-36.0%
Serious injuries	196 994	153 974	147 516	142 290	133 023	-25.1%	-27.8%	-32.5%
Slight injuries	1 032 040	831 491	797 958	735 180	701 123	-22.7%	-28.8%	-32.1%

Source: ASTRA model, calibrated on PRIMES-TREMOVE model results and CARE database

Note: including powered-two-wheelers (P2W) and slow modes

5.1.1.11 Road congestion costs

Road congestion costs in the baseline scenario would increase by about 18% by 2030 and 34% by 2050, relative to 2015. On the inter-urban network this would be the result of growing transport activity along specific corridors, in particular where these corridors cross urban areas with heavy local traffic. On the other hand, driven by policy in place and the assumed implementation of the Roadworthiness package, the number of fatalities is expected to decrease by 25% by 2030, relative to 2015 (36% decrease by 2050) and the number of injuries by 23% by 2030 (32% reduction for 2015-2050).

5.1.1.12 Summary

The table below provides a brief summary of some of the key quantitative indicators presented in previous sections.

Table 5-4-13: Quantitative assessment of the baseline scenario development of the ticket distribution market

Indicator	2028	2030	2040	2050
Total **volume of tickets sold (million per year)**				
for aviation	539	542	611	644
for rail	2 430	2 706	2996	3 170
for buses and coaches	3 357	3 646	3 935	4 152
for waterborne	465	466	485	518
Number of **MDMS platforms**	364	369	395	421
Volume of tickets sold via MDMS for aviation B2B (in million)	168	164	185	194
Volume of tickets sold via MDMS (other modes + aviation B2C)	311	351	501	654
Volume of tickets sold via MDMS (total)	483	520	692	854

5.1.2 Qualitative baseline

The expected development of the Problems in the baseline scenario is presented in Chapter 2. Based on this analysis, there is an expectation for a relative gradual improvement in terms of the comprehensiveness of the travel information available to consumers via MDMS platforms and the level of access of operators to indispensable MDMS. Fuelled by the ever-increasing digitalisation of the economy, the expected increase in the deployment and use of MDMS platforms to plan, book and implement trips will put pressure to the further development of (national) frameworks to regulate transport operator-MDMS platform interactions. This can be expected to facilitate the further integration of the services of operators in MDMS platforms. However, the development of national regulatory frameworks, and the rise of new actors in ticket distribution-related services and the commercial drivers of both transport operators and MDMS platforms when making critical integration decisions, suggests persistent obstacles to an accelerated integration will remain in the future.

When it comes to B2B services, the shifting transport patterns (i.e. change in modal split) and the increased digitalisation of society giving rise to the development of new business models for ticket distributors, are trends expected to contribute towards the propagation of the market distortions currently observed.

In this section we present an analysis of the likely evolution of the market of MDMSs for indicators that could not be quantified.

- **Number of rail operators making their offerings available via MDMS platforms:** With the expected increase in the deployment of MDMS platforms and tickets sold via MDMS, it can be expected that, to some extent, an increased integration of rail operators in MDMS platforms will be visible. Industry initiatives, such as the CER Ticketing Roadmap, foresee actions to increase the visibility of different fares and enable the purchase of international and domestic tickets through a wider range of distribution options, including online apps. This suggests that at least within the group of incumbent rail operators, an increased sharing of ticketing data can be expected, as CER members commit to increase the availability of tickets. However, the voluntary nature of these actions, and the lack of provisions against excluding platforms and other operators from reciprocal agreements, could possibly result in this integration following the currently observed patterns where the data sharing approach is dictated by commercial interests preventing a full integration of the transport offering in all relevant third-party platforms. Ultimately, the main players in the passenger rail services market are also the main players in the rail ticket distribution market. They have an interest in keeping a quasi-monopoly in both markets reinforcing one another. With the ongoing opening of the rail market, new private operators are expected to increase their market share in the rail passenger services market. These private players have a stronger interest to sell their tickets using the most diverse range of distribution channels, as these tickets are their sole source of income.
- **Completeness & accuracy of service information provided via MDMS platforms:** A consequence of the limited expected further integration of rail services into MDMS platforms is the limited completeness of the rail offering on the MDMS platforms. Further, even in the cases in which transport offerings are integrated in MDMS platforms, this does not secure that the information made available to different platforms will always be of the same quality as there is evidence of preferential treatment both on the side of transport operators and that of MDMS when choosing what information will be shared or promoted at different ticket distribution platforms. Therefore, a limited level of progress is expected in this respect.
- **Ability to book multi-modal/multi-operator service offerings:** The user experience and ease of planning and booking a multi-modal or multi-operator trip is one of the factors recognised as affecting the modal choice for a journey, as showcased by the Eurobarometer survey findings (see market report section 2.1 in Annex B). With the increasing deployment and expanding scope of MDMS platforms, more passengers are expected to find such platforms useful to plan their trips. As platforms evolve and gain a better understanding of their users, further innovations are expected to improve the user experience over time.

Table 4-14 below presents an overview of the trends affecting the indicators as analysed above.

Table 4-14: Qualitative assessment of the baseline scenario development of the ticket distribution market

Indicator	Expected trend	Change
Number of **rail operators** making their offerings available via MDMS	Limited further integration of rail operators in existing and prospective MDMS continuing current approach of limiting offering to third-party / independent MDMS	- or ↑
Completeness & accuracy of service information provided via MDMS	Limited improvement over time following the trend of integration of rail operators in MDMS	- or ↑
Ability of booking multi-modal/multi-operator trips	Expected increase in ticket booking convenience as more platforms develop and make new services available	↑

5.2 POLICY MEASURES AND OPTIONS

In this section we present the policy measures considered to address the problem drivers and specific objectives of this initiative. A list of discarded policy measures is presented in Appendix C together with the rationale for them being discarded. A screening exercise for discarded and retained measures is under development and will be finalised with the analysis of feedback from the stakeholder consultation activities on the effectiveness, efficiency, subsidiarity and proportionality and the technical/legal/political feasibility of the measures. This will be also included in the next iteration of this report.

Then in section 5.2.1 we elaborate on the list of retained measures explaining how they are meant to be implemented and the mechanism through which they are expected to yield impacts. Finally in section 5.2.2, these policy measures are packaged into policy options of different levels of ambition.

5.2.1 Long-list of policy measures

In Table 4-15 the list of retained policy measures is presented. This list of measures was derived in consultation with the European Commission and presented in the second stakeholder workshop of 2 April 2025. In drawing this list of measures, we clearly and directly link them to the problem drivers identified making sure that all problem drivers are addressed and that there is more than one alternative policy measure addressing each problem driver.

Table 4-15 - Description of policy measures

No	Policy measure	PD	Action required	Intervention logic
Update and extension of the CRS Code of Conduct's rules				
1	Obligation for all MDMS platforms to apply neutral display obligations and for transport operators (in all modes) to ensure that the data they submit are accurate	PD2	The current rules on neutral display included in the CRS Code of Conduct would be extended to all MDMS. The neutral display rules ensure that data provided by participating carriers is presented in a neutral and comprehensive manner, without discrimination or bias. Non-discriminatory displays must include accurate, non-misleading information. The neutral display requirements would include: **Ban on self-preferencing**. MDMS platforms are prohibited from applying highly restrictive practices such as self-preferencing in cases when a MDMS platform owned by a mobility operator. This will draw experience from CRS Code of Conduct, Article 5 and 10, which prohibits self-preferencing for parent carriers owning a CRS. **Ban on paid prominence except for B2C MDMS and only for non-neutral filter called "Choice of". Ranking / display based on commercial agreements between operators and MDMS platforms is prohibited.** Advertised and paid promotions in search results are prohibited for all MDMS. B2C MDMS can add a non-neutral filter complying with the Directive on Unfair Commercial Practices but not on the landing page and this cannot be a default ranking criterion. As mentioned above the latter Directive prohibits undisclosed advertising and paid promotion in search results. Providing search results in response to a consumer's online search query without clearly disclosing any paid advertisement or payment specifically for achieving higher ranking of products within the search results is considered as unfair practice.	Ensuring that neutral display requirements apply to all MDMS would ensure that all CRS and MDMS platforms are not preferencing certain carriers such as parent companies, legacy carriers, or rail incumbents in their display order. Instead, neutral displays can contribute to establishing a level playing field with fair competition, ensuring that all carriers are considered when customers are choosing a mobility option. A ban on self-preferencing would ensure that MDMS platforms that also double as transport operators, offer fair representation of other groups of transport operators using their services. Similarly, banning paid prominence would stop larger, or more successful, transport operators from paying for a prominent or visible position in search results. The interviews and survey responses indicate a widely shared view among participating stakeholders that the current regulatory framework, especially the CRS Code of Conduct, is outdated and no longer aligns with the complex, rapidly evolving landscape of digital distribution. **Survey** responses highlighted several recurring themes regarding the CRS Code of Conduct. Six air-sector stakeholders said the CRS Code remains effective for traditional CRSs but no longer reflects current market realities. Ten transport operators and associations noted that OTAs, metasearch engines and other MDMS platforms now dominate distribution but are not subject to comparable rules. One major rail and coach operator stressed that the Code does not cover rail or OTAs, limiting its relevance. Three CRSs pointed to competitive distortions between regulated CRSs and unregulated B2B channels, with one arguing that many Code provisions "are no longer relevant today" and calling for consistent rules "for all distribution channels." A new content aggregator similarly emphasised the historical value of the CRS

No	Policy measure	PD	Action required	Intervention logic
			MDMS will define their default sorting criteria with users having the ability to indicate preferences based on a minimum sorting criteria. Under this measure, the European Commission would lead on a process to define: ○ a set of minimum sorting criteria (including parameters such as travel time and price) that MDMS platforms should at minimum provide to users; and ○ set the parameters for MDMS platforms to define their own default option that complies with neutral display requirements. To avoid the unintended consequences on the quality of services that could derive from more stringent requirements – e.g., less innovation and differentiation between platform algorithms potentially leading to a lower user experience – the identified set of sorting criteria would only represent a minimum requirement for MDMS platforms, which would still have the ability to offer different sorting criteria beyond what is required to potentially address their niche markets or target the preferences of their users. Similarly, MDMS platforms would be free to define additional ranking options beyond the one they would be required to adopt by default.	Code—crediting it with preventing biased or abusive GDS practices—but recommended updating it to reflect technological developments and the growing role of unregulated actors such as OTAs, and supported applying core principles across all MDMS platforms. However, some stakeholders took a different position. A rail-focused MDMS stakeholder said they did not perceive a distortion between CRS and non-regulated B2B platforms, and another large platform argued that modern distribution models respond to market demand without bypassing CRS obligations or distorting competition. In the **interviews,** opinions diverge on whether neutrality enhances consumer clarity or stifles competition and user choice. Overall, there is strong support among the stakeholders who have participated in the stakeholder consultation activities, for modernising the regulatory framework to better reflect today's heterogeneous market, rather than reinforcing outdated and overly rigid rules. One MDMS provider, one road transport operator, WestBahn, and EPF generally support the idea of applying the CRS Code of Conduct's neutral display obligations, provided it is implemented in a manner that enhances customer clarity. Additionally, three out of six air carriers / airlines associations supported this policy. On the other hand, two MDMS providers out of 16 and three incumbent rail operators / rail associations out of five, including SNCF and CER, argue that there should be no changes in this regard.
2	Obligation for all MDMS platforms to load and process data of operators with equal care and timeliness	PD2	Require MDMS platforms to load and process data provided by transport operators fairly, ensuring that all operators' data is treated with the same level of care, in accordance with the rules already set out for CRS platforms in the CRS Code of Conduct. System operators would therefore be obliged to ensure that all operators have the same information on schedules, fares and availability, irrespective of transport mode, as that which is provided to its own operator. They must also ensure equal	This policy measure provides an increased level of protection for transport operators selling their tickets through MDMS platforms, by ensuring that MDMS platforms are bound by the same regulatory rules as CRS. This policy measure applies solely to the fair treatment of data, ensuring that loading and processing are conducted with equal care and promptness. This measure ensures that new distribution channels that have become more popular in part due to increased internet penetration are also obliged to meet the same standards. It

No	Policy measure	PD	Action required	Intervention logic
			timeliness in confirming reservations, accept and confirm bookings which are in conformity with fares and conditions, and not refuse bookings under unclear terms.	therefore aims to adapt the policy framework in line with regulatory changes, while ensuring fair competition between ticketing platforms and channels.
3	Obligation for all MDMS platforms to share marketing and booking data in a fair way, when requested by transport operators and authorities Obligation for all MDMS to apply the CRS Code of Conduct's rules on marketing and booking data (MIDT (Marketing Information Data Tapes) data or equivalent)	PD3	Marketing Information Data Tapes (MIDT) refers to booking and marketing data collected by CRSs – this includes price information, what travel agents are booking which routes, origin and destination travel combinations, and what share each carrier or route is getting. MDMS platforms collect similar data when users search for journeys, make bookings and/or purchase tickets. This policy measure would restrict and regulate the usage of this data by MDMS platforms toward against potentially abusive practices and misuse of the data. The requirements for MDMS platforms would be as follows: ○ Prohibiting system vendors to identify travel agents in the MIDT to avoid transport operators employing persuasive tactics towards travel agents to preference their trainline/airline. ○ Obligation for system providers to maintain a clear functional and operational separation between the MDMS platform and the internal reservation systems of any parent transport operators, in order to prevent any preferential access or undue advantage for affiliated operators and/or carriers. ○ Obligation for system vendors to provide equal access to MIDT to all transport operators	Similar to PM 2, this measure addresses the current lack of coverage of the CRS Code of Conduct to all air ticketing distribution channels. By ensuring all MDMS must comply with rules on marketing and booking, a level playing field is established where transport operators are protected from data misuse and preferential access to information is avoided. The interviews underscored significant structural changes in the travel distribution landscape, highlighting the declining relevance of traditional CRS platforms and growing concerns about the transparency and neutrality of online intermediaries such as OTAs and meta-search engines. As airlines increasingly pursue direct-to-consumer strategies and alternative data providers gain prominence, the strategic value of CRS platforms is eroding (mentioned by one MDMS provider). At the same time, a stakeholder from the airline sector, criticised the existing regulatory framework for disproportionately protecting OTA access to airline content without ensuring adequate consumer transparency (mentioned by one MDMS association). These stakeholders argue that platforms often prioritise commercial interests over user value, calling for a revision of the CRS Code of Conduct to better reflect current market realities (referred by two airline associations out of two, two airlines out of four, four MDMS providers / MDMS association out of 16, - including one OTA, one new content aggregator, one CRS and EU Travel Tech, and one Other organisation – BEUC).
4	Obligation for all B2B MDMS plat-forms to treat subscribers fairly and clearly identify in their display banned airlines. Obligation for third countries B2B MDMS to ensure equal treatment of EU air carriers	PD1	This policy measure would extend only to B2B MDMS platforms, not all MDMS. This means that B2B MDMS would not need to comply with these same rules under the new definition of CRS. ○ The 'fair treatment of subscribers' refers to equal and non-discriminatory access to the platform's (whether CRS or MDMS) content and services. Article 6 of the CRS Code of Conduct will stay in place. That article	As in PM 2 and PM 3, widening the scope of rules set under the CRS Code of Conduct ensures that other MDMS channels that function similarly to existing CRS will be held against the same standards. However, this policy measure only targets B2B MDMS platforms. B2B platforms aggregate mobility services and distribute them to professional users who resell or manage them (e.g., travel

No	Policy measure	PD	Action required	Intervention logic
			already prevents CRSs from imposing unfair or unjustified conditions on travel agents. **Equal access to functionalities** ○ All users to have access to the same search, display, booking and post-sale features **Neutral display criteria** (see PM1) **Transparency**: Ranking and display criteria should be made available to users. The 'equivalent treatment of EU airlines on 3rd country B2B MDMS' instead ensures that EU airlines that are featured on non-EU owned MDMS platforms are entitled to equivalent treatment. This includes the above-mentioned factors, such as non-discriminatory pricing and neutral display criteria. This ensures competition fairness, and that preferential treatment is not given to airlines based in the 3rd country.	agencies, business platforms) similarly to CRS platforms. B2C platforms instead interact directly with the end user and are subject to other consumer protection horizontal legislation (e.g., GDPR, EU digital services act (DSA), Unfair commercial practices directive (EU 2019/2161). The different operational model of B2C platforms makes the CRS-style rules less relevant and could subject small or innovative B2C platforms to unnecessary regulatory burden.
5	Remove provisions from CRS Code of Conduct on data protection which are no longer necessary due to GDPR	PD1	The EU General Data Protection Regulation (GDPR) (EU 2016/679) harmonised data privacy laws across Europe, setting rules on how organisations can collect, process and store the personal information of individuals. Personal data covered under this legislation includes: ○ Names, addresses, phone numbers, email addresses ○ Identification numbers (i.e., passport numbers) and biometric data ○ Location data (i.e., IP addresses) As data protection is addressed under wider umbrella EU legislation, Article 11, in Section 4 would either be removed or revised. This article refers to the following points on privacy: ○ Collecting personal data only for the purpose of making reservations or issuing tickets and processed only for these purposes.	This measure aims to eliminate outdated and redundant data protection provisions in the CRS Code of Conduct that are fully superseded by the GDPR to avoid disparities between different requirements, reduce legal uncertainty, and ensure consistency with horizontal EU data protection law. In the **survey**, participants were asked how effective they expected Policy Measure 5 (removing CRS Code of Conduct data-protection provisions now superseded by the GDPR) to be in addressing Problem 1. Across all stakeholders, 9 of 66 considered it effective, 10 considered it ineffective, and 47 were neutral or unsure. Among MDMS providers, 2 of 20 viewed it as effective, 7 saw it as ineffective, and 11 were neutral or unsure. Transport operators showed very limited expectations of effectiveness, with 2 of 28 seeing it as effective and 25 neutral or unsure. Among national authorities, 2 of 10 expected it to be effective, while 8 were neutral or unsure. Among other stakeholders, 3 of 8 considered it effective, 3 considered it ineffective, and the remainder were neutral or unsure.

No	Policy measure	PD	Action required	Intervention logic
			○ Data processing for other purposes should only take place at the explicit consent and informed basis of the individual involved ○ Information under control of the system vendor should be stored offline within 72 hours of the last element of the booking and destroyed within three years. ○ Consumers should have access to the name and address of the system vendor, and information on their data processing, if requested. ○ Consumers retain the right to access their own data stored by the vendor This article would be replaced with reference to the data protection provisions outlined in Directive 95/46/EC.	
Enforcement				
6	Obligation for Member States to appoint a national authority to settle disputes be-tween parties, and establish an EU en-forcement network for coordination	, PD3, PD4	Member States will be required to formally designate a national authority responsible for overseeing the implementation and enforcement of rules related to MDMS platforms, including dispute resolution among transport operators and MDMS providers. These authorities will ensure that access conditions to MDMS platforms are fair, transparent and non-discriminatory according to the principles established by PM 11 and as applied to the scope of the regulated entities as defined in PMs 9-15. The enforcement rules will mainly concern the following: ○ Non-discrimination and neutrality of displays ○ Access rights and participation conditions ○ Content and data use rules ○ Patent carrier rules Under this policy measure, the CRS Regulation enforcement rules will now fall under the responsibility of the designated national authorities. To effectively carry out these responsibilities, authorities will likely need to expand their capacity by recruiting	This policy measure addresses uneven access of operators to indispensable MDMS platforms. It tackles multiple factors contributing to this problem. By appointing dedicated national authorities to oversee enforcement and dispute resolution, the measure ensures that MDMS platforms operate under clear, enforceable rules that prevent unfair or highly restrictive conditions/terms towards certain operators. It will help to curb the risk of dominant platforms prioritising larger operators due to commercial incentives, thereby improving access for smaller, regional, or new transport providers who might otherwise struggle to compete. The involvement of national authorities also directly addresses the currently imbalanced commercial relationships between MDMS platforms and transport operators. Through formal enforcement mechanisms, authorities can tackle issues such as unfair contractual conditions, exclusivity clauses, high fees and concerns about visibility and ranking. This oversight provides smaller operators with stronger protections and ensures they

No	Policy measure	PD	Action required	Intervention logic
			additional staff, such as digital platform and data governance experts to audit algorithms and data practices, legal and competition specialists to handle disputes and ensure compliance, technical staff to monitor platform interoperability, and consumer protection officers to address user complaints. However, rather than creating new institutions, Member States could achieve efficiencies by assigning these functions to existing bodies, such as national competition authorities or transport regulators. To ensure a harmonised approach to enforcement, individual national authorities will form an EU-wide enforcement network to facilitate coordination and information exchange.	have meaningful access to the market, helping to level the playing field against larger, more established players. Handling enforcement at the national level brings the advantage and efficiencies related to local transport market knowledge. National authorities understand their own markets, including the specific circumstances in which local transport operators and users operate. This allows them to apply the rules in a way that fits the national context, while still being part of an EU-wide network that ensures coordination and consistency across countries. Stakeholder opinions received on the expected effectiveness of this policy measure varied. In the **survey**, participants were asked how effective they expected the measure to be in tackling Problem 1. Overall, 36 of 71 respondents considered it effective, 14 viewed it as ineffective, and 21 were neutral or unsure. Among MDMS providers, 7 of 20 expected it to be effective, 8 considered it ineffective, and 5 were neutral or did not know; among vertically integrated MDMS, only 1 of 5 found it somewhat effective while the others were neutral or unsure. Transport operators were more positive, with 19 of 29 expecting the measure to be effective and 10 neutral or unsure. Among national authorities, 6 of 12 expected the measure to be effective[50], 3 considered it ineffective[51], and 3 were neutral or did not know. Among 'Other' stakeholders, 4 of 10 expected it to be effective, 3 considered it ineffective, and 3 were neutral or did not know. In the survey, an industry association elaborated on their views on this policy measure, noting that it "provides smaller MDMS providers with a legal channel to challenge unfair practices or refusals of access" and emphasised that while "its effectiveness depends on implementation and enforcement at the national level," it ultimately "strengthens the position of small players".

[50] IE, FR, FI-1, CH, LV, NO
[51] PT, FI-2

No	Policy measure	PD	Action required	Intervention logic
				During **interviews**, stakeholders expressed mixed views on the idea of creating a neutral EU-level body to oversee the MDMS ecosystem. The strongest proponents of such an entity (two new content aggregators, two airlines, two rail new entrant – WestBahn and Snälltåget, a national authority, together with two Others including BEUC)—envisioned as an independent regulatory or coordination body at the EU level and emphasise its potential to ensure market fairness, resolve disputes efficiently, and foster cross-border consistency in enforcement and governance. However, others (one MDMS provider, CER and the Czech authority) question its necessity and practical value, asserting that existing legal and administrative frameworks are sufficient. The divergence reflects differences in national market conditions: in competitive markets, new oversight is seen as redundant, while in more fragmented or unbalanced contexts, a neutral body is viewed as a needed corrective.
Promotion of sustainable modes of transport				
7	Obligation for all B2C MDMS platforms to share data for mobility management	PD2	An obligation on MDMS providers to share data with public transport authorities would address what is a common complaint from public authorities. MDMS platforms would be required to share critical data for mobility management activities with public transport authorities on a free-of-charge basis, should it be necessary to provide personal data, in accordance with the GDPR. The European Commission would initiate a process, possibly involving the work of an expert group, to: ○ Define a list of data considered critical for mobility management activities. ○ Develop standards under which data would become accessible. MDMS providers must develop and standardise systems to routinely collect non-personal mobility management data, such as service availability, journey planning, and real-time operations, and share it with public authorities through secure channels. Clear data sharing protocols should	This measure would contribute to establishing a fair relationship between the public and private sectors in terms of data sharing. This policy measure will ensure that, by sharing data critical for mobility management with public authorities, MDMS services contribute to achieving a better transport system management and provide information to authorities useful to improving their planning activities. An obligation on MDMS providers to share data with public transport authorities on a free-of-charge basis would address what is a common complaint from public authorities, that identify a lack of reciprocity with some transport operators – as authorities claim to be required to provide the data necessary for the operation of MDMS platform while receiving little data in return. Having access to reliable data from MDMS providers would help public authorities better understand how transport services are being used, for example, which routes are busiest, how platforms optimise routes and passenger transfers between

No	Policy measure	PD	Action required	Intervention logic
			specify the frequency and method of submission, the exact data types covered, and guidelines for compliance. Furthermore, it is important that all parties work together smoothly. MDMS providers should receive training and clear guidelines on how to comply with these requirements, while public authorities must have channels to provide feedback on the data they receive. Finally, a robust monitoring system should be established to regularly check that everyone is following the rules.	modes, how services are performing, and where there might be gaps in the network. This would help them plan and manage transport systems more effectively, improve services and make better decisions. Overall, the measure would improve cooperation between public authorities and MDMS providers, making the transport system work better for everyone. In the **survey**, stakeholders were asked how effective they expected this measure to be in addressing Problem 1. Overall, support for the measure was limited: 15 of 71 respondents expected it to be effective, 20 considered it ineffective, and 36 were neutral or did not know. Among MDMS providers, only 1 of 20 expected it to be effective, 11 considered it ineffective, and 8 were neutral or unsure; among vertically integrated MDMS, 1 of 5 expected it to be effective, 2 were neutral, 1 considered it ineffective, and 1 did not know. Transport operators were largely neutral, with 3 of 29 expecting it to be effective, 3 considering it ineffective[52], and 23 neutral or unsure; among new entrant rail operators, 1 of 3 expected it to be effective while 2 did not know. Among national authorities, 7 of 13 expected the measure to be effective[53], 3 considered it ineffective, and 3 were neutral. Among 'Other' stakeholders, 4 of 9 expected it to be effective, 3 considered it ineffective, and 2 were neutral or did not know. Elaborating on this in the survey, an industry association representing mobility service providers described this as "mainly a transparency and policy measure for public mobility management" and stated that it "does not improve access to dominant MDMS platforms for smaller players," highlighting the limited direct effect on access issues. Two national authorities and passenger groups like the European Passengers' Federation consulted through **interviews** supported the idea of MDMS providers sharing trip data with public authorities, highlighting its value for improving

[52] FI-2, IE, NO

[53] PT, FI-1, CH, LV-2 and 3 others

No	Policy measure	PD	Action required	Intervention logic
				transport planning, policy evaluation, and understanding of mobility patterns, especially for sustainable and multimodal transport. welcomed this as a tool for evidence-based decision-making, though with tempered expectations about short-term impacts. However, concerns were raised by Snälltåget, which cautioned that such data could be used to justify public interventions that displace commercially viable services, harming private operators. Additionally, UITP stressed the need for data reciprocity, warning that public transport authorities managing aggregator platforms might monopolise access to data, creating imbalances where operators must repurchase data they originally provided, an outcome deemed unfair and structurally problematic.
8	Obligation for all B2B and B2C MDMS platforms to display information on GHG or CO2 emissions of trips (when these data are provided by the operators in line with and Count Emissions EU and Flight Emission Label)	PD2	All MDMS platforms – both B2B and B2C must: ○ Display greenhouse gas (GHG) emission information for each trip option shown to users ○ Only when such emission data are made available by the transport operator (e.g., airlines, rail companies, bus providers, etc.) The data must be made available at the request of the user in point of search, comparison, or booking, as an optional filter or sorting criterion alongside others such as duration or price. This data must be aligned to EU emission harmonised methodologies, such as CountEmissions EU and the Flight Emission Label for aviation.	This policy measure attempts to ensure that environmental impact becomes a standard part of travel decision-making. Additionally, the obligation for MDMS platforms to only display this data when it is made available is a simple intervention that fits within their role as information intermediaries. It also aligns with other legislative initiatives, such as CountEmissions EU, under the EU Sustainable and Smart Mobility Strategy and Flight Emission Label for aviation. In the **survey**, participants commented on the effectiveness of this measure in addressing Problem 1. Overall, 28 of 71 respondents expected it to be effective while 25 considered it ineffective. A further 18 were neutral or did not know. Among MDMS providers, 6 of 20 expected it to be effective, 9 considered it ineffective, and 5 were neutral; among vertically integrated MDMS, 1 of 5 expected it to be effective, 2 were neutral, 4 considered it ineffective, and 1 did not know. Among transport operators, 11 of 29 expected it to be effective, 10 considered it ineffective, and 8 were neutral or did not know; among new entrant rail operators, 1 of 3 was neutral while 2 considered it ineffective. Among national authorities, 5 of 12

No	Policy measure	PD	Action required	Intervention logic
				expected it to be effective[54], 3 considered it ineffective[55], and 4 were neutral. Among 'Other' stakeholders, 6 of 10 expected it to be effective, 3 considered it ineffective, and 1 was neutral. The European Passengers' Federation noted that "considering increased willingness among passengers to travel more sustainably, it could be useful for MDMS to provide information on greenhouse gas emissions and overall environmental impact, if available (using a standardised methodology, to ensure a like-for-like comparison and to avoid greenwashing). Information on environmental impact should be provided as one of the (default) criteria for ranking travel options." During **interviews**, there was broad stakeholder support for integrating GHG emissions data into MDMS platforms to promote environmentally conscious travel choices, with advocates like SNCF, ADN Mobilités, EPF, and T&E calling for mandatory, standardised disclosures across all transport modes. However, stakeholders such as one MDMS provider, two rail operators -one incumbent and Snälltåget, and a road transport operator stress that emissions data is only meaningful when presented in a fair, multimodal context, and warn of technical challenges and inconsistencies in data methodologies that hinder comparability. Opinions diverge on whether disclosure should be mandatory or voluntary, with WestBahn, favouring a flexible, mode-based approach. Additionally, Czech Authority, Helsinki Region Transport and one from the category Others doubt the practical influence of emissions data on consumer behaviour and caution against duplicating efforts with EU initiatives like CountEmissionsEU, urging regulatory coherence.
Identification and designation of MDMS and rail operators subject to specific obligations				

[54] PT, FI-2,CH, FR
[55] NO-2, FI-1

No	Policy measure	PD	Action required	Intervention logic
9	Legislation sets thresholds to identify B2C MDMS with SMP and rail operators in scope: • **for rail operators with SMP**: within one calendar year, equivalent or above 50% share of the total rail services[56] operated in a Member State (including domestic and EU cross-border services to/from that Member State), expressed in yearly passenger kilometres • **for B2C MDMS with SMP**: SMP is evaluated at EU and national level, via two proxies: the total number of ticket sold (or total number of passengers if total number of tickets is un-known) and/or the total value of tickets	PD3, PD4	The legislation would establish clear thresholds to determine which MDMS and rail operators are considered to have Significant Market Power (SMP) These thresholds ensure a consistent and measurable approach for identifying entities with significant influence over mobility markets. These thresholds are being assessed in view of data collected throughout this study and will be finetuned going forward with the impact assessment. While we have some preliminary indications, it will be further refined in accordance with stakeholder feedback gathered through surveys and interviews and data collected from the evidence collection. The selected threshold level ties directly into the concept of proportionality, which also affects the number of regulated entities and the overall implementation effort.	The rationale behind setting these thresholds is to ensure that regulatory measures target market actors that **significantly impact competition and consumer choice**. The intervention logic is based on the following principles: **Market presence and competition**: ○ Rail operators exceeding the 50% threshold play a dominant role in the national rail market, potentially affecting competition and access to services for passengers. ○ MDMS with significant turnover and/or user bases serve as key distribution channels for mobility services. Their market position enables them to shape consumer access to transport options, justifying regulatory scrutiny. **Transparency and legal certainty**: ○ The selected criteria provide **objective, quantifiable, and easily measurable indicators** to assess the dominance of a market player. ○ The turnover and user-based approach for MDMS offers flexibility to account for market differences across Member States while maintaining **harmonised EU-wide standards**. **Fair and effective regulation**: ○ By using **passenger kilometres for rail operators** and **economic/user-based thresholds for MDMS**, the policy ensures that regulation is **targeted, proportional, and effective** in addressing market imbalances. In the **survey**, participants were asked how effective they expected this policy measure to be in addressing Problem 1. The responses show a trend of limited perceived effectiveness,

[56] A poll of sector experts was performed in the second stakeholder workshop of this study. When asked, 43 out of 70 respondents felt that the threshold of total rail services (in annual passenger kilometers) should be lower than 50% for an operator to be designated as indispensable. The study team performed an assessment of operators captured under this threshold, concluding that it would potentially only apply to 25 rail operators (one for each Member State except Cyprus and Malta that have no railway network). An additional test using a 25% threshold suggested only marginal change to the number of operators captured.

No	Policy measure	PD	Action required	Intervention logic
				with a large share of stakeholders remaining neutral or unsure across all groups. Across all 71 respondents, 15 expected the measure to be effective, 19 considered it ineffective, and 37 were neutral or did not know. Among MDMS providers, 4 of 20 expected it to be effective, 9 considered it ineffective, and 7 were neutral or unsure; among vertically integrated MDMS, 4 of 5 considered it ineffective and 1 did not know. Among transport operators, 3 of 30 expected it to be effective, 7 considered it ineffective, and 20 were neutral or did not know; among new entrant rail operators, 1 of 3 expected it to be effective, 1 was neutral, and 1 did not know. Among national authorities, 3 of 11 expected it to be effective (Switzerland, France, Latvia-1), 2 considered it ineffective (Ireland, Norway), and 6 were neutral or did not know. Among 'Other' stakeholders, 5 of 10 expected it to be effective, 1 considered it ineffective, and 4 were neutral or did not know. Survey participants were also asked how effective the expected this measure to be in addressing Problem 2. The responses show a similar trend to Problem 1, with limited perceived effectiveness and a substantial share of stakeholders remaining neutral or unsure across all groups[57].
10	**B2C MDMS platforms with SMP** notify national authorities or the EC of their market presence.. National authorities designate B2C MDMS platforms and rail operators with SMP at national level, while the EC designates B2C MDMS platforms with SMP at	PD3, PD4	PM 10 defines how the indispensable MDMS platforms and rail operators will be designated under this initiative. The SMP assessment is considered at (i) a national level for rail and (ii) at both an EU and national level for MDMS set of regulated entities.	For the purposes of this PM, indispensability is assessed for the distribution market of tickets and mobility products (in each mode). An MDMS is considered indispensable when it has a dominant position at a national and/or EU-level. This designation of indispensable MDMS is based on the choice of thresholds as presented in PM 9. A rail operator is considered to have SMP when it has a dominant position in rail services in specific regions.

[57] Across all 67 respondents, 14 expected the measure to be effective, 15 considered it ineffective, and 38 were neutral or did not know. Among MDMS providers, 5 of 20 expected it to be effective, 5 considered it ineffective, and 10 were neutral or did not know. Among transport operators, 2 of 27 expected it to be effective, 7 considered it ineffective, and 18 were neutral or did not know; among new entrant rail operators, 1 of 3 expected it to be effective while 2 did not know. Among national authorities, 3 of 10 expected it to be effective, 1 considered it ineffective, and 6 were neutral or did not know. Among 'Other' stakeholders, 4 of 10 expected it to be effective, 2 considered it ineffective, and 4 were neutral or did not know.

No	Policy measure	PD	Action required	Intervention logic
	EU level. EC to publish a list of MDMS platforms and rail operators with SMP, at national and Union's level			In the **survey**, stakeholders were asked how effective they expected this policy measure to be in addressing Problem 1. The responses show a trend of limited perceived effectiveness, with many stakeholders remaining neutral or unsure across all groups. Across all 70 respondents, 15 expected the measure to be effective, 18 considered it ineffective, and 37 were neutral or did not know. Among MDMS providers, 4 of 20 expected it to be effective, 9 considered it ineffective, and 7 were neutral or did not know; among vertically integrated MDMS, 4 of 5 considered it very ineffective and 1 did not know. Among transport operators, 2 of 29 expected it to be effective, 7 considered it ineffective, and 20 were neutral or did not know[58]. Among national authorities, 5 of 11 expected it to be effective[59], 1 considered it ineffective[60], and 5 were neutral or did not know. Among 'Other' stakeholders, 4 of 10 expected it to be effective, 1 considered it ineffective, and 5 were neutral or did not know. Survey participants were also asked how effective they expected the measure to be in addressing Problem 2. The responses show a similar trend to Problem 1, with limited perceived effectiveness and a substantial share of stakeholders remaining neutral or unsure[61]. During the interviews, most stakeholders rejected the concept of "indispensability" for MDMS platforms (four MDMS providers / associations, including, Skyscanner, ADN Mobilités and one CRS, the travel agents association ECTAA, three incumbent rail operators/associations, including DB and CER, and UITP). They argue that it risks market distortion, overregulation, and misrepresents the complexity of today's distribution landscape.

[58] Among new entrant rail operators, 2 of 3 were neutral while 1 did not know.

[59] FR, DI-1, CH, LV-2, LV-1

[60] NO

[61] Across all 67 respondents, 16 expected the measure to be effective, 19 considered it ineffective, and 32 were neutral or did not know. Among MDMS providers, 5 of 20 expected it to be effective, 6 considered it ineffective, and 9 were neutral or did not know; among vertically integrated MDMS, 4 of 5 considered it very ineffective and 1 did not know. Among transport operators, 3 of 26 expected it to be effective, 8 considered it ineffective, and 15 were neutral or did not know; among new entrant rail operators, 1 of 3 was neutral while 2 did not know. Among national authorities, 5 of 11 expected it to be effective (France, Ireland, Switzerland, Latvia-2, Latvia-1), 2 considered it ineffective (Norway), and 4 were neutral or did not know. Among 'Other' stakeholders, 3 of 10 expected it to be effective, 3 considered it ineffective, and 4 were neutral or did not know.

No	Policy measure	PD	Action required	Intervention logic
				While a few actors, like UITP and one airline, acknowledged context-dependent cases or supported light incentives, the prevailing view is that no MDMS currently holds such dominant power. Mentioned critics challenged the vague and potentially unfair criteria being proposed, especially for small or B2B platforms, and warned against penalising operators with successful direct sales. They also highlighted the diversity within the MDMS ecosystem and cautioned against treating all platforms as functionally equivalent. Instead, some suggested regulatory focus should shift toward the growing concentration among OTAs, where a few providers already control a significant share of the market (three airlines/airlines association including A4E).
Specific obligations for MDMS and operators				
11	**Applies to B2C MDMS platforms with SMP, indispensable RU platforms and B2B MDMS:** respect principles on distribution fees and cannot impose highly restrictive clauses (exclusivity clauses, unfair and unjustified conditions, marketing clauses and other technical restrictions) when entering into commercial agreements with transport operators	PD3	The principles will allow the fair treatment of all transport operators and in particular smaller and new entrant transport operators. These principles would aim to ensure that unfair and unjustified conditions are prohibited, as this is already the case in the CRS Code of Conduct and contractual clauses follow guiding principles (fair, reasonable, and non-discriminatory) which will allow for more balanced commercial relationships. **These principles should refrain actors from imposing highly restrictive contractual clauses** when engaging in commercial agreements with transport operators. Specifically, they cannot enforce: ○ Exclusivity clauses that restrict transport operators from using multiple distribution channels. ○ Unfair or unjustified conditions that disproportionately benefit the MDMS.. ○ Marketing clauses that impose unreasonable promotional obligations or limit operators' ability to market their own services.	The measure aims to ensure a **level playing field** in mobility service distribution by preventing dominant players from **restricting fair competition**. This measure specifically ensures that any agreements that are voluntarily made comply with the established principles. The intervention aims to achieve the following goals: **Ensuring fair access and preventing market distortion**: ○ Transport operators have the freedom to distribute their services across multiple MDMS platforms without being **forced into exclusivity agreements** that limit consumer choice. ○ Fair and proportionate distribution fees prevent **anti-competitive pricing strategies** that could favour certain providers over others. **Enhancing consumer choice and market transparency**: ○ Restrictive contractual clauses imposed by MDMS platforms with SMP **reduce competition** and limit consumer access to a variety of transport services. Removing these barriers ensures **a diverse and competitive marketplace** where consumers benefit from **better pricing, service availability, and innovation**.

No	Policy measure	PD	Action required	Intervention logic
			○ Technical restrictions that create artificial barriers to interoperability or accessibility for transport operators.	**Proportional and targeted regulation**: ○ The measure does not impose a **one-size-fits-all** restriction but instead ensures that agreements remain **fair and justified** based on market realities. ○ Does not force the conclusion of agreements between transport operators and MDMS platforms This policy measure applies only when there is an existing intention to enter into a commercial agreement. Due to the voluntary nature of the agreements, the impact here is relatively narrow ensuring the fair treatment of transport operators once they have been accepted by MDMS platforms and does not prevent platforms from excluding certain operators altogether. In the **survey**, participants were asked how effective they expected this policy measure. Across all 69 respondents, 31 expected the measure to be effective, 20 considered it ineffective, and 18 were neutral or did not know. Among MDMS providers, 5 of 20 expected it to be effective, 13 considered it ineffective, and 2 did not know; among vertically integrated MDMS, 1 of 5 considered it effective, 1 was neutral, 2 considered it very ineffective, and 1 did not know. Among transport operators, 15 of 27 expected it to be effective, 4 considered it ineffective, and 8 were neutral or did not know; among new entrant rail operators, 1 of 3 expected it to be effective, 1 considered it ineffective, and 1 did not know. Among national authorities, 5 of 12 expected it to be effective[62], 1 considered it ineffective[63], and 6 were neutral or did not know. Among 'Other' stakeholders, 6 of 10 expected it to be effective, 2 considered it ineffective, and 2 were neutral or did not know. During **interviews**, stakeholders express mixed views on mandatory data sharing and cooperation under FRAND

[62] FR, LV-1, CH, and 2 others
[63] IE

No	Policy measure	PD	Action required	Intervention logic
				principles in the MDMS ecosystem. While three MDMS providers / MDMS association including ADN Mobilités, ETT and one OTA, two new entrant rail operators/association, including AllRail, one national authority and one consumer organisation, support FRAND mandates to enhance transparency, competition, and integrated booking, others warn of practical and regulatory risks. Concerns arise over the feasibility and enforceability of FRAND terms, the potential distortion from regulated distribution fees, and the imposition of complex product requirements. DB, CER, SNCF, and UITP argued that imposing levels of fee defined by regulation could distort the true value of services rendered and overlook the internal costs borne by providers, while airlines strongly oppose full-content obligations that limit flexibility and raise costs. The debate is further complicated by the lack of clear definitions and conditions for FRAND-based agreements, underscoring the need for regulatory clarity to avoid inefficiencies and unintended consequences.
12	Indispensable RUs (with SMP and op-erating PSO and cross- border services): must respect principles on distribution fees without imposing restrictive clauses (ex-clusivity clauses, marketing clauses and other technical restrictions) when entering into commercial agreements with MDMS platforms	PD4	Similar to PM 11, the European Commission would lead a process to define a set of principles. Specifically, the principles would: ○ Prevent rail operators from requiring excessive clauses that hinder MDMS platforms from including the transport offer of other competing transport operators. ○ Prevent unfair or unjustified conditions that would disproportionately favour rail operators with significant market power, thus ensuring equal market access. ○ Ensure that marketing clauses do not impose unreasonable promotional obligations on MDMS platforms or limit their ability to market the transport offering in their platforms in their preferred way. ○ Prevent rail operators from sharing only partial or delayed real time and fare data causing	The measure aims to ensure a level playing field in rail service distribution by preventing key players in rail operation from limiting fair competition. This intervention is based on the following key principles: **Preventing market abuse by dominant players** Rail operators with significant market power, particularly in high-demand corridors or under Public Service Obligation (PSO) contracts, may become gatekeepers in distribution. **Promoting transparency and competition** Clear, enforceable FRAND principles ensure transparency in commercial agreements. This strengthens trust among stakeholders, supports fair competition, and prevents anti-competitive behaviours such as: ○ Discriminatory pricing or revenue-sharing terms. ○ Technical constraints that limit interoperability between systems or create artificial switching costs. **Safeguarding public service and cross-border rail services**

No	Policy measure	PD	Action required	Intervention logic
			discrepancies in the service offer available across platforms and distribution channels.	PSO services are subsidised and play a critical role in regional connectivity, additionally cross-border rail services are critical for EU transport integration. Ensuring that these services are distributed fairly and widely through multiple MDMS platforms helps achieve the integration of the EU transport area. This PM would increase the quality of travel information available in MDMS platforms allowing the combination of travel options to trips better suited to passenger needs. Since 64% of all passenger rail activity is performed under PSOs[64], and a significant additional part of the total activity is performed by operators with significant market power, this PM would probably cover the majority of rail travel across the EU. In the **survey**, participants were asked how effective they expected this policy measure to be in addressing Problem 1. Across all stakeholders, 19 of 69 expected it to be effective, 14 considered it ineffective, and 36 were neutral or did not know. Among MDMS providers, 7 of 20 expected it to be effective and 5 considered it ineffective. Among transport operators, 2 of 29 expected it to be effective and 6 considered it ineffective. National authorities were somewhat more positive, with 6 of 11 expecting it to be effective[65] and 2 considering it ineffective[66]. Among other stakeholders, 4 of 9 expected it to be effective and 1 considered it ineffective, with the remainder neutral or uncertain.
13	Indispensable RUs (with SMP and operating PSO and cross-border services): must enter into commercial agreements with requesting MDMS platforms to enable the re-	PD4	Similar to PM12, the European Commission would lead a process to define a set of principles. Specifically, the principles would: ○ Prevent rail operators from requiring excessive clauses that hinder MDMS platforms from including	The measure aims to ensure a level playing field in rail service distribution by preventing key players in rail operation from limiting fair competition. This intervention is based on the following key principles: **Preventing market abuse by dominant players**

[64] See section 3.1 of the market report in Appendix B
[65] PT, FI-1, CH, LV-2, LV-1 and NO
[66] IE and one other

No	Policy measure	PD	Action required	Intervention logic
	linking, resale and/or distribution of their tickets via those platforms for the specified services ('sharing obligation')		the transport offer of other competing transport operators. ○ Prevent unfair or unjustified conditions that would disproportionately favour rail operators with significant market power, thus ensuring equal market access. ○ Ensure that marketing clauses do not impose unreasonable promotional obligations on MDMS platforms or limit their ability to market the transport offering in their platforms in their preferred way. ○ Prevent rail operators from sharing only partial or delayed real time and fare data causing discrepancies in the service offer available across platforms and distribution channels.	Rail operators with significant market power and a significant user basis , particularly in high-demand corridors or under Public Service Obligation (PSO) contracts, may become gatekeepers in distribution. **Promoting transparency and competition** Clear, enforceable FRAND principles ensure transparency in commercial agreements. This strengthens trust among stakeholders, supports fair competition, and prevents anti-competitive behaviours such as: ○ Discriminatory pricing or revenue-sharing terms. ○ Technical constraints that limit interoperability between systems or create artificial switching costs. **Safeguarding public service and cross-border rail services** PSO services are subsidised and play a critical role in regional connectivity, additionally cross-border rail services are critical for EU transport integration. Ensuring that these services are distributed fairly and widely through multiple MDMS platforms helps achieve the integration of the EU transport area. This PM would increase the quality of travel information available in MDMS platforms allowing the combination of travel options to trips better suited to passenger needs. Since 64% of all passenger rail activity is performed under PSOs[67], and a significant additional part of the total activity is performed by operators with significant market power, this PM would probably cover the majority of rail travel across the EU. In the **survey**, stakeholders were asked how effective they expected this PM to be in addressing Problem 1. Across all stakeholders, 22 of 70 expected it to be effective (very or somewhat), 14 considered it ineffective (very or somewhat), and 34 were neutral or did not know. Among MDMS providers, 7 of 20 expected it to be effective and 4 considered it ineffective, with 9 neutral or uncertain. Among

[67] See section 3.1 of the market report in Appendix B

No	Policy measure	PD	Action required	Intervention logic
				transport operators, 2 of 29 expected it to be effective and 8 considered it ineffective, while 19 were neutral or did not know. National authorities were more positive, with 7 of 11 expecting it to be effective and 1 considering it ineffective, with the remainder neutral or uncertain. Among other stakeholders, 6 of 10 expected it to be effective and 1 considered it ineffective, with 3 neutral or uncertain.
14	Indispensable RU platforms: must enter into commercial agreements with request-ing RUs (operating within the same geo-graphical area in which the RU owning the indispensable RU platform has SMP) to enable the distribution of their tickets ('hosting obligation')	PD4	Rail operators who (a) have their own ticketing platform that qualify as an MDMS (i.e. offers tickers for other operators on the same display), and (b) sell at least 50% of rail tickets in the operational market (i.e. Member State) are **obliged** to enter into agreements (based on fair principles as defined in PM11) between their MDMS platform and other willing rail operators to enable re-linking and/or the sale of tickets for the geographical area (Member State) where they have exceeded the threshold. Under this new obligation, if a rail operators seeks to include their offering on the ticketing platform of a rail operator with more than 50% market share, the latter is obliged to enter into agreement and display or re-link their fare and ticketing information.	This policy measure will ensure that transport operators, especially smaller or independent ones, gain access to platforms managed by rail operators with the majority of market share in that region. By obliging these platforms to enter into commercial agreements with any willing operator, the measure prevents them from excluding competitors or favouring their own services. As a result, operators that previously had hindered access to essential sales channels, will be able to offer their services to a wider audience, increasing their visibility and potential customer base. Consumers will benefit from a greater variety of travel options and improved competition, which may lead to better prices and service quality. The measure will also help reduce the market power imbalance between MDMS platforms and transport operators by giving operators a clear legal right to access these platforms, rather than being dependent on the platform's commercial discretion. In the **survey**, participants were asked how effective they expected an obligation for rail operators with dominant platforms to enable re-linking and/or the sale of tickets to be in addressing Problem 2[68]. Across all stakeholders, 22 of 68 expected it to be effective, 20 considered it ineffective, and 26 were neutral or did not know. Four out of 5 rail operators who were deemed likely to fall in scope of this obligation considered it very ineffective, while 1 out of 5 replied don't know or did not answer. Among MDMS providers, 5 of 20 expected it to be effective and 5 considered it very ineffective. Among transport operators, 5 of 27 expected it to

[68] It should be noted the policy measure that stakeholders were asked to comment on changed after the consultation. Therefore, stakeholder views relate to a policy measure that does not match this one exactly. However, the question addressed the same obligation to re-link or display, just to a different group of rail operators.

No	Policy measure	PD	Action required	Intervention logic
				be effective while 15 considered it ineffective. National authorities were more supportive, with 6 of 11 expecting it to be effective[69]. Among other stakeholders, 6 of 10 expected it to be effective, with the remainder neutral or uncertain.
15	Indispensable RU platforms: must unbundle its distribution system from the systems of its parent operator	PD4	In-scope rail operators are the same as in PM14, but here they are **obliged** to separate their distribution system from the parent operator when it qualifies as an MDMS platform. The accounts of operator and distributor would therefore be separated.	This measure targets structural discrimination risks where rail operators with their own distribution channel, covering also offers from other rail operators, favour their linked transport operator over competitors. By unbundling the distribution system, the MDMS will be required to treat all transport operators equally. This will reduce conflicts of interest and ensure that independent operators have fairer access to essential sales and visibility channels, improving market access and competition. It also increases trust in the neutrality of the MDMS platform, encouraging more operators to participate and enhancing consumer choice. Overall, the measure aims to dismantle technical and organisational barriers that currently disadvantage non-affiliated operators. It can be expected to eventually achieve a better integration of transport services of different operators in dominant MDMS platforms enabling passengers to have a greater access to and combination of the offering of different providers. In the **survey**, participants were asked how effective they expected organisational separation to be in tackling Problem 2[70]. Across all stakeholders, 22 of 69 considered it effective, 20 considered it ineffective, and 26 were neutral or unsure. Among MDMS providers, 6 of 20 expected it to be effective, 4 considered it ineffective, and 10 were neutral or unsure. Transport operators were more negative, with only 3 of 28 seeing it as effective, 15 considering it ineffective, and 10 neutral or unsure. National authorities were more favourable, with 6 of 11 expecting it to be effective[71]. Among other stakeholders, 4 of 10 considered it

[69] FR, CH, LV-2, LV-1, NO

[70] It should be noted the policy measure that stakeholders were asked to comment on changed after the consultation. Therefore, stakeholder views relate to a policy measure that does not match this one exactly. However, the question addressed the same obligation to un-bundle, just to a different group of rail operators.

[71] FR, PT, CH, LV-2, LV-1 and NO

No	Policy measure	PD	Action required	Intervention logic
				effective, with 1 viewing it as ineffective and the remainder neutral or unsure. The debate on unbundling ticketing in long-distance rail during the interviews exposed a fundamental divide between protecting market sustainability and promoting open, independent distribution. Twelve out of 16 respondents who offered a complete response on the topic show a negative opinion on unbundling and view unbundling as an ineffective and potentially harmful measure. This position is shared by DB and three other major rail operators/associations including CER and SNCF, three new content aggregators / MDMS association, one new entrant rail operator, one national authority and the UITP. They argued that unbundling threatens financial viability and offers little added value to consumers, while also being politically and technically challenging. Others, such as European Sleeper, WestBahn, and Snälltåget, counter that incumbent sales channels function as de facto public assets and should be accessible to all market participants. They called for neutral, independent ticketing platforms to prevent self-preferencing and foster competition. Proposals such as Austria's "One Mobility" initiative were cited as potential models for EU-wide governance. However, widespread consumer loyalty to incumbent brands and reluctance to use third-party platforms remain significant obstacles, highlighting the unique structural and symbolic features of the rail market that complicate full unbundling

5.2.2 Policy option formulation

Four distinct policy options (POs) have been formulated based on combinations of the policy measures presented with the aim that each of the POs is able to address all problem drivers and specific objectives of the initiative. Table 4-16 presents the packaging of policy measures into the four POs. The four policy options show an ascending level of ambition aiming to meet the policy objectives with increasingly interventionist measures. The contents and rationale of the four policy options is identified and is presented later in this section alongside the set of common policy measures considered relevant for all.

Table 4-16: Packaging of PMs into POs

PM	Description	SO	PD	PO1	PO2	PO3	PO4
1	Obligation for all MDMS platforms to apply neutral display obligations and for transport operators (in all modes) to ensure that the data they submit are accurate	1	2	**X**	**X**	**X**	**X**
2	Obligation for **all MDMS platforms** to load and process data of operators with equal care and timeliness	1	2	**X**	**X**	**X**	**X**
3	Obligation for all MDMS platforms to share marketing and booking data in a fair way, when requested by transport operators and authorities	1	3	**X**	**X**	**X**	**X**
4	Obligation for **all B2B MDMS platforms to treat subscribers fairly and** clearly identify in their display banned airlines. Obligation for third countries B2B MDMS to ensure equal treatment of EU air carriers	1	1	**X**	**X**	**X**	**X**
5	Remove provisions on data protection from CRS Code of Conduct	1	1	**X**	**X**	**X**	**X**
6	Obligation for **Member States** to appoint a national authority to settle disputes between parties, and establish an EU enforcement network for coordination	1,2	3,4	**X**	**X**	**X**	**X**
7	Obligation for **all B2C MDMS platforms** to share data for mobility management	1	2	**X**	**X**	**X**	**X**
8	Obligation for **all B2B and B2C MDMS platforms** to display information on GHG or CO2 emissions of trips (when these data are provided by the operators in line with and Count Emissions EU and Flight Emission Label)	1	2	**X**	**X**	**X**	**X**
9	Thresholds to identify B2C MDMS platforms and RUs with SMP: for RUs with SMP: within one calendar year, 50% or more of the total passenger rail services operated in a Member State (including domestic and EU cross-border	1,2	3,4	**X**	**X**	**X**	**X**

	services to/from that Member State), expressed in yearly passenger kilometres • for B2C MDMS with SMP: for OTAs and TMCs evaluated at EU and national level, via two proxies: total number of ticket sold and/or the total value of tickets; for MSE evaluated at EU level based on traffic						
10	**B2C MDMS platforms with SMP:** must notify national authorities or the EC about their market presence. National authorities designate B2C MDMS platform, RUs with SMP and indispensable RU platforms at national level, while the EC designates B2C MDMS platforms with SMP at EU level. The EC publishes a list of MDMS platforms (including indispensable RU platforms) and RUs with SMP at both national and EU level.	1,2	3,4	**X**	**X**	**X**	**X**
11	**B2C MDMS platforms with SMP, indispensable RU platforms and B2B MDMS**: must respect principles on distribution fees and cannot impose highly restrictive clauses (exclusivity clauses, unfair and unjustified conditions, marketing clauses and other technical restrictions) when entering into commercial agreements with transport operators	1	3	**X**	**X**	**X**	**X**
12	**Indispensable RUs (with SMP and operating PSO and cross- border services): must respect principles on distribution fees without imposing restrictive clauses (exclusivity clauses, marketing clauses and other technical restrictions) when entering into commercial agreements with MDMS platforms**	1,2	4	**X**	**X**	**X**	**X**
13	**Indispensable RUs (with SMP and operating PSO and cross- border services): must enter into commercial agreements with requesting MDMS platforms to enable the re-linking, resale and/or distribution of their tickets via those platforms for the specified services ('sharing obligation')**	2	4		**X**	**X**	**X**
14	**Indispensable RU platforms: must enter into commercial agreements with requesting RUs (operating within the same geographical area in which the RU owning the indispensable RU platform has SMP) to enable the distribution of their tickets ('hosting obligation')**	2	4			**X**	
15	**Indispensable RU platforms: must unbundle its distribution system from the systems of its parent operator**	1,2	4				**X**

Table 4-17 provide a short overview of how the policy options differs.

Table 4-17: Overview of the differences between policy options

Policy measures not common to all options								
	PO1		PO2		PO3		PO4	
Commercial agreements rules (PM11-12)	**Indispensable** MDMS platforms	**Indispensable** RUs	**Indispensable** MDMS platforms	**Indispensable** RUs	**Indispensable** MDMS platforms	**Indispensable** RUs	**Indispensable** MDMS platforms	**Indispensable** RUs
Obligation to sell (PM13)								
Obligation to host (PM14)						**Indispensable** RU platforms		
Obligation to unbundle (PM15)								**Indispensable** RU platforms

The main characteristic of each PO follows.

PO1: The obligation to respect rules in commercial agreements applies to indispensable MDMS platforms and indispensable RUs. Overall, PO1 is a minimalistic approach that targets all specific objectives and addresses all problem drivers. A first set of policy measures that are common to all four policy options (PM1 to PM8), includes measures that establish, in a flexible way, minimal requirements ensuring fair treatment of information and data on MDMS platforms. It also sets out key principles framing all commercial agreements between indispensable MDMS platforms and transport operators, as well as between indispensable RUs and MDMS platforms.

This option fully addresses SO1, by establishing a level playing field for MDMS and transport operators through the extension of the CRS Code of Conduct's rules to all MDMS providers (PM1, PM2, PM3, PM4 and PM5). PM9 sets thresholds to identify MDMS platforms and RUs with SMP, which would be designated by national enforcement bodies or the European Commission (EC) depending on the market in which they have SMP (PM10). These are needed for PM11, which sets rules that protects transport operators in their commercial agreements with indispensable MDMS platforms, including provisions that (1) safeguard commercially sensitive data of operators, (2) prohibit the inclusion of unjustified or unnecessary contract conditions that could prevent the conclusion of the agreement, and (3) ensure remuneration of platforms is based on objective and transparent criteria (such as quality and level of services, annual volume of transport products distributed, look-to-book ratios, etc). These criteria should be transparently shared with the operator or the National Enforcement Body (NEB) upon request. Member States would be required to appoint a national authority to settle disputes that could arise between parties (PM6) and an EU enforcement network of such authorities would ensure consistent enforcement across the EU. PM8 would oblige MDMS platforms to display information on greenhouse gas emissions, when that information is shared by the transport operator, and PM7 obliges B2C MDMS platforms to share data for mobility management with public authorities.

To address SO2, PM12 protects MDMS providers in their commercial agreements with indispensable RU by setting rules on distribution fees and prohibiting restrictive clauses in contracts (exclusivity clauses, unfair and unjustified conditions, marketing clauses and other technical restrictions) allowing to address the imbalances in bargaining power when negotiating commercial agreements.

PO2: The obligation to respect rules when entering commercial agreements applies to indispensable MDMS platforms and indispensable rail operators (as in PO1). In addition, it obliges indispensable rail operators to enter into agreements with willing MDMS platforms (provided that these platforms fulfil minimum requirements)

requesting to distribute rail tickets (cross-border, PSO service tickets as well as regional and long-distance rail passenger tickets of rail operators with SMP i.e. national market share above 50%).

PO2 meets SO1 in the same manner as PO1 but further addresses SO2by mandating that indispensable RUs enter into commercial agreements with willing ticketing platforms to enable the sale of tickets i) for rail services in the Member State in which they hold significant market presence, ii) for PSO and iii) cross-border services.

To meet SO2,, indispensable RUs would be obliged to enter into commercial agreements with any requesting online ticketing platform to enable re-linking, resale and/or distribution of their tickets (depending on the request of the platform). This is provided that these platforms fulfil minimum requirements. RUs with SMP would have to supply all their rail tickets and fares for the Member State in which they hold significant market presence, and RUs operating PSO or cross-border services would have to supply any tickets for such services, as described in PM13. These commercial agreements between indispensable RUs and MDMS platforms would have to follow fair and reasonable conditions, as laid down in PM12. In particular, indispensable RUs cannot prevent their tickets from being combined with tickets from other operators, allowing platforms to sell them as single tickets. Under PO2, MDMS platforms (in particular independent ones) would be capable of expanding and ultimately provide a complete offer.

PO3: The obligation to respect rules when entering commercial agreements applies to indispensable MDMS platforms and indispensable rail operators (as in PO1). Indispensable RUs are obliged to enter into a distribution agreement with requesting MDMS platforms (as in PO2). Adding on this, PO3 obliges indispensable RU platforms to distribute the tickets of any requesting railway undertaking operating within the same geographical area in which the rail operator owning the indispensable rail platform has SMP.

PO3 meets SO1 in the same manner as PO2 but extends its obligations by mandating that indispensable RU platforms enter into commercial agreements with RUs willing to be integrated in their platform for the distribution of their tickets (PM14). This obligation would only apply in the Member State in which the indispensable RU owning the platform has SMP. For cross-border services, a willing RU could turn to the indispensable RU platforms in all Member States it reaches with its service.

To meet SO2, it introduces an obligation on indispensable RU platforms to host (PM14) under fair and reasonable criteria, laid down in PM11. PO3 would thus foster the completeness of the offer on both independent MDMS and indispensable RU platforms, providing the traveller ample choice on all platforms, including the ones he uses most. This is expected to address SO2 quicker than other policy options. This obligation would not apply to incumbents' sales channels that only sell tickets of services that they operate directly, as these sales channels do not raise the same user expectations. Requiring such operators to make the necessary IT investments and enter the MDMS market would be unnecessary and disproportionate.

PO4: The obligation to respect rules when entering commercial agreements applies to indispensable MDMS platforms and indispensable RUs (as in PO1). Indispensable RUs are obliged to enter into a distribution agreement with requesting MDMS platforms (as in PO3). However, unlike PO3, PO4 does not impose an obligation on indispensable RU platforms to host requesting rail operators. Instead, platforms owned by incumbent rail operators are required to unbundle their distribution and operational services.

PO4 meets SO1 in the same manner and with the same policy measures as per PO2 but takes an alternative approach to PO3 in how to achieve SO2: indispensable RU platforms would be obliged to unbundle their distribution services from the parent company's transport activities (i.e. divesting) (PM15). Removing the vertical integration of the service and ticketing branches would also remove their mutual incentive to protect their current dominance in both markets. This is expected to fully address SO2 albeit slower than PO3.

6. ASSESSMENT OF IMPACTS

This chapter presents the expected impacts of the Policy Options, separated into economic, social, and environmental impacts.

The proposed options are assumed to be implemented from 2028 onwards, so the assessment has been undertaken for the 2028-2050 period and covers the EU Member States. Costs and benefits are expressed as present value over the 2028- 2050 period, using a 3% discount rate. All costs and benefits are expressed in 2024 prices.

6.1 THEORY OF CHANGE

This section outlines at a high level how the policy options are expected to generate impacts on society.

Outputs: The policy measures are expected to improve both the completeness and ability to book alternative transport offerings displayed on MDMS platforms. Platforms will be required to present available transport options in a fair, transparent, and unbiased manner (PM1–PM5) and incorporate information on GHG emissions for trips where such data are available (PM8). Moreover, the range of transport services displayed on MDMS platforms will expand. Indispensable rail undertakings that previously showcased their services exclusively through their own linked platforms will now be visible on third-party platforms (PM13). Other

transport operators are also expected to participate, driven by the benefits of exposing their services to multimodal competition (PM14) and by reduced barriers to concluding distribution agreements due to new principles governing distribution fees (PM11–PM12). Taken together, these interventions are expected to enhance the completeness, accuracy, and book-ability of offerings on MDMS platforms. These are captured in the modelling approach through the multi-parameter analysis (MPA) module, which scores each PM for its expected impact on these parameters (see the Methodological Annex). Consumers - including both passengers (B2C channel) and businesses (B2B channel) - will have access to a wider set of options, including new multi-operator and multimodal combinations. Some of these newly visible options are likely to represent improvements relative to existing choices (e.g. shorter travel times, lower costs, reduced time spent searching for tickets, or lower GHG emissions).

Outcomes: The primary expected outcome of this expanded and more transparent set of transport offerings is **modal shift**. Increased visibility and ease of booking collective transport modes (e.g. rail, bus/coach, ferry) is anticipated to drive behavioural change in consumers to choose options that provide identifiable benefits based on their preferences (reductions in journey time or cost, GHG emission savings, etc.), with a corresponding reduction in demand for higher-emission private car and aviation. Modal shift estimates are captured in the modelling framework by (a) using the MPA to assess to what extent the POs will reach a theoretical modal shift ceiling, and (b) simulating resulting transport demand using the ASTRA modelling suite (see the Methodological Annex). In parallel, a **shift in ticket sales** on platforms is likely to occur. This includes (i) new ticket purchases generated by users who previously travelled by car, and (ii) existing public transport users who formerly relied on mode-specific platforms (such as rail-only platforms) but who may now switch to other MDMS platforms offering a wider set of multi-operator and multimodal combinations.[72]

Impacts: These interventions are expected to produce several categories of impact:

- **Direct consumer impacts**: Changes in travel behaviour—driven by mode switching—will generate aggregate effects on travel time and transport expenditures. These are modelled within ASTRA.
- **Direct business impacts**: Transport operators and platforms may incur adjustment and administrative costs related to compliance with new policy requirements. The policy may also influence market dynamics, including the number of MDMS platforms able to compete effectively and remain viable in the market. These are assessed with the CBA module.
- **Indirect externalities**: Shifts in the composition of transport activity will generate associated externalities, including changes in energy consumption, GHG emissions, air pollutant emissions, noise pollution, and road safety outcomes. These are modelled within ASTRA.
- **Wider impacts**: Additional broader societal and economic effects are expected (innovation, competition, etc.), which are explored qualitatively in subsequent sections of the report.

6.2 ECONOMIC IMPACTS

The analysis of economic impacts covers the following:

- Impacts on modal split
- Impacts on MDMS platforms
- Impacts on transport operators
- Impacts on national authorities
- Impacts on the European Commission
- Impacts on SMEs
- Impacts on user costs and congestion
- Impacts on competitiveness

[72] The exception to this expectation is in PO3, where the obligation to host (PM14) could result in incumbent rail platforms providing a full offer, giving customers no reason to switch from their status quo.

- Impact on the functioning of the internal market and on competition
- Impacts on innovation
- Digital by default
- Impact on tourism
- Territorial impacts

6.2.1 Impacts on modal split

The outcomes of the MPA analysis (see the Methodological Annex) have been used as inputs to the modelling suite with regards to the modal shift potential resulting from the Policy Options' impact on the capacity of MDMS platform users to identify or book alternative multi-modal or public transport-based trip options. Further, the potential time savings for multi-modal and public transport-based options that have resulted from the 100 OD-pair analysis have also been used as inputs to the modelling suite with the potential to trigger a further modal shift. It is important to mention that, due to the relatively low sample size with cost comparisons derived from the 100 OD-pair analysis and the low robustness of the findings, no cost saving impact has been considered in the modelling process beyond changes resulting from the modelled modal shift.

The combined impact of these inputs leads to different modal shift levels in the Policy Options' packages compared to the baseline. Table 6-2 reports the estimated projections of total passenger kilometres per mode on EU27 level for the baseline and all POs (including the related percentage change compared to the baseline).

PO1 extends neutral display rules to all B2B actors and introduces rules governing commercial agreements with indispensable B2C platforms and railway undertakings (RUs), but it does not require any structural changes. Indispensable RUs and platforms would not be obliged to share ticket content or host other RUs, meaning the current market structure would largely remain unchanged. As a result, while PO1 has a positive impact in promoting a level playing field in B2B distribution, its overall effect on modal split is limited. By focusing on fairness without mandating access, it is unlikely to significantly enhance competition or expand consumer choice.

Building on PO1, PO2 introduces a 'sharing obligation', requiring indispensable RUs to share their tickets for distribution on willing platforms. By ensuring broader access to the ticket offer, it improves the level playing field in the distribution market. However, a key limitation in PO2 is that indispensable RU (those controlling both ticket distribution and rail operations) retain significant influence in the short to medium term. They could still restrict RUs' access to popular distribution channels, undermining competition. The impact on modal split is still stronger than in PO1 as this option directly influences supply, demand, pricing, and competitive dynamics.

PO3 takes a bolder step by adding a 'hosting obligation', compelling indispensable RU platforms to sell willing RUs tickets. The result is a guaranteed pathway for new RUs to reach customers through established, high traffic platforms, removing a major barrier to entry. Increased competition, in turn, drives innovation and better pricing. By fundamentally reshaping market dynamics, this approach ensures fair access to indispensable RU platforms, fostering a more open and competitive railway ecosystem. In terms of modal split, the largest impact is achieved.

PO4 obligates vertically integrated distribution RU platforms to unbundle from their operators, eliminating inherent conflicts of interest. While it does not impose a hosting obligation, breaking these ties aligns incentives with independent platforms, reducing market distortions caused by dominant players favouring their own services. However, the complexity of implementation (including legal, operational, and transitional challenges) could undermine its efficiency. The impact on modal split is close to that of PO3 (it achieves a fairer, more neutral market) but with less efficiency due to the practical difficulties of restructuring established systems. The modal shift is therefore less pronounced than in PO3, but stronger than in PO2.

In general, all POs reduce regulatory fragmentation across the EU and promote a level playing field for ticket distribution in both B2C and B2B markets. Therefore, in all POs it is observed that transport activity by car and air is reduced: this is the consequence of a shift toward rail and buses (and multimodal combinations involving these modes) which are made more competitive and accessible. In terms of timeline of the modal shift, most of the change relative to the baseline is achieved by 2035 (see Table 4-18) and is then maintained or further increased up to 2050 across all POs.

Table 4-18: Car transport activity – POs compared to the Baseline over time – EU27

	2028	2030	2035	2040	2045	2050
PO1	0.0%	-0.14%	-0.29%	-0.28%	-0.30%	-0.29%
PO2	0.0%	-0.24%	-0.50%	-0.52%	-0.56%	-0.57%
PO3	0.0%	-0.35%	-0.69%	-0.72%	-0.76%	-0.76%
PO4	0.0%	-0.26%	-0.55%	-0.57%	-0.61%	-0.62%

Source: Own elaboration from ASTRA model

The largest reduction is observed in PO3 where the amount of car pkm decrease by -0.4% in 2030, by -1% in 2040 and in 2050. It has to be noted that the increasing level of reduction over time follows the growth of the overall transport demand in the long term. This leads to a drop in car modal share by -0.35 p.p. in 2030 and about -0.72 p.p. in 2040 and -0.76 p.p. in 2050 compared to the baseline.

Over time, transport activity by air within the EU27 is also reduced, albeit at a slower rate. In fact, there are air trips (such as those above 1500 km) that cannot be easily replaced by combinations of other transport services, such as rail and/or bus. At the same time there may be specific cases where there would be attractive transport alternatives to flying and it might be the case that the air mode is combined with some of these modes in the POs. The decrease for air mode in passenger-km ranges in the POs from -0.07% to -1%, with the larger reduction achieved in 2050 for PO3. In terms of modal share, this corresponds to changes of less than -0.15 p.p.

Conversely, an increase in the use of buses and trains is expected, as they become the main mode of transport more often (and also as part of multimodal trips). In the POs, the increase in bus passenger-km is expected to range from +0.6% to +1.3% in 2030 relative to the baseline, achieving a rate between +1.3% and +2.8% in 2050. A larger increase is expected in terms of passenger km by train: the range is between +1% and 2.5% in 2030, and between +1.8% and 4.8% in 2050. The strongest increase in pkm for train and coach/bus can be seen in PO3.

Table 4-19: Passenger transport activity per mode (1000 million passenger-km/year and percentage changes relative to the baseline) – EU27

Mode	2028	2030	2040	2050	% change 2030	% change 2040	% change 2050
Baseline							
Car	4 364	4 346	4 480	4 567			
Bus	507	562	638	704			
Train	622	707	825	948			
Air	587	604	739	795			
IWW and domestic maritime	14	15	16	17			
Total	6 094	6 234	6 697	7 032			
PO1							
Car	4 364	4 339	4 465	4 552	-0.2%	-0.3%	-0.3%
Bus	507	566	646	713	0.6%	1.4%	1.3%
Train	622	713	839	965	1.0%	1.7%	1.8%
Air	587	604	737	792	-0.1%	-0.2%	-0.4%
IWW and domestic maritime	14	15	16	17	0.0%	0.0%	0.0%
Total	6 094	6 237	6 703	7 040	0.1%	0.1%	0.1%
PO2							
Car	4 364	4 334	4 450	4 532	-0.3%	-0.7%	-0.8%
Bus	507	568	651	719	0.9%	2.1%	2.1%
Train	622	719	853	983	1.7%	3.4%	3.7%

Mode	2028	2030	2040	2050	% change 2030	% change 2040	% change 2050
Air	587	603	735	788	-0.2%	-0.5%	-0.9%
IWW and domestic maritime	14	15	16	17	0.00%	0.01%	0.01%
Total	6 094	6 238	6 704	7 040	0.1%	0.1%	0.1%
PO3							
Car	4 364	4 328	4 437	4 519	-0.4%	-1.0%	-1.1%
Bus	507	570	655	724	1.3%	2.7%	2.8%
Train	622	724	864	993	2.5%	4.7%	4.8%
Air	587	603	734	788	-0.2%	-0.7%	-1.0%
IWW and domestic maritime	14	15	16	17	0.01%	0.01%	0.01%
Total	6 094	6 239	6 705	7 040	0.1%	0.1%	0.1%
PO4							
Car	4 364	4 332	4 447	4 529	-0.3%	-0.7%	-0.8%
Bus	507	568	652	720	1.0%	2.2%	2.3%
Train	622	720	855	986	1.9%	3.7%	4.0%
Air	587	603	734	788	-0.2%	-0.6%	-1.0%
IWW and domestic maritime	14	15	16	17	0.00%	0.01%	0.01%
Total	6 094	6 238	6 704	7 040	0.1%	0.1%	0.1%

Source: Own elaboration from ASTRA model

In terms of modal shares, rail increases in the range between +0.1 p.p. and +0.27 p.p.in 2030. This impact is increased by 2035 and achieve changes between +0.22 p.p. and +0.62 p.p.in 2050. Instead, the increase of the modal share of buses ranges between +0.05 p.p. and +0.11 p.p.in 2030, with a slight increase up to +0.27 p.p. in PO3 in 2050.

Concerning waterborne, the POs do not implement the obligation for platforms to display the tickets of operators for ferry and related combinations. However, it is assumed that very marginal gain in market share could be achieved by platforms already showing ferry tickets. This applies only to those passengers not already aware of the ferry' options, therefore the shift toward these mode and related multimodal combinations is almost negligible, especially in terms of modal share. In terms of pkm by IWW and domestic maritime, a slight increase is estimated in the range of 0.002% to 0.013%, with the larger increase achieved in 2050 for PO3.

Total passenger kilometres increase in a similar way over time across the baseline and all Policy Options. In fact, the shifts from one mode to another (or to a combination of different modes) lead to minor differences for routes and distance travelled with negligible effect on total pkm (changes are in the range of 0.05% to 0.17%). This is because the measures included in the POs are not expected to have a significant impact on people's overall willingness to travel.

Table 4-20: Car mode share – POs compared to the Baseline – EU27

Mode	2028	2030	2040	2050	p.p. change 2030	p.p. change 2040	p.p. change 2050
Baseline							
Car	71.6%	69.7%	66.9%	64.9%			
Bus	8.3%	9.0%	9.5%	10.0%			
Train	10.2%	11.3%	12.3%	13.5%			
Air	9.6%	9.7%	11.0%	11.3%			
IWW and domestic maritime	0.2%	0.2%	0.2%	0.2%			
Total	100.0%	100.0%	100.0%	100.0%			
PO1							
Car	71.6%	69.6%	66.6%	64.7%	-0.14%	-0.28%	-0.29%
Bus	8.3%	9.1%	9.6%	10.1%	0.05%	0.12%	0.12%
Train	10.2%	11.4%	12.5%	13.7%	0.10%	0.20%	0.22%
Air	9.6%	9.7%	11.0%	11.3%	-0.01%	-0.04%	-0.05%
IWW and domestic maritime	0.2%	0.2%	0.2%	0.2%	0.00%	0.00%	0.00%
Total	100.0%	100.0%	100.0%	100.0%			
PO2							
Car	71.6%	69.5%	66.4%	64.4%	-0.24%	-0.52%	-0.57%
Bus	8.3%	9.1%	9.7%	10.2%	0.08%	0.19%	0.20%
Train	10.2%	11.5%	12.7%	14.0%	0.19%	0.40%	0.48%

Mode	2028	2030	2040	2050	p.p. change 2030	p.p. change 2040	p.p. change 2050
Air	9.6%	9.7%	11.0%	11.2%	-0.02%	-0.07%	-0.11%
IWW and domestic maritime	0.2%	0.2%	0.2%	0.2%	0.00%	0.00%	0.00%
Total	100.0%	100.0%	100.0%	100.0%			
PO3							
Car	71.6%	69.4%	66.2%	64.2%	-0.35%	-0.72%	-0.76%
Bus	8.3%	9.1%	9.8%	10.3%	0.11%	0.24%	0.27%
Train	10.2%	11.6%	12.9%	14.1%	0.27%	0.57%	0.62%
Air	9.6%	9.7%	10.9%	11.2%	-0.03%	-0.09%	-0.13%
IWW and domestic maritime	0.2%	0.2%	0.2%	0.2%	0.00%	0.00%	0.00%
Total	100.0%	100.0%	100.0%	100.0%			
PO4							
Car	71.6%	69.4%	66.3%	64.3%	-0.26%	-0.57%	-0.62%
Bus	8.3%	9.1%	9.7%	10.2%	0.08%	0.20%	0.22%
Train	10.2%	11.5%	12.8%	14.0%	0.20%	0.44%	0.52%
Air	9.6%	9.7%	11.0%	11.2%	-0.02%	-0.08%	-0.12%
IWW and domestic maritime	0.2%	0.2%	0.2%	0.2%	0.00%	0.00%	0.00%
Total	100.0%	100.0%	100.0%	100.0%			

Source: Own elaboration from ASTRA model

6.2.2 Impacts on MDMS platforms

Several policy measures impact costs for MDMS platforms, which scale with the projected number of MDMS platforms active in the European transport ticketing market. We first present these platform projections, followed by the costs incurred by those platforms, categorised along the Better Regulation cost typology. The analysis has been carried out in the CBA model and the cost calculations with all assumptions are described in detail in the Methodological Annex. Costs for MDMS platforms are summarised in Table 4-22 at the end of this section.

Impacts on MDMS platforms deployment. All policy options are expected to lead to an increase in the number of MDMS platforms across EU27, relative to the baseline. As explained in the Methodological Annex, policy measures common to all POs are expected to lead to an increase in (a) the completeness and accuracy of ticket offerings on MDMS platforms, and (b) the ability to book tickets via MDMS platforms, some of which will be driven by new entrants. The differences between Member States are assessed by considering a country grouping. Member States are grouped into three categories: 'Leaders[73]', 'Planned Adopters[74]', or 'Followers[75]', which are based on the level of deployment of MDMS service. Two indicators have been used to develop an overall ranking for each Member State, including the existing number of MDMS platforms and the number of users of these platforms.

However, as shown in Table 4-21, the deployment increase of MDMS platforms compared to the baseline is expected to be significantly higher in PO2, PO3 and PO4 compared to PO1 (around 5% increase relative to the baseline by 2050 in PO1, against a 50% increase compared to the baseline in PO2-PO4. This is primarily driven by obligations for indispensable rail operators to display their tickets on willing MDMS platforms, thereby disrupting existing sales channels and opening the ticketing market to further competition.

Table 4-21: Estimated number of platforms across EU27 and by country group

Grouping	2028	2030	2040	2050
Baseline				
Leaders	154	155	162	169
Planned adopters	157	160	174	188
Followers	53	54	59	64
Total	**364**	**369**	**395**	**421**
PO1				
Leaders	154	160	188	188
Planned adopters	157	163	188	188
Followers	53	56	64	64
Total	**364**	**379**	**440**	**440**
PO2				
Leaders	154	166	276	257
Planned adopters	157	173	300	279
Followers	53	59	101	94
Total	**364**	**398**	**677**	**630**

[73] Seven Member States are considered as leaders: Germany, Austria, Denmark, Luxembourg, Finland, Spain, Netherlands

[74] Ten Member States are considered as 'planned adopters': France, Poland, Italy, Belgium, Portugal, Malta, Cyprus, Greece, Bulgaria, Estonia.

[75] Ten Member States are considered as 'followers': Croatia, Lithuania, Hungary, Sweden, Czech Republic, Ireland, Slovenia, Latvia,Romania, Slovakia

Grouping	2028	2030	2040	2050
PO3				
Leaders	154	165	257	257
Planned adopters	157	172	279	279
Followers	53	58	94	94
Total	**364**	**395**	**630**	**630**
PO4				
Leaders	154	166	266	257
Planned adopters	157	172	289	279
Followers	53	58	98	94
Total	**364**	**396**	**653**	**630**

Source: Own elaboration from CBA model

Impacts on costs and costs savings for MDMS platforms.

6.2.2.1 One-off and recurrent adjustment costs for MDMS platforms.

All policy options are expected to generate adjustment costs for large MDMS platforms. These arise mainly from the software development effort required to comply with the common technical measures PM1, PM2, PM3, PM7 and PM8, which apply across all policy options, albeit with different numbers of platforms affected. In addition, PO3 introduces a further one-off cost in 2028 through PM14, which obliges RU platforms whose operational branches account for at least 50% of the national rail market to conclude new commercial agreements and establish related API-based data-sharing arrangements. PO4 includes a more substantial additional requirement under PM15, which mandates the unbundling of vertically integrated distribution systems for rail operators whose operational branches account for at least 50% of the national rail market. This unbundling generates significant organisational and technical restructuring costs.

Under every policy option, large MDMS platforms that are not already compliant will need to undertake software development to implement PM1, PM2, PM3, PM7 and PM8. These measures entail one-off development costs, incurred either in the implementation year for existing platforms or in the first year of operation for new entrants, as well as recurrent maintenance costs estimated at 10% of the initial development effort. Because these five measures overlap in terms of required technical components, such as shared back-end modifications, user interface updates, testing and logging infrastructure, and streamlined quality-assurance processes, a 25% reduction in the estimated engineering effort is applied to reflect achievable synergies.

PM1 introduces an obligation to apply the updated CRS Code of Conduct neutral display rules. Based on the stakeholders' feedback, for most large platforms, this is assumed to require 90 working days of software-engineering effort. Based on the assessment, approximately 172 large platforms are expected to be affected. The corresponding one-off development cost across all large platforms is estimated at EUR 4.0 million in 2028 and then for new platforms entering the market from then onwards. Recurrent costs for maintenance due to PM1 for large MDMS platforms (excluding CRSs) are assumed to be 10% of one-off costs, that is EUR 2,312 annually, or around EUR 0.4 million across relevant platforms in 2028.

PM2 requires platforms to ensure equal care and timeliness in the loading and processing of operators' data. The required system modifications are comparatively narrower in scope than those for PM1, and are assumed to require 68 working days of software-engineering time for each affected platform, excluding CRS platforms, which are already compliant. The one-off cost associated with PM2 is estimated at EUR 3.0 million in 2028. Maintenance of the system is expected to deliver an annually recurring cost equal to 10% of the one-off cost. This would come at EUR 1,734 for all, non-CRS, large platforms, or around EUR 0.3 million across relevant platforms in 2028.

PM3 concerns the provision and sharing of marketing and booking data in a non-discriminatory manner. The development effort is assumed to be similar to PM2, though fewer platforms are affected, as both CRS and NCA platforms are already compliant. The assessment indicates that around 133 large platforms are impacted. This results in an estimated one-off cost of approximately EUR 2.3 million in 2028. As with PM1 and PM2, recurrent costs for maintenance are assumed to be 10% of one-off costs.

PM7 introduces a requirement for large B2C MDMS platforms to share non-personal data with public authorities for mobility management. The one-off cost corresponds to the development of data-sharing interfaces, estimated at EUR 117 thousand per platform based on stakeholders' feedback, with additional recurrent costs for ongoing API maintenance. Based on the assessment, approximately 150 large B2C platforms are expected to be affected in 2028, resulting in an estimated one-off cost of EUR 17.6 million.

PM8 requires all large platforms to display GHG-emissions information whenever such data is provided by operators. Implementing this functionality is assumed to entail 90 working days of software-engineering work per affected platform. With approximately 175 large platforms expected to fall within scope in 2028, the resulting one-off implementation cost is estimated at EUR 4.1 million for that year.

The total one-off adjustment costs for new platforms entering the market after 2028, and the recurrent maintenance costs from 2028 onwards, depend on the number of platforms per year; therefore, total 2028-2050 costs vary by policy option.

Over the assessment period, the combined adjustment costs associated with PM1, PM2, PM3, PM7 and PM8 amount to EUR 92.9 million (NPV) in PO1 and EUR 127.7 million (NPV) in PO2 (Table 4-22), differing only due to the differences in platform projections in these POs.

In PO3, the same set of measures generates EUR 124.2 million (NPV) in adjustment costs. In addition, PM14 introduces a one-off requirement for rail operator platforms where the operational branch reaches at least 50% of the operational market, to enter into new commercial agreements with other operators and establish the necessary API-based data-sharing arrangements. This adds EUR 0.4 million in one-off costs, bringing the total adjustment cost for PO3 to EUR 124.6 million (NPV) relative to the baseline.

In PO4, the combined cost of the common measures is estimated at EUR 118.1 million (NPV). However, the main cost driver in PO4 is PM15, which obliges 19 rail operator platforms to unbundle their distribution systems from the systems of their parent operators. The unbundling cost is estimated at EUR 8.5 million per platform, generating EUR 157.7 million (NPV) in additional adjustment cost over the analysis period. As a result, total adjustment costs in PO4 reach EUR 282.3 million (NPV) over 2028-2050.

6.2.2.2 One-off administrative costs for MDMS platforms

All policy options generate administrative costs under PM10, the measure requiring MDMS platforms with Significant Market Presence (SMP) to notify national authorities (for national-level thresholds) and the European Commission (for EU-level thresholds).

Based on the threshold assumptions in PM9, four MDMS platforms are expected to qualify. Each platform is estimated to incur a one-off administrative cost equivalent to 2 FTEs, valued at EUR 113,000 per platform.

This results in a total one-off cost of approximately EUR 0.45 million in 2028, the year of implementation, across all policy options.

6.2.2.3 Adjustment costs savings for MDMS platforms.

Across all policy options, the introduction of the commercial-agreement rules under PM11 and PM12 is expected to generate recurrent adjustment cost savings for MDMS platforms. These measures require indispensable MDMS platforms (PM11) and indispensable RUs (PM12) to follow specific principles when entering commercial arrangements with third parties, thus simplifying negotiations and reducing administrative effort. The estimated savings are at EUR 2,000 for each new commercial agreement and

EUR 1,183 for each renegotiation. While PM11 and PM12 apply under every policy option, the magnitude of cost savings varies substantially between options, as it depends on the expected number of new and renegotiated commercial agreements relative to the baseline. In turn, the volume of such agreements is driven by the additional obligations introduced in each policy option.

Under PO1, which introduces only limited drivers for additional agreements, savings are estimated at EUR 13 million over 2028-2050 (NPV, 2024 prices). PO2, which includes a sharing obligation (PM13), leads to a substantial increase in agreements and therefore significantly higher savings of EUR 149 million. In PO3 the hosting obligation (PM14) leads to a slightly lower projection of platforms and hence agreements, resulting in savings of EUR 134 million. In PO4, the unbundling requirement (PM15) enhances neutrality on indispensable rail platforms and thereby facilitates additional agreements relative to PO2, leading to total savings of EUR 142.7 million over the assessment period.

6.2.2.4 Net benefits for MDMS platforms

Table 4-22 provides an overview of the adjustment and administrative costs, associated savings, and the net impacts for all policy options over the 2028-2050 period.

Overall, the assessment shows that PO1 and PO4 generate net costs, whereas PO2 and PO3 yield net benefits. PO4 records the largest net cost, EUR 140 million (NPV 2028-2050, relative to the baseline), driven mainly by the substantial adjustment costs associated with the unbundling obligation (PM15). In PO1, the cost reductions from streamlined commercial negotiations are too small to counterbalance the adjustment and administrative costs, resulting in EUR 80.4 million in net costs. In contrast, PO2 benefits from the increased number of agreements triggered by the sharing obligation (PM13), producing EUR 20.9 million in net benefits and performing best overall. In PO3, slightly lower net benefits of EUR 11.3 million are estimated, as the hosting requirement (PM14) leads to consolidation in the MDMS platform market, therefore subduing the savings generated under PM11 and PM12.

Table 4-22: NPV (2028-2050) of costs for LE and SME platforms in different policy options in mln EUR (2024 prices)

	Difference to baseline			
	PO1	PO2	PO3	PO4
Adjustment costs	**92.9**	**127.7**	**122.3**	**282.3**
PM1 (Neutral display)	12.0	16.5	15.8	16.1
PM2 (Equal care for data)	9.0	12.4	11.8	12.1
PM3 (Marketing and booking data sharing)	6.9	9.5	9.1	9.3
PM7 (Data for mobility management)	52.9	72.6	69.4	70.8
PM8 (GHG emission data)	12.1	16.7	15.9	16.3
PM14 (Obligation to host)	0.0	0.0	0.4	0.0
PM15 (Obligation to unbundle)	0.0	0.0	0.0	157.7
Administrative costs	**0.5**	**0.5**	**0.5**	**0.5**
PM10 (Designation of indispensable MDMS and RUs)	0.5	0.5	0.5	0.5
Adjustment cost savings	**13.0**	**149.0**	**134.0**	**142.7**
PM11 (Commercial agreement rules indispensable MDMS)	12.0	136.1	122.3	130.4
PM12 (Commercial agreement rules indispensable RUs)	1.0	12.9	11.7	12.3
Net costs (-) or net benefits (+)	**-80.4**	**20.9**	**11.3**	**-140.0**

6.2.3 Impacts on transport operators

The estimated number of transport operators in the scope of this initiative is provided in Table 4-23 below. The numbers are assumed to remain stable over time. The first column shows the number of operators that could potentially benefit from this initiative or voluntarily implement some of the proposed measures. Mandatory measures exclude SMEs (this is the case of policy measures such as neutral display requirements and GHG reporting obligations for platforms in PO1) or are limited to indispensable operators (notably obligations to share in PO2 and obligations to host in PO4).

Table 4-23: Estimated number of transport operators

Mode	In-scope	Excluding SMEs	Indispensable operators
Rail[76]	158	149	24
Bus and Coach[77]	3778	567	0
Air[78]	331	331	0
Waterborne[79]	523	5	0

Total costs and cost savings for transport operators are presented below and summarised in Table 4-24 at the end of this section.

6.2.3.1 One-off adjustment costs for transport operators.

In PO2, PO3 and PO4, obligations are introduced for rail operators with SMP and PSO/cross-border operators to enable re-linking and/or the sale of tickets to any requesting MDMS platform (PM13). Since obligated operators would not have entered these agreements in the absence of policy intervention, costs will be incurred costs to facilitate this. An onboarding cost is assumed of EUR 29,772[80] per additional agreement relative to the baseline. Total costs were calculated by multiplying this onboarding cost with the additional agreements negotiated by the obligated entities relative to the baseline in each PO. These adjustment costs are greatest in PO2 (EUR 48.2 million) due to a slightly higher number of assumed MDMS platforms that would be willing to enter agreements with indispensable rail operators, followed closely by PO4 (EUR 45.2 million) and PO3 (EUR 42.2 million).

6.2.3.2 One-off administrative costs for transport operators.

All policy options include an obligation for RUs with SMP to inform national authorities about the list of their platforms that are opened to other RUs (PM10). Only RUs with SMP as detailed in PM9, and whose platforms are already opened to other RUs (19) would be requested to submit this information, and once submitted, they would not be obliged to submit any further information in the consecutive years, unless a change occurs. We therefore assume that 2 hours are needed per RU with SMP for this task. Thus, the total one-off administrative costs at EU level for RUs are estimated at EUR 1,356 in 2028.

6.2.3.3 Adjustment cost savings for transport operators

All policy options include the adoption of principles on distribution fees designed to streamline contract execution (PM11 and PM12), thereby generating cost savings. Specifically, these are estimated to lead to cost savings of EUR 2,000 per new agreement and EUR 1,183 per renegotiation. The total cost savings differ across the policy options, reflecting varying estimates of the annual number of new and

[76] IRG Market Monitoring report, 2023

[77] DG MOVE estimate

[78] Considering Category A active operating licences (ACOL) for passenger services. Category A operating licences refer to operators of aircraft with 20 or more seats. This categorisation is in line with Regulation (EC) No 1008/2008 on air services

[79] DG MOVE estimate

[80] Comprising an assumed cost of contract negotiation (EUR 18,000) and a logistical cost to prepare rail APIs for a new third-party connection (EUR 11,772).

renegotiated agreements. These are greatest in PO2 (EUR 149 million) as service deployment is estimated to be the greatest in the medium term, and the obligation to share (PM13) leads to additional agreements being negotiated relative to the baseline, without the obligations to host (PM14) or unbundle (PM15) having any market consolidation effects. Total agreements and associated cost savings are next greatest PO4 (EUR 142.7 million), PO2 (EUR 149 million), and PO1 (EUR 13 million) in turn.

6.2.3.4 Net benefits for transport operators

The costs and cost savings presented in previous sections are summarised in Table 4-24 below. PO1 shows a net benefit of EUR 13 million, as adjustment cost savings (EUR 13 million) exceed negligible administrative costs. PO2, PO3 and PO4 show net benefits of 100.9 million, EUR 91.8 million and EUR 97.6 million, respectively. In these options, adjustment cost savings more than offset the higher adjustment costs and obligations.

Table 4-24: NPV (2028-2050) of costs for LE and SME operators in different policy options in mln EUR (2024 prices)

	Difference to baseline			
	PO1	PO2	PO3	PO4
Adjustment costs	**0.0**	**48.2**	**42.2**	**45.2**
PM13 (Obligation to share)	0.0	48.2	42.2	45.2
Administrative costs	**0.001**	**0.001**	**0.001**	**0.001**
PM10 (Designation of indispensable MDMS and RUs)	0.001	0.001	0.001	0.001
Adjustment cost savings	**13.0**	**149.0**	**134.0**	**142.7**
PM11 (Commercial agreement rules indispensable MDMS)	12.0	136.1	122.3	130.4
PM12 (Commercial agreement rules indispensable RUs)	1.0	12.9	11.7	12.3
Net costs (-) or net benefit (+)	**13.0**	**100.9**	**91.8**	**97.6**

6.2.4 Impacts on national authorities

This section presents the analysis of the expected cost impact to national authorities in Member States level as resulting from the policy options. National public authorities include both the Member States' bodies responsible for the implementation of the rules and for their monitoring. The analysis is carried out in the CBA model and the cost calculations with all assumptions described in detail in the annex of this study. The costs to public authorities are presented in detail in Table 4-25.

6.2.4.1 One-off and recurrent administrative costs for national authorities.

A one-off administrative cost arises in all policy options due to the common policy measure PM10, under which Member States are required to receive information from B2C MDMS platforms and notify the European Commission about the entities designated with SMP at national level. Assuming an effort of two full-time equivalents per Member State, the one-off cost in 2028 is estimated at approximately EUR 3.1 million, expressed as present value relative to the baseline.

Under PM6, Member States must also handle dispute resolution among transport operators and MDMS providers. This activity is estimated to cost EUR 1.5 million per year based on 1FTE required per Member State, equivalent to EUR 25.8 million expressed as present value over 2028–2050 relative to the baseline.

6.2.4.2 Recurrent enforcement costs for national authorities.

All policy options are expected to entail ongoing enforcement costs for public authorities. Under PM6, Member States must monitor the market for entities with SMP and are responsible for overseeing the implementation and enforcement of rules related to MDMS platforms. Based on stakeholder feedback,

this effort is estimated at three full-time equivalents per Member State, that is EUR 226 thousand. The total enforcement cost is estimated at EUR 6.1 million per year in all policy options, corresponding to EUR 106.5 million expressed as present value over 2028-2050 relative to the baseline.

6.2.4.3 Net costs for national authorities

All policy options require the same level of effort in terms of enforcement and administrative costs for Member States. The overall net cost per policy option is estimated at EUR 135.4 million, expressed as present value over 2028-2050 relative to the baseline, with recurrent enforcement costs representing the main component.

Table 4-25: NPV (2028-2050) of costs for national authorities in the different policy options relative to the baseline in mln EUR (2024 prices)

	Difference to baseline			
	PO1	**PO2**	**PO3**	**PO4**
Enforcement cost	**106.5**	**106.5**	**106.5**	**106.5**
PM6 (Enforcement authority)	106.5	106.5	106.5	106.5
Administrative costs	**28.9**	**28.9**	**28.9**	**28.9**
PM6 (Enforcement authority)	25.8	25.8	25.8	25.8
PM10 (Designation of indispensable MDMS and RUs)	3.1	3.1	3.1	3.1
Net costs	**135.4**	**135.4**	**135.4**	**135.4**

6.2.5 Impacts on the European Commission

6.2.5.1 Recurrent adjustment costs for the European Commission

All policy options contain common measures that are expected to lead to recurrent adjustment costs for the European Commission. These are summarised in Table 4-26 below.

An EU-wide enforcement network will be introduced to exchange best practices from 2028 onwards (PM6), for which the EC is expected to host a two-day in-person meeting and fund participants to attend, totalling around EUR 30,000 per year. In addition, a Eurobarometer survey is assumed to be collected every two years from 2030 onwards to assist with monitoring and enforcement efforts, at an assumed cost of EUE 100,000 per survey. Together, these are estimated at EUR 1.3 million when expressed as a present value over 2028-2050 (2024 prices).

A requirement is also introduced in all policy options for the EC to designate B2C MDMS platforms with SMP at EU-level (PM10), after receiving notifications from platforms. The EC might also need to deal with complaints/further investigation related to the designation process. Over time, EC will need to monitor developments and manage the list of designated entities (with potential additions or removals to the list). This is assumed to require 2 FTE per year at EUR 118,326 per FTE. Thus, recurrent adjustment costs for EC total EUR 236,652 per year in all PO's, or EUR 4.0 million when expressed in present value terms.

Table 4-26: NPV (2028-2050) of costs to the EC in difference policy options in mln EUR (2024 prices)

	Difference to baseline			
	PO1	**PO2**	**PO3**	**PO4**
Adjustment costs	**5.3**	**5.3**	**5.3**	**5.3**

	Difference to baseline			
	PO1	PO2	PO3	PO4
PM6 (Enforcement authority)	1.3	1.3	1.3	1.3
PM10 (Designation of indispensable MDMS and RUs)	4.0	4.0	4.0	4.0
Net costs	**5.3**	**5.3**	**5.3**	**5.3**

6.2.6 Impacts on SMEs

The SME check has been performed and is presented in a separate annex. The policy measures aim to prevent gatekeeping behaviours from indispensable rail operators MDMS platforms, and to promote competition in the transport ticketing market by making it easier to see and book complete and accurate offerings across multiple modes and operators.

SME MDMS platforms and SME transport operators are expected to benefit from the introduction of commercial agreement rules for indispensable MDMS platforms (PM11) and indispensable RUs (PM12) in all policy options. These rules will streamline negotiation processes through a more harmonized approach that reduces commercial negotiation efforts and guarantees a fairer access to key offers and platforms. Thus, adjustment costs savings are expected for both SME MDMS platforms and SME transport operators in all policy options, and are presented in the following sections.

Obligations to share (PM13) and host (PM14) for indispensable market players, all of whom are large enterprises, would give SMEs the option to have their offerings displayed on a level playing field with indispensable rail operators on linked platforms. SMEs would likely incur costs to facilitate display of these offerings on platforms, but this would also likely lead to additional revenues. We assume that these revenues would at least exceed the costs incurred (otherwise they would not enter the agreement willingly) and assume zero associated costs or revenues.

Table 4-27 below presents the numbers of SMEs that are expected to be affected by these initiatives, broken down into MDMS platforms and operators.

Table 4-27: Estimated number of SME platforms and transport operators

	Number of platforms in the EU27			
Platform type	**2028**	**2030**	**2040**	**2050**
Baseline				
SME platforms	189	191	205	218
SME operators	3,738	3,738	3,738	3,738
Total SMEs	**3,927**	**3,929**	**3,943**	**3,956**
PO1				
SME platforms	189	197	228	228
SME operators	3,738	3,738	3,738	3,738
Total SMEs	**3,927**	**3,935**	**3,966**	**3,966**
PO2				
SME platforms	189	206	352	327
SME operators	3,738	3,738	3,738	3,738
Total SMEs	**3,927**	**3,944**	**4,090**	**4,065**
PO3				

	Number of platforms in the EU27			
SME platforms	189	204	327	327
SME operators	3,738	3,738	3,738	3,738
Total SMEs	**3,927**	**3,942**	**4,065**	**4,065**
PO4				
SME platforms	189	205	339	327
SME operators	3,738	3,738	3,738	3,738
Total SMEs	**3,927**	**3,943**	**4,077**	**4,065**

Source: own elaboration from the CBA model

6.2.6.1 Recurrent adjustment costs savings for SME MDMS platforms.

SME MDMS platforms will benefit from adjustment cost savings linked to the introduction of commercial agreement rules (PM11 and PM12)[81]. As explained in 6.2.2, although PM11 and PM12 are included in all policy options, the cost savings vary significantly between them, since they are calculated based on the projected number of new and renegotiated commercial agreements relative to the baseline. The highest adjustment costs savings, expressed as present value over 2028-2050 relative to the baseline, would be achieved in PO2 (EUR 101 million). This is followed by PO4 (EUR 95.7 million) and PO3 (EUR 90.5 million). PO1 is expected to generate lower savings (EUR 9.2 million). PM11 contributes to the largest share of savings in each option (EUR 8.6-93.7 million), while PM12 provides additional but smaller savings (EUR 0.5-7.3 million).

Table 4-28: NPV (2028-2050) of cost savings for SME platforms in different policy options in mln EUR (2024 prices)

	Difference to baseline			
	PO1	PO2	PO3	PO4
Adjustment cost savings	**9.2**	**101.0**	**90.5**	**95.7**
PM11 (Commercial agreement rules indispensable MDMS)	8.6	93.7	83.9	88.8
PM12 (Commercial agreement rules indispensable RUs)	0.5	7.3	6.6	6.9
Net benefit	**9.2**	**101.0**	**90.5**	**95.7**

6.2.6.2 Recurrent adjustment costs savings for SME transport operators.

As for SME MDMS platforms, in all policy options, SME transport operators will also benefit from the introduction of commercial agreement rules for indispensable MDMS platforms (PM11) and indispensable RUs (PM12). Adjustment cost savings for SME transport operators, expressed as present value over 2028-2050 relative to the baseline, are highest in PO4 (EUR 102.5 million), followed by PO2 (EUR 107 million), PO3 (EUR 96.1 million), and PO1 (EUR 9.4 million).

[81] The cost saving per new agreement is assumed at EUR 2,000 and per renegotiated agreement at EUR 1,183, based on input from stakeholders.

Table 4-29: NPV (2028-2050) of costs for SME operators in different policy options in mln EUR (2024 prices)

	Difference to baseline			
	PO1	PO2	PO3	PO4
Adjustment cost savings	**9.4**	**107.0**	**96.1**	**102.5**
PM11 (Commercial agreement rules indispensable MDMS)	9.4	106.2	95.4	101.8
PM12 (Commercial agreement rules indispensable RUs)	0.1	0.8	0.7	0.7
Net benefits	**9.4**	**107.0**	**96.1**	**102.5**

6.2.6.3 Net benefits for SMEs

Total net benefits for SMEs (MDMS platforms and transport operators) are estimated at EUR 208.0 million in PO2, EUR 198.2 million in PO4, EUR 186.6 million in PO3, and EUR 18.6 million in PO1 expressed as present value over 2028-2050 relative to the baseline. As explained above, the obligations included in the policy options do not apply to SMEs and SMEs are only expected to indirectly benefit from them.

SMEs views were considered via stakeholder consultation activities, including the targeted survey and interviews conducted in the context of the impact assessment support study, and the open public consultations. Overall, SMEs expressed favourable views on the policy options, with strong support for the introduction of binding rules and the introduction of commercial agreement rules. An overview of SMEs' views is provided in the SME check, in annex.

6.2.7 Impacts on user costs and congestion

The proposed policy options are expected to benefit transport users through three channels: (a) a reduction of search costs for travellers; (b) an increase in competition in the platform market; (c) an increase in competition in the transport market. A further societal impact is expected from modal shift and hence a reduction in road transport congestion brought about by (c) and (b). Impacts on user costs and congestion are therefore presented separately.

6.2.7.1 User costs

The reduction of search costs for travellers. The most direct effect would be the reduction in search cost, as travellers would be able to find, compare and purchase tickets in a single place without having to perform longer searches and visit multiple platforms. In the baseline scenario, travellers must dedicate time and effort to search for the most convenient offer in terms of fares, comfort and travel time, with no guarantee that they will manage to find the offer that best matches their preferences. Under the various policy options, and to the extent that the measures included in each option will provide customers with a complete ticketing offer in a single place, travellers will most certainly save time on searches, but possibly also gain in terms of travel time and more convenient fares. As it would be too complex to further pursue this distinction between savings on search time, on travel time and on ticket fares, this section considers them jointly as 'reduction of search costs'.

This effect would be present in PO1, thanks to neutral display requirements that would make convenient offers more visible to potential customers. However, the impact would be limited, since there are no provisions in this option that have the effect of widening the offer of platforms and guaranteeing that a complete ticketing offer becomes available on single platforms. In PO2, the addition of the 'sharing obligation' (PM13) would enable a complete ticketing offer on willing platforms. The effect with thus be stronger than PO1 but still be limited to the customer base of independent platforms, since indispensable RU platforms have shown no willingness to host the full offer of competitors. In PO3, the

further addition of the 'hosting obligation' (PM14) would make a substantial difference, since now the possibility to access a complete ticketing offer would be extended to the customers of indispensable RU platforms that have by far the largest reach. The reduction in search cost would be highest in this case. In PO4, the unbundling of vertically integrated platforms would remove the perverse incentives to limit their ticketing offer. Accordingly, the magnitude of the reduction in search cost for consumers would be similar to PO3 but it is likely to be achieved with a certain delay due to the need for restructuring processes.

Implications for consumers of increased competition in the platform market. Increased competition in the platform market would lead to greater innovation efforts, widening of services available on platforms, improvements in the overall ticketing experience, and possibly reduction of transaction costs for users. PO1 would not substantially affect competition in the platform market, since, broadly speaking, it will neither affect the content, nor the incentives of platforms, but only the presentation of existing offers. PO2 would have an impact on the content of independent platforms, making them a more attractive distribution channel for consumers. This will improve their position vis à vis the indispensable platforms and increase overall competition in the platform market. The inertia in consumer behaviour might however dampen the effect as many consumers would remain loyal to indispensable platforms. PO3 would oblige indispensable platform to host a complete ticketing offer (PM14). This is likely to reinforce their appeal in the market, but at the same time would deprive them of any possibility of abusing behaviour (by virtue of the common measures included in all options, PM1 to PM12) or denying access to competitors (PM14). This would change the incentives for indispensable platforms, inducing a behaviour that is closer to that of 'normal' platforms that seek to maximise market intermediation. This, in turn, might elicit even stronger innovation efforts from competing independent platforms. Similar considerations can be made for PO4. Altogether, it is uncertain which of the options - PO2, PO3 or PO4 - would produce greater benefits for consumers from competition in the platform market.

Implications for consumers of increased competition in the transport market. Greater competition in the transport market would tend to lower prices and increase the quality and frequency of transport services. The amount of pressure exercised by competition would be proportional to the number of customers being able to easily find, compare and purchase the most convenient travel offers. PO1 would improve visibility and fair representation of existing offers on online platforms, but it would not broaden their ticketing offer. This would promote competition in the transport market, but not as substantially as the other policy options. PO2 would affect the content of independent platforms, giving them access to indispensable tickets. Customers of independent platforms would therefore be able to compare the offers of different transport operators and opt for the most convenient. Initially, the competitive pressure on the transport market would only be exercised through the customers of independent platforms. However, the effect would become stronger if consumers begin switching to independent platforms attracted by their broader offer. PO3 would oblige indispensable platforms to host a complete ticketing offer (PM14). In this case, nearly all consumers would be able to compare directly the offers of transport operators and buy the most convenient one. This is likely to lead to stronger price competition between RUs. Accordingly, PO3 would have the largest effect on consumers through competition in the transport market. PO4 is likely to lead to a situation similar to that of PO3, meaning a situation in which indispensable platforms host a complete ticketing offer. However, this outcome is likely to materialise with a certain delay with respect to PO3, due to the necessary restructuring processes.

Overall assessment of impacts on user costs. The proposed policy options are expected to generate significant benefits for consumers by reducing search costs and fostering greater competition in both the platform and transport markets. The most immediate and tangible effect across all options is the reduction of search costs. By enabling travellers to find, compare, and purchase tickets in a single location, the initiative would eliminate the need to conduct lengthy searches across multiple platforms.

This simplification of the purchasing process enhances convenience, transparency, and efficiency for consumers.

The following tables show the impacts of the POs on average individual expenditure for interurban mobility and the related generalised cost (which include the monetisation of travel time savings).

The expenditure per individual for interurban mobility considers all the cost perceived by the user for using different transport modes (car, bus, train, air intra EU27, inland waterways and domestic maritime). For collective modes of transport these are ticket costs, while for car mode costs include both variable (fuel and tolls) and fixed costs (vehicle purchase, maintenance, insurance and circulation tax). VAT is also included in the costs for all modes. The trend in costs by mode over time is derived from the PRIMES-TREMOVE baseline scenario: these are projected to decrease by 24% and 6% respectively for rail and cars by 2050, whereas slight increases are assumed for buses (+1%) and waterborne transport (+4%) compared to 2028.

The average generalised cost per individual considers the average expenditure and the travel time, which is monetised using the Value of Time (VOT). VOT values, derived from the ITS Leeds meta-analysis (Wardman et al., 2012), are differentiated by country, mode and distance band (regional, national or international) using the ASTRA model. The average EU27 value is 9.7 euros per hour in a regional context, 10.7 euros per hour in a national context, and 26.3 euros per hour in an international context, where the differences are due to the usage of different modes in different contexts (e.g. a larger share of aviation for international trips, whereas more buses are used in the regional context).

The impacts of the different POs on the average expenditure per person are solely related to the changes in the mode split across different contexts. As reported in Table 4-30, these impacts are almost negligible in the short term (-0.01% to -0.06% in the POs in 2030), whereas a slight cost decrease is estimated in the long term, ranging from -0.05% to -0.34% in 2050, with the largest reduction expected in PO3. This is driven by the decreasing cost of passenger rail transport over time, which increases the economic benefit of shifting towards this mode of transport from private cars and aviation (the greatest benefit is achieved in PO3, where the highest mode shift is estimated).

The impacts on the average generalised cost per person present a similar trend, albeit at a slower pace. This is due to the fact that the generalised cost includes the monetised travel time and therefore the shift towards rail and buses increases travel times compared to aviation and car options. Consequently, the average generalised cost percentage decreases are generally slightly lower (up to -0.28% in PO4 in 2050) than those of average expenditure.

Table 4-30: Impacts on EU27 Average individual expenditure for interurban mobility

Average expenditure per person for interurban mobility (% change to the baseline)	2030	2035	2040	2045	2050
PO1	-0.01%	0.00%	-0.03%	-0.04%	-0.05%
PO2	-0.03%	-0.09%	-0.16%	-0.21%	-0.24%
PO3	-0.06%	-0.17%	-0.27%	-0.32%	-0.34%
PO4	-0.04%	-0.11%	-0.19%	-0.23%	-0.28%

Table 4-31: Impacts on EU27 Average individual generalised transport costs for interurban mobility (incl. time savings)

	2028	2030	2035	2040	2045	2050
PO1 % difference to baseline	0.00%	-0.02%	-0.03%	-0.07%	-0.07%	-0.09%

	2028	2030	2035	2040	2045	2050
PO2 % difference to baseline	0.00%	-0.02%	-0.07%	-0.15%	-0.18%	-0.20%
PO3 % difference to baseline	0.00%	-0.02%	-0.12%	-0.23%	-0.27%	-0.28%
PO4 % difference to baseline	0.00%	-0.02%	-0.09%	-0.17%	-0.20%	-0.22%

6.2.7.2 Congestion

Whilst transport activity is expected to increase over time in the baseline scenario, POs are expected to promote modal shift towards other modes of transport such as public transportation. As a result, there would be fewer cars on the road, but also more coaches. The net effect from consolidation of users into fewer vehicles reduces the traffic volume and improves traffic flows, leading to an overall reduction of road congestion. Less congested roads would in turn lead to fewer delays and less fuel consumption.

As elaborated in section 6.2.1, the modal share of cars decreases for all POs compared to the baseline. PO1 shows the smallest deltas compared to the baseline and, as a result, impact on congestion is expected to be limited. With PO2 and PO3, the reduction of transport activity compared to the baseline leads to a stronger impact compared to PO1, in terms of reducing the negative impacts of congestion compared to baseline. The magnitude of impact for PO4 is between PO2 and PO3.

Table 4-32 presents the monetised damages from congestion, calculated by interpolating the mode-specific passenger transport activity results for each year and multiplying by a mode-specific congestion damage cost from the 2019 handbook on the external costs of transport[82] (€ per passenger km). The impact on congestion costs of the various policy options mirrors the impact on modal shift, with PO3 having the strongest effect (EUR 6.4 billion congestion costs savings, expressed as present value over 2028-2050 relative to the baseline), followed by PO4 (EUR 4.8 billion congestion costs savings), PO2 (EUR 4.4 billion congestion costs savings) and PO1 (EUR 1.8 billion congestion costs savings)

Table 4-32: Impacts on external costs of road congestion in the POs relative to the baseline (EU27), expressed as present value over 2028-2050, in million EUR (2024 prices)

	Difference to baseline			
	PO1	PO2	PO3	PO4
Savings in external costs of road congestion	1,758	4,352	6,438	4,833

6.2.8 Impacts on competitiveness

6.2.8.1 Scope and benchmark

This section assesses the economic competitiveness effects of the policy options on:

- Rail operators active in passenger transport,
- MDMS platforms operating in the EU,
- The multimodal passenger transport sector more broadly.

The benchmark is the baseline scenario, characterised by continued reliance on voluntary commercial negotiations, heterogeneous access conditions and limited regulatory intervention.

The assessment focuses on:

[82] The impacts on external costs of road congestion have been quantified with the help of the ASTRA model and using the unit costs from the 2019 Handbook on external costs of transport (Handbook on the external costs of transport - Publications Office of the EU (europa.eu)) to monetise the external costs.

- Operational efficiency and transaction costs,
- Cost and service competitiveness of multimodal transport,
- Sector-level economic performance.

Structural competition effects, internal market integration and innovation dynamics are assessed separately in the following sections.

6.2.8.2 Transaction costs and operational efficiency

Across all policy options, the common measures increase regulatory clarity and transparency. By extending CRS Code of Conduct rules, requiring neutral display, ensuring fair data processing and establishing enforcement mechanisms, the initiative reduces legal uncertainty and dispute risk.

Lower uncertainty and clearer negotiation frameworks can reduce administrative and contractual transaction costs for both rail operators and MDMS platforms. This effect is expected to be present under all policy options.

Under PO1 and PO2, the introduction and extension of fair principles improve predictability in commercial negotiations. While agreements remain voluntary, a harmonised framework can reduce inefficient negotiation cycles and lower compliance risks, particularly in cross-border contexts.

Under PO3 and PO4, stronger regulatory obligations may increase compliance costs for regulated entities. However, these obligations are expected to improve the completeness and efficiency of integration between operators and platforms. Improved distribution efficiency may contribute to better capacity utilisation and reduced duplication of distribution infrastructure. The net competitiveness effect depends on the balance between compliance costs and efficiency gains, but the modelling results indicate a positive overall effect relative to the baseline.

In particular, in PO2, PO3 and PO4, obliging distribution agreements between indispensable RUs and willing MDMS platforms (PM13) will greatly contribute to the MDMS's ability to offer new competitive services and sustainable alternative journeys for passengers. This, coupled with the obligation to neutrally display offers (PM1) will support fair competition on all MDMS platforms, and especially rail, as incumbent rail offers will become more easily comparable with alternative rail journeys on MDMSs.

Overall, the positive effects on competition are expected to be strongest under PO3, followed by PO4 and PO2, while PO1 would have more limited effects as it does not introduce equivalent obligations on indispensable actors.

6.2.8.3 Cost and service competitiveness of multimodal transport

By reducing search and booking frictions and improving the visibility of transport offers, the policy options enhance the effective competitiveness of multimodal passenger journeys.

Improved integration of rail services in MDMS platforms can increase the attractiveness of rail-based itineraries relative to car-only trips. Similarly, improved visibility and integration of bus and coach services within MDMS platforms can facilitate their inclusion in multimodal journeys and make these services more easily discoverable to passengers. This strengthens the competitive position of rail and bus services within the passenger transport market.

Improved competitiveness of multimodal transport can also have indirect positive effects on related economic sectors, including tourism and cross-border mobility services.

The measures included in PO2 and PO3 are not only expected to reduce search costs for customers and facilitate matching demand and supply for multimodal and rail journeys but also increase competition in both the transport and the platform markets. For example, in the rail transport market, the offers of different RUs will be presented on the online platforms next to each other with their characteristics and price. This is likely to lead to more intense price competition between operators. The effect will be stronger in PO3 since it will apply not only to the independent platforms (as in PO2) but also to the indispensable ones. Similarly, PO2 will increase competition between platforms, by making available to all the offer of indispensable operators. These stronger competitive dynamics are

expected to translate into improved competitiveness of rail and multimodal transport services, through more efficient pricing, improved service offerings and greater consumer choice.

As regards SMEs competitiveness, they would also benefit from better market conditions: creating a level playing field for all stakeholders could be particularly beneficial for small businesses or start-ups. New entrant SMEs in the rail transport market would particularly benefit from the obligation for indispensable RU platforms to enter into commercial agreement with willing RUs (PM14). New entrant RUs face the problem of how to establish their brand and typically must resort to costly advertising campaigns, which can be prohibitive for SMEs. PM14 would allow them to benefit from indispensable RU platforms' brand visibility and reach immediately the very high share of customers that use those platforms.

In PO4, the obligation for indispensable RUs to unbundle their distribution and operation services (PM15) will also provide better visibility and consumer reach to new entrant RUs, albeit to a lesser extent than PM14. Indeed, the complete unbundling process is expected to be complex and will likely require an extended adjustment period. These newly independent platforms would also not be obliged to negotiate with new rail entrants, therefore decreasing slightly the positive impact on SME competitiveness compared to PM14.

Finally, the prohibition of restrictive contractual clauses by indispensable RUs and indispensable MDMS platforms and the introduction of fairer distribution fee principles (PMs 11-12) in all POs will facilitate agreements between platforms and operators, directly targeting gatekeeping behaviour, curbing anti-competitive practices, and enhancing transparency and fairness. This will therefore greatly support smaller MDMSs and operators in concluding contractual agreements with players benefiting from a strategic position in the market.

6.2.8.4 International competitiveness

The initiative applies equally to EU and non-EU platforms when operating within the EU market and does not differentiate by nationality. It therefore does not introduce trade distortions.

The impact on international competitiveness is expected to be neutral. The economic effects are confined to improving efficiency and performance within the EU passenger transport market.

This initiative has no impact on international competitiveness of MDMS and multimodal transport as it applies mainly to operations within the EU. While the updated B2B provisions will apply to extra-EU travel and to non-EU operators (if tickets are sold in the EU), they are not expected to have any meaningful impact on competitiveness.

6.2.8.5 Overall assessment

All policy options generate positive competitiveness effects relative to the baseline. These effects are primarily driven by reduced transaction costs, improved operational efficiency and increased modal uptake of rail and bus services.

PO3 delivers the strongest overall economic gains due to greater integration of services, followed by PO4. PO1 and PO2 generate more moderate improvements.

The magnitude of impacts remains proportionate and should not be overstated.

6.2.9 Impact on the functioning of the internal market and on competition

6.2.9.1 Analytical scope and benchmark

This section assesses how the policy options affect:

- The functioning of the internal market for passenger rail services,
- The market for digital ticket distribution and multimodal distribution services (MDMS),
- Entry conditions and competitive dynamics in both markets.

The benchmark is the baseline scenario, characterised by:

- Voluntary commercial negotiations between rail operators and MDMS platforms,

- Heterogeneous contractual practices across Member States,
- Potential asymmetries where vertically integrated platforms combine operational and distribution functions,
- Fragmented cross-border integration of ticketing and re-linking solutions.

Under the baseline, distribution access is not guaranteed and may depend on bilateral commercial incentives. This creates legal and practical uncertainty for market participants and may limit cross-border expansion and entry of new operators or platforms.

Without EU intervention, fragmentation risks persist or increase as digital distribution becomes more central to passenger choice and market access.

The EU markets are dependent on an efficient and resilient transport system, which is itself dependent on an efficient distribution system, maximizing the visibility of all transport offers. As outlined in the description of the problem, without EU-intervention the current MDMS market could become more and more fragmented, which would result in higher costs and less benefits for MDMS service providers, transport operators, and especially RUs, as well as Member States, local authorities and travellers. The proposed policy options aim to accelerate the development of the MDMS and rail market. While all POs address the identified problem drivers, and therefore improve market conditions, some measures are expected to have a particular impact on market dynamics. Some measures are common to all options (PMs1 to 12) and are relevant for B2C and B2B MDMS, to a lesser extent for transport operators (especially RUs) and public authorities, and with a positive impact for consumers.

6.2.9.2 Common measures (PM1-PM12): horizontal improvement of neutrality and transparency

All policy options include common measures that:

- Extend CRS Code of Conduct obligations to all B2B MDMS platforms,
- Require neutral display of transport offers,
- Ensure fair loading and processing of operator data,
- Establish national authorities responsible for dispute settlement.

These measures address behavioural distortions and improve transparency in ticket distribution markets. In particular, neutral display reduces the risk of self-preferencing and increases the visibility of alternative transport offers, strengthening competition on price and quality.

However, these measures do not by themselves guarantee access to ticket inventory or distribution agreements. Their effect on market structure is therefore incremental rather than structural. They improve fairness conditions but do not eliminate entry barriers linked to refusal to deal.

Applying fair terms in operator-MDMS with SMP license agreements (PM11) and on indispensable RU operator – MDMS agreement (PM12) in all POs is expected to facilitate the development of commercial agreements by ensuring to the weaker party equitable deals. It would have a significant impact on market conditions, as applying fair terms in commercial agreement would lead to a level playing field for the distribution of tickets affecting all players positioned in the market. This could in turn lead to changes in pricing strategies (lower prices to gain market shares) and thus changes on the demand and supply side.

The strong impact of PMs 11 and 12 is supported by the introduction of NEBs, that will guarantee the implementation of neutral display requirements and fair terms by dealing with related complaints (PMs 9 & 10), improving compliance and deterring unfair behaviour.

6.2.9.3 Comparative assessment across policy options

6.2.9.3.1 Policy Option 1: principles-based framework limited to entities with SMP

Under PO1, rail operators with significant market power and MDMS platforms with SMP are required to respect fair principles when entering commercial agreements. However, the decision to conclude an agreement remains voluntary.

The internal market impact of PO1 lies primarily in improving predictability and reducing the risk of abusive contractual clauses in negotiations involving large actors. It reduces asymmetries in bargaining positions where SMP is present and strengthens legal certainty.

Nevertheless, because no obligation to conclude agreements is introduced, structural barriers to entry in distribution markets remain. Rail operators may still limit access to inventory, and MDMS platforms may decline to integrate certain operators. As a result, fragmentation of ticket distribution across Member States may persist. PO1 therefore improves behavioural fairness and reduces extreme imbalances, but its impact on market contestability and cross-border integration remains moderate.

In PO1, the neutral display requirement (PM1) impacts the market by making alternative transport options more visible, creating incentives to improve transport services and/or lower prices for customers. With neutral display and without self-preferencing, market rules demand that users choose the best (cheapest, most innovative, etc.) offer. Competition between service providers is therefore promoted by these measures.

6.2.9.3.2 Policy Option 2: extension of fair principles to all operators and MDMS platforms

PO2 extends the obligation to respect fair principles to all rail operators and all MDMS platforms, irrespective of SMP status.

This reduces asymmetry between large and smaller actors and harmonises negotiation frameworks across the internal market. It strengthens internal market coherence by:

- Increasing consistency of contractual practices,
- Reducing discriminatory treatment,
- Improving legal certainty across Member States.

By applying fair principles universally, PO2 increases the likelihood that agreements are concluded under balanced terms, thereby facilitating integration of services.

However, as under PO1, agreements remain voluntary. While market dynamics improve relative to the baseline, structural access to distribution or inventory is not guaranteed. Entry barriers linked to refusal to conclude agreements may still arise.

PO2 therefore delivers a stronger improvement in internal market functioning than PO1, but without fully addressing strategic exclusion risks.

PO2 is expected to provide stronger incentives to improve the functioning of EU transport system than PO1 as it builds on the same measures while introducing an obligation for indispensable RUs to enter into agreement with requesting MDMS (PM13). While this will come with initial adjustment costs, it will provide strong benefits in the long run by allowing a broader distribution of key RU offerings, and the combination of these newly acquired rail offers with other transport modes, providing innovative, competitive and more sustainable journey options to consumers.

6.2.9.3.3 Policy Option 3: mandatory conclusion of agreements for regulated entities

PO3 introduces a structural change. In addition to the principles-based framework applicable to SMP entities, it:

- Obligates regulated rail operators to conclude commercial agreements with MDMS platforms willing to integrate their services,
- Obligates vertically integrated MDMS platforms with SMP to conclude re-linking and/or ticket sale agreements with rail operators active within their geographic and modal scope.

This option directly addresses competition concerns linked to refusal to deal and selective exclusion.

The impact on the internal market is significant:

- Access to distribution channels becomes more predictable,
- Entry barriers for new rail operators are reduced,

- Vertically integrated distribution systems with SMP face constraints on exclusionary behaviour,
- Cross-border integration of rail services becomes more feasible.

By reducing the ability of indispensable actors to restrict access, PO3 enhances contestability in both rail service markets and ticket distribution markets.

This may lead to stronger price competition and more dynamic supply–demand interactions. It also supports a more integrated internal market by reducing fragmentation of distribution conditions across Member States.

PO3 therefore delivers the most substantial improvement in internal market integration and competition intensity among the policy options.

In addition to these measures, indispensable RU platforms are required to enter into commercial agreements with willing RU to enable the distribution of these tickets on their platform (PM14). This would address competition obstacles linked to the strong position of key RUs in both the operational and distribution market, which have been outlined by several national and EU-level competition cases (see Annex 11). This would strengthen competition on the market for rail services, where the lack of fair access to existing distribution channels is a significant barrier to market entry for new operators.

6.2.9.3.4 Policy Option 4: structural unbundling of vertically integrated MDMS with SMP

PO4 also requires regulated rail operators to conclude agreements under fair principles. However, instead of imposing mandatory hosting obligations on vertically integrated MDMS platforms with SMP, it requires them to unbundle their distribution systems from those of their parent operators.

This measure targets structural conflicts of interest rather than transactional access.

By separating operational and distribution functions, PO4 reduces incentives for preferential treatment and improves neutrality in distribution markets. It addresses vertical integration concerns that may distort competition.

However, because PO4 does not impose a direct obligation on vertically integrated MDMS platforms to conclude hosting agreements, its impact on guaranteed content availability differs from PO3. The improvement in competition stems from structural governance rather than direct inclusion obligations. PO4 therefore strengthens competitive neutrality and internal market coherence, but its mechanism differs from PO3.

Similar to PO3, PO4 builds on measures established in PO2 and introduces a new requirement. However, PO4 would have a weaker impact on the market compared to PO3 as, instead of introducing a hosting obligation to indispensable RU platforms (PM14), it requires RUs with SMP to unbundle their distribution and operation services (PM15). While this measure is expected to also prevent preferential treatment from incumbents to their own transport services on their platforms, unbundling is costly and complex to implement and can also affect how efficiently booking systems operate.

6.2.9.3.5 Comparative assessment across options

All policy options improve internal market functioning relative to the baseline by reducing fragmentation and strengthening neutrality in ticket distribution.

- PO1 improves fairness in negotiations involving SMP entities but leaves market access voluntary.
- PO2 extends fair principles to all actors, improving harmonisation across the internal market.
- PO3 introduces mandatory obligations to conclude agreements, directly reducing entry barriers and strengthening contestability.
- PO4 improves structural neutrality through unbundling of vertically integrated distribution systems.

Among the options, PO3 provides the strongest structural intervention in market dynamics, particularly in reducing strategic exclusion and improving access to distribution channels.

Summing up, several measures would improve the market conditions as well as the transport system. The impacts of PO1 are expected to be more limited, as it includes less stringent, targeted measures than the other POs. The impacts of PO2 on market dynamics are expected to be significantly stronger, as it includes an obligation for indispensable RUs to enable the distribution of their tickets on MDMS, affecting the core of market dynamics – supply, demand, competition and pricing. The strongest impacts are expected in PO3, as an obligation for indispensable RU platforms to host their competitors' tickets is introduced and will substantially influence the market dynamics in rail, contributing further towards a level playing field in rail ticket distribution especially. PO4 would achieve the same objectives as PO3 by introducing an unbundling obligation for RUs with SMP, but less efficiently, because of its complex implementation.

6.2.10 Impacts on innovation

6.2.10.1 Scope of innovation considered

This section assesses the impact of the policy options on innovation in:

- Digital multimodal distribution services,
- Ticketing and re-linking solutions,
- Cross-border journey planning and bundling,
- Commercial and pricing strategies of rail operators.

Innovation in rolling stock, physical infrastructure and energy systems is outside the scope of this initiative.

The baseline scenario is characterised by fragmented access conditions, voluntary commercial negotiations and heterogeneous technical integration across platforms and operators. Under these conditions, innovation may be constrained by limited access to inventory, uncertainty regarding commercial agreements and asymmetric bargaining positions.

6.2.10.2 Innovation in digital mobility services (MDMS layer)

Digital innovation in the MDMS market depends heavily on access to operator content, legal certainty and interoperability conditions.

Under the baseline, independent MDMS platforms may face uncertainty regarding access to rail inventory and re-linking permissions. This can increase the risk associated with developing new digital products, as innovative service offerings may not be viable without sufficient access to content.

The common measures included in all policy options (neutral display, fair data handling, enforcement mechanisms) create a more predictable regulatory environment. Regulatory clarity reduces uncertainty and can facilitate investment in new digital features, including enhanced journey comparison tools, dynamic pricing interfaces and multimodal bundling.

Under PO1 and PO2, the principles-based framework improves negotiation predictability but does not guarantee access to content. Innovation incentives improve moderately, as reduced legal uncertainty lowers risk, but barriers linked to voluntary agreement dynamics remain.

Under PO3, mandatory obligations for regulated rail operators to conclude agreements with MDMS platforms willing to integrate services significantly reduce the risk of exclusion from key inventory. For vertically integrated MDMS platforms with SMP, the obligation to conclude agreements limits the possibility of selective exclusion of competitors. By reducing strategic uncertainty and ensuring broader access to content, PO3 strengthens incentives for new entrants and existing platforms to invest in innovative digital solutions. It lowers entry barriers in the distribution market and encourages competition based on service quality and functionality.

Under PO4, structural unbundling of vertically integrated MDMS platforms with SMP addresses conflicts of interest and may improve neutrality in distribution systems. This can create a more stable and transparent competitive environment, which may support innovation. However, since PO4 does not

impose a direct obligation on vertically integrated platforms to conclude hosting agreements, its impact on content availability may be more indirect compared to PO3.

Overall, innovation in the MDMS layer is expected to be most strongly supported under PO3, followed by PO4, with more moderate effects under PO2 and PO1.

6.2.10.3 Innovation in rail service offerings and commercial models

Improved integration of rail services in MDMS platforms can influence incentives for innovation among rail operators.

Greater visibility and comparability of offers may:

- Increase pressure to innovate in pricing strategies,
- Encourage development of flexible ticketing products,
- Support cross-border commercial offerings,
- Incentivise service quality improvements.

Under options where access to distribution channels is more secure (particularly PO3), rail operators may face stronger competitive pressure, which can stimulate incremental innovation in commercial models.

At the same time, increased competitive pressure may reduce margins for some operators. However, the modelling results indicate increased rail activity under all policy options, suggesting that demand expansion effects outweigh potential negative impacts on revenue.

6.2.10.4 Interoperability and standardisation effects

6.2.10.5 Potential negative or constraining effects

Regulatory intervention may, in principle, constrain innovation if:

- Compliance costs are excessive,
- Business model flexibility is unduly restricted,
- Incentives for vertical integration are weakened without alternative efficiency gains.

However, the measures introduced under the policy options primarily regulate access conditions and fairness principles rather than prescribing specific technological solutions. The regulatory approach remains technologically neutral.

Compliance costs are expected to be moderate relative to the size of the actors concerned, particularly as many larger platforms and operators already operate interoperable systems.

No significant reduction in R&D incentives is expected.

6.2.10.6 Overall assessment

All policy options improve innovation conditions relative to the baseline by increasing regulatory clarity and reducing discriminatory practices.

PO1 and PO2 create incremental improvements by harmonising negotiation principles and increasing predictability.

PO3 provides the strongest innovation stimulus by reducing strategic uncertainty and improving guaranteed access to distribution and inventory, thereby lowering entry barriers in the digital mobility services market.

PO4 improves structural neutrality and may support innovation indirectly through enhanced separation of ticket distribution and transport operational functions.

The overall impact on innovation is expected to be positive under all options, with the magnitude of the effect increasing with the degree of market access certainty.

6.2.11 Digital by default

6.2.11.1 Application of the digital by default principle

The ‘digital by default’ principle requires that policy measures are designed in a way that prioritises digital solutions, facilitates digital integration and avoids unnecessary administrative or technical fragmentation.

All policy options contribute positively to the digital transformation of the multimodal passenger transport ecosystem. The initiative primarily affects digital distribution systems, ticketing interfaces, data exchange and interoperability between rail operators and MDMS platforms.

The impact on digital integration is expected to be incremental under PO1 and PO2, where commercial agreements remain voluntary, and stronger under PO3 and PO4, where obligations affecting agreements increase the likelihood of systematic integration.

All policy options will have a positive impact on the application of the 'digital by default' principle. In particular, the obligations to load and process data with equal care and timeliness (PM2) and the obligation to respect fair principles in commercial agreements (PMs 11 & 12) will allow for fairer and more efficient data exchanges between parties.

6.2.11.2 Data sharing and data governance

All policy options include obligations relevant to data sharing, notably:

- The obligation for MDMS platforms to share non-personal data with public authorities where relevant,
- Requirements ensuring fair data loading and processing,
- Enforcement mechanisms to secure compliance.

These measures aim to remove obstacles to acquiring, sharing and reusing data assets, while ensuring coherent governance structures.

The initiative is consistent with the broader horizontal legal framework, including the Data Act and related EU data governance initiatives. Enhanced data sharing supports the development of a more integrated European mobility data ecosystem and contributes to the objectives of a common European Mobility Data Space.

At the same time, particular attention must be paid to personal data processing. Data exchanges between MDMS platforms and transport operators must comply fully with the GDPR. The initiative does not introduce derogations from existing data protection rules and remains technologically neutral.

6.2.11.3 Comparative assessment across policy options

While all policy options contribute positively to digital integration, the intensity of their impact differs.

Under PO1, digital improvements are primarily driven by behavioural obligations (neutral display, fair data processing). However, as commercial agreements remain voluntary, integration remains dependent on negotiation outcomes.

PO2 strengthens the digital impact by extending fair principles to all operators and MDMS platforms, increasing the consistency of digital integration conditions across the market.. PO3 produces a stronger digital integration effect. By introducing mandatory obligations for regulated rail operators to conclude agreements with MDMS platforms willing to integrate services, and for vertically integrated MDMS platforms with SMP to conclude agreements under defined conditions, PO3 increases the likelihood of systematic digital integration across the market. This reduces the risk that key data or booking interfaces remain inaccessible, thereby enhancing the practical implementation of the digital by default principle.

PO4 also strengthens digital neutrality by requiring structural unbundling of distribution systems from parent operators where SMP exists. This separation may improve technical neutrality and reduce incentives for preferential digital integration within vertically integrated groups. However, as PO4 does not impose mandatory hosting obligations on vertically integrated MDMS platforms, its digital integration

effect differs from PO3 in nature, focusing more on structural governance than on guaranteed content inclusion.

Overall, PO3 and PO4 generate stronger digital transformation effects than PO1 and PO2, with PO3 having the most direct impact on the systematic integration of digital ticketing systems.

In addition, the obligations to share non-personal data with public transport authorities (PM7) included in all four policy options will increase the availability of mobility data and its use by public institutions, therefore enhancing the overall functioning of the transport systems. Similarly, the obligation to apply the CRS's CoC rules on marketing and booking data (PM3) will also contribute to fair and efficient data sharing by ensuring non-discriminatory marketing, booking and sales data sharing by MDMS to all transport operators involved, and ensure anonymization and fair use of these data by MDMS platforms. Overall, these measures aim to remove obstacles to acquiring, sharing, combining, and reusing data assets, while ensuring coherent data governance and continuous data management, in line with the horizontal legal framework developed by the Commission, in particular through Regulation (EU) 2023/2854 (i.e. the Data Act). In this context, enhanced data sharing will further allow for the development of innovative multimodal services and will contribute to the development of a common European Mobility Data Space and the common European Tourism Data Space.

6.2.11.4 Coherence with EU digital policy framework

The initiative aligns with the Union's broader digital policy objectives, including:

- Promotion of interoperability,
- Facilitation of data reuse,
- Reduction of technical fragmentation,
- Strengthening of digital single market integration.

By encouraging standardisation and structured data exchange, the policy options support the development of interoperable digital services across Member States. The measures remain proportionate and technologically neutral, avoiding prescriptive technical solutions while enabling digital integration.

6.2.11.5 Overall assessment

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The strength of the digital impact increases with the degree to which agreements and integration become more systematic. PO3 delivers the strongest direct digital integration effect, followed by PO4, while PO1 and PO2 provide incremental improvements relative to the baseline.

No negative impacts on digitalisation are expected, provided that implementation remains proportionate and fully compliant with existing EU data protection and data governance frameworks.

6.2.12 Impact on tourism

All policy options support the transformation of the tourism sector by unlocking seamless travel experiences for tourists across Europe. Central to this are several measures designed to promote smooth and integrated travel planning and execution. In all policy options, the sharing of non-personal data (PM7) with public transport authorities will facilitate improved management of transport services, allowing tourists to easily connect between various modes of transport. This harmonisation is essential for creating an interconnected transport network that enhances fluid transfers between travel modes. In PO2, PO3 and PO4, the introduction of a sharing obligation (PM13) will empower MDMS platforms to offer broader access to diverse transport services, enabling tourists to book integrated and greener travel itineraries with ease. In PO3, the hosting obligation (PM14) further strengthens service integration by ensuring that indispensable RU platforms foster rail services, facilitating a seamless booking experience for travellers wishing to undertake rail journeys. PM14 enhances the ability of the most popular rail platforms to present tourists with unified travel solutions that cater for their specific needs.

Therefore, PO3 contributes most to the development of a user-centric travel ecosystem that enhances accessibility, convenience, and efficiency for tourists.

6.2.13 Territorial impacts

All policy options are expected to strengthen territorial cohesion by creating a more inclusive and integrated multimodal transport system across all EU regions. Central to this are measures designed to ensure fair access and visibility for transport operators of all sizes. In all policy options, the obligation for MDMS platforms to ensure neutral display of transport offers (PM1) guarantees that all operators, including those in peripheral or less-connected areas, receive equal visibility alongside larger providers. In PO2 and PO3, additional measures significantly enhance territorial cohesion. The obligation to share tickets for indispensable RUs (including cross-border and PSO services) is expected to improve the connectivity (PM13). Most importantly, the access to indispensable RU platforms (PM14) in PO3 guarantees that even smaller regional providers can be integrated into major booking platforms. PO3 is therefore expected to have the highest impact on territorial cohesion and create a transport system where all regions, from major cities to remote areas, have equal opportunity to participate in the digital mobility market. This balanced approach supports economic development across all territories while preventing the concentration of mobility services in already well-connected areas.

6.3 SOCIAL IMPACTS

For the social impacts, the following categories were analysed:

- Impacts on health
- Impact on road safety.
- Impact on employment.
- Impact on fundamental rights – data protection.
- Impact on transport poverty.
- Impact on persons with disabilities and reduced mobility.

6.3.1 Impacts on health

As Better Regulation Tool #32 notes, “human health is a fundamental value and an investment in economic growth and social cohesion.”[83]

Modal shifts in long-distance travel (from car/plane to rail/coach/waterborne) are expected to contribute to an improvement in public health due to a reduction in **air pollution**. This is because air pollutant emissions, especially particulate matter (PM2.5), can trigger a range of health problems. Children, the elderly and people with health impairments are worst affected by air pollution. But people with a lower socio-economic status also tend to be more severely affected by poor air quality, as they are particularly likely to live near busy roads and are less able to afford good medical care.[84] Section 6.4.1 earlier presents impacts on air pollutant emissions, and shows that the expected reduction in PM, NOx and VOC emissions are likely to generate significant benefits in all POs, ranging from EUR 218 million in PO1 to EUR 670 million in PO3.

Another aspect to be considered are **noise emissions**. While the policy options encourage modal shift from private cars to more sustainable modes of transport, an increase in travel by bus and/or rail may also lead to increased noise levels. Prolonged and frequent exposure to transport noise can lead to various health issues. Key health endpoints supported by significant evidence include ischaemic heart disease, stroke, dementia, and hypertension. Additionally, annoyance is also considered a health endpoint, aligning with the World Health Organization's broad definition of health encompassing physical, mental, and social well-being. This annoyance, a disturbance caused by traffic noise, can

[83] Better Regulation Toolbox #32

[84] https://www.eea.europa.eu/themes/air/health-impacts-of-air-pollution

hinder daily activities and manifest as irritation, disappointment, anxiety, exhaustion, and sleep disturbances. The savings in external costs of noise emissions, expressed as present value over 2028-2050 relative to the baseline, are also estimated to be highest in PO3 (EUR 2.1 billion), followed by PO4 (EUR 1.7 billion), PO2 (EUR 1.5 billion) and PO1 (EUR 0.7 billion) [85].

All in all, considering the combined effect of benefits from reductions in air pollution and reductions in noise emissions, impacts on human health are expected to be positive (i.e. decreases in costs to society) in all POs, with the greatest benefits in PO3.

Table 4-33: External costs of air pollution and noise emissions expressed as present value for the period 2028-2050 in billion EUR (in 2024 prices)

Policy option	PO1	PO2	PO3	PO4
Air pollutant emissions	218	455	670	502
Noise emissions	735	1,509	2,146	1,663

Source: Own elaboration from CBA model

6.3.2 Impact on employment

The policy options under consideration are expected to have an indirect impact on employment through the increase in transport activity for rail and bus/coach services, and to a much smaller extent waterborne transport, which are projected to attract a share of passengers shifting away from private car use. Transport operators may be able to accommodate much of the additional passenger traffic by improving load factors, increasing train and bus frequencies on existing routes, and utilising existing rolling stock and vehicle fleets more efficiently. As a result, the increase in employment is expected to be lower than the projected increase in transport activity.

The expected modal shift facilitated by the deployment of MDMS platforms may thus lead to a combination of increased occupancy of public transport modes (in the short term) and an increase in the public transport fleet operated to facilitate this modal shift (in the mid- to long-term). While this short-term effect may not be expected to produce additional employment in the transport sector, the mid-to long-term effects described here could require additional staffing across these segments of the transport sector. The larger the modal shift achieved, the more probable it is that the short-term effects would be able to handle the modal shift occurring. Therefore, policy options inducing larger modal shifts in favour of public transport are more probable to produce larger employment impacts.

According to the modelling results, rail passenger traffic is expected to increase across all policy options, with the largest gains observed under PO3. By 2035, rail activity is projected to increase by approximately 0.30 percentage points under PO1 and PO2, by up to 0.47 percentage points under PO3, and by around 0.37 percentage points under PO4. Bus and coach services are also expected to experience moderate increases in demand, with activity increasing by approximately 0.15 to 0.17 percentage points under PO1 and PO2, rising to around 0.24 percentage points under PO3, and reaching approximately 0.19 percentage points under PO4. These modal shift results would suggest that PO3 has the largest employment generation potential, followed by PO4 and then PO2 and PO1.

Specifically for aviation, based on the current modelling results, the policy options are not expected to substantially affect overall transport volumes or the number of flights operated. Aviation traffic is practically unchanged, with only very small decreases observed across all policy options. For example, as shown in section 6.2.1, aviation modal share changes are limited to a range between 0% and -0.07% by 2035, indicating that the impact of the initiative on air transport activity is negligible. This is consistent with the assumption that MDMS integration has limited influence on trips exceeding 1,500 km, where aviation remains the dominant mode of transport. Consequently, no significant impacts on employment levels in the aviation sector are anticipated.

[85] The unit costs from the 2019 Handbook on external costs of transport (Handbook on the external costs of transport - Publications Office of the EU (europa.eu)) have been used to monetise the external costs.

The increases in rail and bus activity are likely to generate some additional employment in the public transport sector, particularly in operational, maintenance, and customer service roles. However, it is important to note that a significant portion of the increased demand is expected to be absorbed by the existing transport capacity and operations.

The expected modal shift away from private cars, which shows reductions in car usage across all policy options (up to 0.67 percentage points under PO3 by 2050), supports the transition towards more sustainable transport modes and is a core driver of the increased demand for public transport. The employment effects in the car sector are expected to be negligible, as the reduction in car use is spread across the entire market and does not imply a direct reduction in production or service jobs.

Certain policy measures, such as improved access to content, transparent ranking, and enhanced data sharing, may encourage further innovation and investment in MDMS platform development and deployment. This could generate some additional employment in IT, product development, and customer solutions. The scale of these effects will link to the potential increase in the number of MDMS platforms being developed. MDMS platform deployment and consequently, relevant employment, may be expected to significantly expand in PO3 and PO4, while more moderate – but still significant – expansion can be expected in PO1 and PO2.

6.3.3 Impact on safety

In all policy options, the reduction in the passenger car transport activity induced by more offers and information available to users to make more sustainable choices, is expected to result in a decrease in the number of fatalities and injuries relative to the baseline. Cumulatively over 2028-2050, PO1 is estimated to lead to 731 lives saved and 49 thousand injuries avoided, while PO2, PO3 and PO4 would have significantly higher positive impact (1,480 lives saved and close to 98 thousand injuries avoided in PO2, 2,113 lives saved and close to 137 thousand injuries avoided in PO3 and 1,616 lives saved and 107 thousand injuries avoided in PO4) with PO3 showing the highest positive impact.

Table 4-34: Annual number of fatalities, serious and slight injuries avoided relative to the baseline for each policy option

	2030	2040	2050	Cumulative over 2028-2050	% change to baseline
Fatalities					
PO1	18	38	39	731	0.2%
PO2	33	76	84	1,480	0.4%
PO3	49	109	117	2,113	0.5%
PO4	36	83	92	1,616	0.4%
Serious injuries					
PO1	159	316	321	6,250	0.2%
PO2	272	610	656	11,991	0.4%
PO3	405	888	918	17,285	0.5%
PO4	304	682	734	13,413	0.4%
Slight injuries					
PO1	1,154	2,149	2,168	43,171	0.3%
PO2	1,939	4,139	4,577	82,954	0.5%
PO3	2,865	6,025	6,423	119,624	0.7%

	2030	2040	2050	Cumulative over 2028-2050	% change to baseline
PO4	2,180	4,684	5,195	93,903	2.9%

Source: Own elaboration from CBA model

The reduction in external costs of accidents, expressed as present value over 2028-2050 relative to the baseline, is estimated to be the highest in PO3 (EUR 21.3 billion), followed by PO4 (EUR 16.5 billion), PO2 (EUR 14.8 billion) and PO1 (EUR 7.6 billion)[86].

Table 4-35: External costs of accidents expressed as present value for the period 2028-2050 in billion EUR (in 2024 prices).

Policy option	PO1	PO2	PO3	PO4
Fatalities and injuries	7,606	14,807	21,297	16,470

Source: Own elaboration from CBA model

6.3.4 Impact on fundamental rights

6.3.4.1 B2C dimension

The level of data protection for businesses and consumers is a key element when considering the impacts of the policy options on fundamental rights.

For end-users of MDMS platforms, data protection is governed by the GDPR, which provides a harmonised legal framework across the EU. The GDPR ensures that personal data are processed lawfully, fairly, and transparently, with adequate safeguards for users' rights, including the right to access, rectify, and erase personal data.

The deployment of MDMS platforms, particularly those integrating planning, booking, and payment services, will necessarily involve the processing of personal data such as names, contact details, travel itineraries, and payment information. In line with the principle of data minimisation, MDMS platforms and transport operators must ensure that only the data strictly necessary for providing the services are collected and processed.

The policy options considered in this initiative do not introduce specific new rules on personal data processing beyond the GDPR. However, PM5 (included in all policy options), which proposes the repeal of the data protection provisions in the CRS Code of Conduct, is relevant in this context. PM5 is intended to remove outdated sector-specific provisions that have been superseded by the GDPR, thereby contributing to regulatory simplification and ensuring that personal data processing in the MDMS and CRS context is fully governed by the GDPR.

Care must be taken to ensure that the new data-sharing and interoperability requirements are implemented in a way that fully respects existing data protection rules. The data-sharing obligations introduced by the initiative concern non-personal data and therefore do not introduce new requirements for the exchange of personal data. Any processing of personal data by MDMS platforms or transport operators remains subject to the GDPR, including rules governing user consent and profiling. The MDMS regulatory framework therefore does not modify existing GDPR obligations but operates within the existing EU data protection framework.

6.3.4.2 B2B dimension

As foreseen in all policy options through PM5, the repeal of data protection provisions from the CRS Code of Conduct removes sector-specific rules that are now largely redundant due to the GDPR. PM5

[86] The impacts on fatalities and injuries have been quantified with the help of the ASTRA model. The 2019 Handbook on the external costs of transport (Source: Handbook on the external costs of transport - Publications Office of the EU) has been used to monetise the costs.

is intended to eliminate these outdated provisions and ensure that personal data processing in the CRS and MDMS context is fully and consistently governed by the GDPR.

Also, for B2B MDMS, the entry into application of the GDPR is a key consideration prompting the revision and potential repeal of data protection-related Articles of the CRS Code of Conduct.

The CRS-specific provisions on, for example, data retention periods and the storage of booking information offline within 72 hours were initially introduced to address concerns specific to the distribution model at the time.

The removal of the CRS Code of Conduct's data protection articles through PM5 will contribute to regulatory simplification and legal consistency, reducing the risk of conflicting requirements between sector-specific and horizontal data protection rules. It will also contribute to a level playing field by ensuring that the same GDPR standards apply uniformly to all B2B distribution platforms.

The overall impact on fundamental rights is expected to be neutral to positive, as the regulatory framework will become clearer and more consistent.

6.3.5 Impact on transport poverty

The deployment of MDMS is expected to bring potential benefits for persons affected by transport poverty, although the scale and distribution of these benefits will depend on the degree of MDMS coverage, the inclusiveness of the platforms, and the effectiveness of the underlying policy measures. In line with the Commission Recommendation on transport poverty, transport poverty can be understood through three main dimensions: affordability of transport services, accessibility of destinations and services, and availability of transport options. Transport poverty typically affects individuals who experience limited mobility options due to low income, poor service availability, high travel costs, or limited accessibility of transport services. It often has the effect of restricting access to essential services, employment, and social participation.

The development of MDMS platforms can support persons affected by transport poverty by improving transparency and comparability of travel options, which may help individuals identify more affordable and efficient multimodal routes. By consolidating information across different modes and operators, MDMS platforms can facilitate access to lower-cost transport combinations that might otherwise remain difficult to identify. Furthermore, improved access to multimodal ticketing, including through digital channels, may reduce the time and effort required to plan complex journeys, which can be particularly beneficial to those living in areas with limited transport connectivity.

PM1 and PM2 (common to all policy options), which require operators to share comprehensive, non-discriminatory data and ensure neutral display of travel options, are particularly relevant in this regard. These measures are present across all four policy options and are expected to support better visibility of lower-cost options, including those offered by smaller operators or public transport providers. By requiring MDMS platforms to present all available offers in an unbiased manner, the initiative can help ensure that more affordable alternatives are not deprioritised or hidden from view.

The expected travel time and cost reductions described in the section on the impact on user costs and congestion are particularly relevant for persons affected by transport poverty, as they can contribute to lowering the financial and time burdens associated with travel. The largest benefits in terms of time and cost savings are projected to occur in clusters especially involving international trips and those with attractive origin and destination nodes. Such improvements can help alleviate the barriers faced by low-income travellers, provided that these routes are accessible to them and well-integrated with local and regional transport services.

However, the realisation of these benefits may be uneven across different user groups and geographical areas. Persons experiencing transport poverty often reside in rural, peri-urban or less densely populated areas where MDMS services may initially have lower coverage or where transport options themselves remain limited. While the initiative encourages more comprehensive coverage, the extent to which the policy options can address these structural limitations will depend on market responses and on the voluntary uptake of MDMS solutions in these areas. PO3, which includes more extensive obligations

on data sharing and coverage, is likely to deliver more substantial benefits for persons affected by transport poverty compared to the less ambitious options.

It is also important to note that limited digital access or digital skills may affect the accessibility dimension of transport poverty for some low-income groups.

While MDMS platforms can improve accessibility for digitally connected users, those without regular access to digital devices or mobile internet may continue to face challenges in fully benefiting from the solutions introduced. The initiative itself does not directly address digital inclusion, as its objective is to ensure fair and neutral display of transport offers and prevent distortions of competition in MDMS platforms. Issues related to digital literacy and digital access are addressed through other EU policies and initiatives.

6.3.6 Impact on persons with disabilities and reduced mobility

The deployment of MDMS is expected to generate positive impacts for persons with disabilities and those with reduced mobility by improving the accessibility, reliability and usability of transport services. MDMS can play a key role in reducing some of the barriers these groups currently face when planning and undertaking multimodal journeys, particularly those that involve complex transfers or changes between operators.

Integrated MDMS platforms offer the potential to provide comprehensive information on the accessibility of transport services, including the availability of step-free access, dedicated spaces, assistance services and accessible booking channels. These platforms can also ensure that real-time travel information, including disruption updates, is provided in a timely manner and in formats that are accessible to all users, including those relying on assistive technologies. By simplifying the ticket purchasing process and reducing the need to access multiple platforms or ticket counters, MDMS can improve the travel experience for passengers with reduced mobility, particularly in cross-border and multimodal contexts.

The policy options considered in this Impact Assessment are expected to contribute to these positive outcomes in several ways. In particular, the data sharing obligations introduced through PM1 and PM2, which are present in all four policy options, will be essential to ensure that accessibility-related data are systematically made available and can be integrated into MDMS platforms. The requirement for neutral display, also part of all policy options, will help ensure that accessible services provided by smaller operators are equally visible and not deprioritised by commercial ranking algorithms.

The initiative operates within the broader EU accessibility framework, including the European Accessibility Act[87], which requires that digital services, including online travel information and ticketing services, are accessible to persons with disabilities. The application of the Accessibility Act is directly relevant to MDMS operators and will reinforce the obligation to design platforms that are usable by all passengers, regardless of their abilities. The likely scale of the positive impact is expected to increase under the more ambitious policy options that promote broader data sharing obligations, enforce non-discriminatory access conditions, and encourage the development of fully integrated MDMS platforms that offer real-time updates, booking and payment functionalities.

[87] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019L0882

6.4 ENVIRONMENTAL IMPACTS

The impact of the regulation on the environment is described using the following categories:

- Air pollutants.
- Climate – GHG emissions.
- Noise.
- Energy demand.

6.4.1 Impact on air pollutants

The analysis considered impacts on tank to wheel polluting emissions for *particulate matter (PM)*, *nitrogen oxides (NOx)* as well as *volatile organic components (VOC)* in tonnes per year for the EU-27. NOx is emitted by fuel combustion, while PM is mainly caused by operation (braking and tyre wear) and VOC predominantly comes from paints and varnishes. Polluting emissions are covered for all modes of passenger transportation, including car, bus/coach, rail, aviation and waterborne.

The baseline scenario already indicates that air pollution of the transport sector will be significantly reduced by 2050, mainly due to electrification of the vehicle fleets and technological progress, motivated for example by the Euro pollutant emission standards in road transport. Electrification is mainly driven by the CO2 standards, supported by the implementation of the Alternative Fuel Infrastructure Regulation. In the medium term (2030-2040), air pollutant emissions in the baseline are expected to more than halve in absolute terms, with similar reductions expected in the longer term (2040-2050).

These reduction trends are expected to be similar between the baseline and the Policy Option scenarios, but with slightly greater reductions expected in each PO relative to the baseline, with reductions consistently smaller in future years compared to 2030.

Cumulatively over 2028-2050, the highest reduction in **NOx** emissions relative to the baseline is projected in PO3 (23.9 thousand tonnes), followed by PO4 (17.9 thousand tonnes), PO2 (16.2 thousand tonnes) and PO1 (7.7 thousand tonnes). This represents a decrease by 0.2% relative to the baseline in PO3 and around 0.1% in PO4, PO2 and PO1. For **PM2.5** emissions, the highest reduction cumulatively over 2028-2050 is estimated for PO3 (1.5 thousand tonnes), followed by PO4 (1.1 thousand tonnes), PO2 (1 thousand tonnes) and PO1 (0.4 thousand tonnes). Likewise, for **VOC** emissions, the highest reduction cumulatively over 2028-2050 is estimated for PO3 (9.1 thousand tonnes), followed by PO4 (7.0 thousand tonnes), PO2 (6.4 thousand tonnes) and PO1 (3.1 thousand tonnes).

Table 4-36: Annual pollutant emissions and emissions avoided relative to the baseline for each policy option for EU27 (tonnes).

	2030	2040	2050	Cumulative over 2028-2050	% change to baseline
CO2 emissions (kilo tonnes of CO2 avoided)					
PO1	541	370	17	8,319	0.2%
PO2	992	761	37	16,468	0.3%
PO3	1,458	1,106	52	23,794	0.5%
PO4	1,091	838	41	18,148	0.3%
NOx emissions (tonnes of NOx avoided)					
PO1	485	377	93	7,727	0.1%
PO2	986	749	194	16,221	0.1%
PO3	1,532	1,142	271	23,929	0.2%
PO4	1,097	833	212	17,911	0.1%
PM2.5 emissions (tonnes of PM avoided)					

	2030	2040	2050	Cumulative over 2028-2050	% change to baseline
PO1	27	19	4	437	0.1%
PO2	57	43	12	980	0.2%
PO3	89	65	19	1,498	0.2%
PO4	63	47	13	1,080	0.2%
VOC emissions (tonnes of VOC avoided)					
PO1	188	148	60	3,182	0.2%
PO2	341	306	142	6,416	0.4%
PO3	498	438	197	9,159	0.5%
PO4	374	337	157	7,056	0.4%

Source: Own elaboration from ASTRA model and costs from Handbook on external costs

External cost savings from reductions in air pollutant emissions are shown in section 6.3.1.

6.4.2 Impact on climate – GHG emissions

The GHG emissions of the passenger transport are estimated in the baseline to be around 505 million tonnes in 2025. Both the baseline projection and the modelling scenarios of policy options 1-4 foresee a rapid decrease in annual GHG emissions in the following years. In the baseline, GHG emissions reduce to 33% of 2025 levels by 2040 and 4% by 2050. It should be highlighted that for air and maritime modes only domestic and intra-European transport demand is taken into account, which is relevant for this assessment.

The use of more sustainable transport means, especially trains, is expected to reduce CO_2 emissions relative to the baseline. PO2, PO3 and PO4 are projected to achieve higher reductions in CO_2 emissions than PO1, with PO3 anticipated to deliver the highest decrease. PO1 results in relatively limited modal shift when compared to the other POs. Thus, the reduction in CO_2 emissions for PO1 is more limited and estimated at 8.3 million tonnes cumulatively over 2028-2050 relative to the baseline. PO3 results in the highest impact among the options, cumulatively over 2028-2050 relative to the baseline, estimated at 23.8 million tonnes, followed by PO4 (18.1 million tonnes) and PO2 (16.5 million tonnes). Cumulatively over 2028-2050, PO3 is expected to result in 0.5% reduction in CO_2 emissions relative to the baseline, PO4 and PO2 in 0.3% reduction and PO1 in 0.2% reduction. As shown in Table 4-37, the reduction in CO_2 emissions relative to the baseline is projected to reduce over time in all policy options. This is because of the decarbonisation of the transport sector over time in the baseline.

Table 4-37: GHG emissions (CO_2 equivalent) savings in Policy Options 1-4 relative to the baseline (in kilo tonnes per year).

	2030	2040	2050	Cumulative over 2028-2050	% change to baseline
GHG emissions (kilo tonnes of CO2e avoided)					
PO1	541	370	17	8,319	0.2%
PO2	992	761	37	16,468	0.3%
PO3	1,458	1,106	52	23,794	0.5%
PO4	1,091	838	41	18,148	0.3%

Source: Own elaboration from ASTRA model

Table 4-38 shows that the savings in external costs of CO_2 emissions, expressed as present value over 2028-2050 relative to the baseline, are estimated to be highest in PO3 (EUR 6.8 billion), followed by PO4 (EUR 5.2 billion), PO2 (EUR 4.7 billion) and PO1 (EUR 2.4 billion)[88].

Table 4-38 External costs of GHG emissions expressed as present value for period 2028-2050 in billion EUR (in 2024 prices).

	Difference to baseline			
	PO1	PO2	PO3	PO4
GHG emission savings	2,367	4,696	6,778	5,176

Source: Own elaboration from ASTRA model and Handbook of external costs (2019)

6.4.3 Impact on noise

All modes of transport produce noise pollution, from which effects on well-being are described under analysis of health impacts (see section 6.3.1). Impacts on noise scale with traffic volume given that a higher number of people would experience disutility due to noise. In the baseline, total noise damage costs are estimated to fall from 20.5 billion in 2028 to 20.2 billion in 2050 – reductions in traffic performed by cars, and an assumed fall in the noise produced per car due to electrification, outweigh increases in noise resulting from shifts to collective modes (coach, rail, aviation, waterborne).

In the policy options, car and air traffic decrease vis-à-vis the baseline, leading to a reduction in associated noise emissions. This transport demand is replaced by bus/coach, rail, and waterborne. For rail it is assumed that baseline capacity can meet the increase in demand for rail in the POs (i.e. no additional trains are needed on tracks relative to the baseline). An increase in noise is assumed for waterborne and bus/coach, but these are not expected to outweigh the reductions from car and aviation. Given this, it is expected that across all policy options EU citizens will be exposed to less noise from transport in the long term. in section 6.3.1 (impacts on health).

Monetised damages from noise levels are presented in section 6.3.1 (impacts on health).

6.4.4 Impact on energy demand

Energy demand of passenger transport is expected to decrease in the baseline due to increased electrification of car fleets and further energy efficiency improvements. In 2028 this is estimated at 186,000 tonnes of oil equivalent (toe)[89], falling to 122,000 toe in 2040 (-34% relative to 2028) and 71,000 toe in 2050 (-62% relative to 2028).

As shown in Table 4-39, lower energy demand is expected in all policy options relative to the baseline due to modal shift. PO1 results in relatively limited modal shift when compared to the other PO's. Thus, the reduction in energy demand for PO1 is more limited and estimated at 6,000 toe cumulatively over 2028-2050 relative to the baseline, or 0.2% of cumulative baseline energy demand. PO2, PO3 and PO4 are projected to achieve higher reductions than PO1 due to higher anticipated modal shift, with PO3 anticipated to deliver the highest decrease at over 17,000 toe cumulatively over 2028-2050 relative to the baseline (or -0.6%).

Table 4-39: Passenger transport energy consumption (toe/year) - EU27.

	2030	2040	2050	Cumulative over 2028-2050	% change to baseline
Energy consumption (toe)					

[88] The unit costs from the 2019 Handbook on external costs of transport (Handbook on the external costs of transport - Publications Office of the EU (europa.eu)) have been used to monetise the external costs.

[89] One tonne of oil equivalent is defined as the amount of energy released when burning one tonne of crude oil or equivalent to 11.63 megawatt-hours (MWh).

	2030	2040	2050	Cumulative over 2028-2050	% change to baseline
PO1	-234	-314	-170	6,054	0.2%
PO2	-422	-639	-382	12,177	0.4%
PO3	-618	-920	-531	17,443	0.6%
PO4	-464	-707	-426	13,475	0.5%

Source: Own elaboration from ASTRA model

6.5 SUMMARY OF THE ECONOMIC, SOCIAL AND ENVIRONMENTAL IMPACTS

Table 4-40 below provides a summary of the comparison of the options against the baseline scenario in terms of economic, social and environmental impacts. The following ranking symbols have been used: from '0' (no impact relative to the baseline), to '+' (more positive than the baseline) and '+++' (much more positive than the baseline).

Table 4-40: Comparison of options in terms of economic, social and environmental impacts relative to the baseline

	PO1	PO2	PO3	PO4
Economic impacts	**+**	**++**	**++/+++**	**++**
MDMS platforms (in EUR million, expressed as present value over 2028-2050 relative to the baseline)	-	+	+	--
Adjustment costs	92.9	127.7	122.3	282.3
Administrative costs	0.5	0.5	0.5	0.5
Adjustment cost savings	13.0	149.0	134.0	142.7
Net costs (-) or net benefits (+) for MDMS platforms	-80.4	20.9	11.3	-140.0
Transport operators (in EUR million, expressed as present value over 2028-2050 relative to the baseline)	+	++	++	++
Adjustment costs	0.0	48.2	42.2	45.2
Administrative costs	0.001	0.001	0.001	0.001
Adjustment cost savings	13.0	149.0	134.0	142.7
Net benefits for transport operators	**13.0**	**100.9**	**91.8**	**97.6**
National authorities in EUR million, expressed as present value over 2028-2050 relative to the baseline)	--	--	--	--
Enforcement costs	106.5	106.5	106.5	106.5
Administrative costs	28.9	28.9	28.9	28.9
Net costs for national authorities	135.4	135.4	135.4	135.4

	PO1	PO2	PO3	PO4
European Commission (in EUR million, expressed as present value over 2028-2050 relative to the baseline)	-	-	-	-
Adjustment costs	5.3	5.3	5.3	5.3
Net costs for European Commission	5.3	5.3	5.3	5.3
Impacts on SMEs* (in EUR million, expressed as present value over 2028-2050 relative to the baseline)	+	++	++	++
Adjustment cost savings for SME MDMS platforms	9.2	101.0	90.5	95.7
Net benefits for SME MDMS platforms	9.2	101.0	90.5	95.7
Adjustment cost savings for SME transport operators	9.4	107.0	96.1	102.5
Net benefits for SME transport operators	9.4	107.0	96.1	102.5
Impacts on user costs and congestion (in EUR million, expressed as present value over 2028-2050 relative to the baseline)	++	++	+++	+++
Savings in external costs of road congestion	1,758	4,352	6,438	4,833
Impacts on competitiveness	+	++	++	++
Impact on the functioning of the internal market and competition	+	++	++	++
Impact on innovation	+	++	+++	++
Digital by default	++	++	++	++
Impact on tourism	+	++	+++	++
Territorial impacts	+	++	+++	++
Social impacts	+	++	++/+++	++
Impacts on health (in EUR million, expressed as present value over 2028-2050 relative to the baseline)	+	++	+++	++
Savings in external costs of air pollutant emissions	218	455	670	502
Impacts on employment	+	++	++	++
Impact on safety	+	++	+++	++
Fatalities reduction (number of lives saved, cumulative over 2028-2050 relative to the baseline)	731	1,480	2,113	1,616
Injuries reduction (number of injuries avoided, cumulative over 2028-2050 relative to the baseline)	49,421	94,945	136,909	107,317
Impacts on fundamental rights	+	+	+	+
Impacts on youth	+	++	++	++
Environmental impacts	+	++	++/+++	++
CO2 emissions saved (in million tonnes, cumulative over 2028-2050 relative to the baseline)	8.3	16.5	23.9	17.9

	PO1	PO2	PO3	PO4
Air pollutant emissions saved (in thousand tonnes, cumulative over 2028-2050 relative to the baseline)	7.7 (NOx) 0.4 (PM2.5) 3.2 (VOC)	16.2 (NOx) 1 (PM2.5) 6.4 (VOC)	23.9 (NOx) 1.5 (PM2.5) 9.1 (VOC)	17.8 (NOx) 1.1 (PM2.5) 7.1 (VOC)
Savings in external costs of noise emissions (in EUR million, expressed as present value over 2028-2050 relative to the baseline)	735	1,509	2,146	1,663

*Note: *Impacts on SMEs overlap with impacts on MDMS platforms and transport operators. This is because part of MDMS platforms and transport operators are SMEs.*

7. COMPARISONS OF OPTIONS

In this section, the performance of the different policy options is compared against the criteria of effectiveness, efficiency, coherence, proportionality and subsidiarity.

7.1 EFFECTIVENESS

Effectiveness is assessed by the extent to which the examined policy options achieve the combination of objectives identified in Chapter 4. The criteria presented in Table 7-1 below are used to help assess effectiveness.

Table 7-1: Objectives and assessment criteria related to the effectiveness of policy options[90]

General objectives	Specific objectives	Assessment criteria
GO1 – Promote rail single ticketing for multi-operator journeys and thereby enhance attractiveness of rail to increase sustainability of the transport system and support modal shift **GO2** – Better functioning of the ticket distribution market, contributing to the competitiveness and the functioning of the transport services market	**SO1** – Improve transparency and establish a level playing field for transport operators in terms of access and use of indispensable MDMS	- Increase in the number of agreements between platforms and transport operators indicating a better functioning of the distribution markets (B2B and B2C) - Decrease in average expenditure per person for interurban mobility, due to increase in competition resulting from better access and use of indispensable MDMS and indispensable RU platforms for transport operators
	SO2 – Improve completeness of rail offer on MDMS platforms, including indispensable RU platforms	- Increase in the transport activity by rail due to better visibility and access to these services

Source: Own elaboration

Overall, all policy options are expected to contribute to the general objectives of promoting rail single ticketing for multi-operator journeys and better functioning of the online ticket distribution market although to various degrees.

[90] Please note that the intervention logic changed compared to what is presented in chapters 2 and 4, and SO3 has now been removed from consideration.

Options PO2-4 appear to be the most effective policy options to deliver all objectives. This effectiveness is due to the measures requiring indispensable rail platforms to enter into commercial agreements with willing transport operators, enabling the sharing of booking and payment data. In summary:

- Indicative of the enhanced level playing field for transport operators in terms of access and use of indispensable MDMS, all policy options show an increase in the number of agreements between platforms and transport operators in the period 2030-2050. PO2 shows the highest increase relative to the baseline in 2030 and 2040 (42% increase in 2030 and 125% in 2040), followed by PO4 (41% increase in 2030 and 117% increase in 2040) and PO3 (40% increase in 2030 and 110% increase in 2040). In 2050, PO2, PO3 and PO4 show similar increase in the number of agreements relative to the baseline (97% increase). The contribution of PO1 towards SO1 is much more limited (3% increase in 2030, 11% increase in 2040 and 5% in 2050).

- Within these additional agreements between platforms and transport operators, a notable proportion are expected to come from indispensable rail undertakings making their offering available on third party platforms, which would constitute an improvement in SO2. This increase in agreements is greatest in PO2 (2,574 more agreements in 2028, 778 more agreements in 2040), followed closely by PO4 and PO3 (same values for 2028, but in 2040 displaying 712 and 646 more agreements respectively). In PO1 there is a much more limited impact (0 more agreements in 2028, 45 more agreements in 2040). Thus, PO3 contributes the most to SO2.

- PO3 shows the highest decrease in the average expenditure per person on interurban mobility compared to the baseline (0.06% in 2030 and 0.34% in 2050), followed by PO4 (0.04% decrease in 2030 and 0.28% in 2050), PO2 (0.03% decrease in 2030 and 0.24% in 2050) and PO1 (0.01% decrease in 2030 and 0.05% in 2050). This reflects an increase in competition resulting from better access and use of indispensable MDMS and indispensable RU platforms for transport operators. Thus, PO3 contributes most significantly towards SO1, followed by PO4 and PO2, while the contribution of PO1 is more limited.
- PO3 shows the highest contribution towards SO2 with a 2.5% increase in transport activity by rail and 1.3% by coach in 2030, and 4.8% increase in the transport activity by rail and 2.8% by coach in 2050, relative to the baseline. The combined effect of the obligation for indispensable RU platforms to integrate willing operators (PM14) with the obligation for indispensable RUs to share their tickets (PM13), only proposed in PO3 can explain this result. In PO4 and PO2 the impacts are more limited (1.9% increase in the transport activity by rail and 1% by coach in 2030 and 4% increase in the transport activity by rail and 2.3% by coach in 2050 relative to the baseline in PO4; and 1.7% increase in the transport activity by rail and 0.9% by coach in 2030 and 3.7% increase in the transport activity by rail and 2.1% by coach in 2050 relative to the baseline in PO2) and thus also the contribution towards SO2. PO1 shows limited impact (1% increase in the transport activity by rail and 0.6% by coach in 2030 and 1.8% increase in the transport activity by rail and 1.3% by coach in 2050 relative to the baseline) and thus contribution towards SO2.
- On the external benefits for consumers and/or wider society a similar picture emerges. PO3 demonstrates the best outcomes for sustainable transportation, leading to a 0.5% reduction in cumulative transport CO2 emissions between 2028-2050, and also the largest improvements of all the POs for NOx emissions (0.2% reduction), PM2.5 emissions (0.2% reduction), and road accidents (0.5% fewer fatalities and 0.7% fewer injuries). Outcomes for external benefits are comparably large for PO2 and PO4, but notably lower in PO1, where the cumulative benefits between 2028-2050 amount to a 0.2% reduction in CO2, 0.1% reduction in NOx, 0.1% reduction in PM2.5, and 0.2% fewer fatalities and injuries from road traffic accidents.

The results of the analysis are summarised in Table 7-2.

Table 7-2: Comparison of impacts of policy packages in terms of objectives (in comparison to baseline).

Strongly negative	Weakly negative	No or limited impact	Weakly positive	Strongly positive	Unclear
Impact	PO1	PO2	PO3	PO4	
SO1 – Improve transparency and establish a level playing field for transport operators in terms of access and use of indispensable MDMS					
Increase in the number of agreements between platforms and transport operators indicating a better functioning of the distribution markets (B2B and B2C)	Increase in agreements relative to baseline: 3% increase in 2030, 11% increase in 2040 and 5% increase in 2050 relative to the baseline	Increase in agreements relative to baseline: 42% increase in 2030, 125% increase in 2040 and 97% increase in 2050 relative to the baseline	Increase in agreements relative to baseline: 40% increase in 2030, 110% increase in 2040 and 97% increase in 2050 relative to the baseline	Increase in agreements relative to baseline: 41% increase in 2030, 117% increase in 2040 and 97% increase in 2050 relative to the baseline	
Decrease in average expenditure per person for interurban mobility, due to increase in competition resulting from better access and use of indispensable MDMS and indispensable RU platforms for transport operators	Reductions in average expenditure at EU-27 level: 0.01% lower in 2030 0.05% lower in 2050	Reductions in average expenditure at EU-27 level: 0.03% lower in 2030 0.24% lower in 2050	Reductions in average expenditure at EU-27 level: 0.06% lower in 2030 0.34% lower in 2050	Reductions in average expenditure at EU-27 level: 0.04% lower in 2030 0.28% lower in 2050	
SO2 – Improve completeness of rail offer on MDMS platforms, including indispensable RU platformsImprove					
Increase in the transport activity by rail due to better visibility and access to these services	Increase in rail transport activity: 1.0% by 2030, 1.8% by 2050 Increase in coach transport activity: 0.6% by 2030, 1.3% by 2050	Increase in rail transport activity: 1.7% by 2030, 3.7% by 2050 Increase in coach transport activity: 0.9% by 2030, 2.1% by 2050	Increase in rail transport activity: 2.5% by 2030, 4.8% by 2050 Increase in coach transport activity: 1.3% by 2030, 2.8% by 2050	Increase in rail transport activity: 1.9% by 2030, 4.0% by 2050 Increase in coach transport activity: 1.0% by 2030, 2.3% by 2050	

7.2 EFFICIENCY

The efficiency of each policy option can be assessed by comparing the expected benefits (i.e., reduction of direct costs or externalities) against the respective expected costs incurred for the delivery of each of the policy options. Therefore, efficiency concerns "the extent to which objectives can be achieved for a given level of resource/at least cost".

Table 7-3: Summary of costs and benefits of policy options - present value over 2028-2050 compared to the baseline (in million EUR, 2024 prices)

	Difference to baseline			
	PO1	PO2	PO3	PO4
MDMS platforms				
Adjustment costs	92.9	127.7	122.3	282.3
Administrative costs	0.5	0.5	0.5	0.5
Adjustment cost savings	13.0	149.0	134.0	142.7
Transport operators				
Adjustment costs	0.0	48.2	42.2	45.2
Administrative costs	0.001	0.001	0.001	0.001
Adjustment cost savings	13.0	149.0	134.0	142.7
European Commission				
Adjustment costs	5.3	5.3	5.3	5.3
National authorities				
Enforcement cost	106.5	106.5	106.5	106.5
Administrative costs	28.9	28.9	28.9	28.9
External cost savings	**12,685**	**25,820**	**37,329**	**28,644**
CO2 emissions	2,367	4,696	6,778	5,176
Air pollutants	218	455	670	502
Fatalities and injuries	7,606	14,807	21,297	16,470
Road congestion	1,758	4,352	6,438	4,833
Noise	735	1,509	2,146	1,663
Total costs	**234**	**317**	**306**	**469**
Total benefits	**12,711**	**26,118**	**37,597**	**28,930**
Net benefits	**12,477**	**25,801**	**37,291**	**28,461**
Benefits to costs ratio	**54**	**82**	**123**	**62**

Total costs are projected to be the lowest in PO1, estimated at EUR 234 million expressed as present value over 2028-2050 relative to the baseline, followed by PO2 (EUR 317 million). PO3 presents somewhat higher costs than PO2 as, on top of the sharing obligation (PM13) it introduces a hosting obligation (PM14). PO4 presents significantly higher costs, estimated at EUR 469 million relative to the baseline, due to the introduction of the unbundling obligation (PM15). Adjustment costs for MDMS platforms represent 40% of the total costs in PO1, PO2 and PO3 and 60% in PO4 (due to the unbundling obligation). Of these, the costs for setting up and maintaining an API by B2C MDMS platforms to share non-personal data for mobility management with public authorities (PM7) represent 23% of the total costs in PO1 and PO3, 22% in PO2 and 15% in PO4. Enforcement costs for national authorities, for monitoring the online ticketing market for potential entities with SMP as well as the correct implementation of the legislation, represent another 45% of the total costs in PO1, 34% in PO2, 35% in PO3 and 23% in PO4. In addition, administrative costs for national authorities, for the designation of indispensable MDMS platforms and RUs represent 12% of the total costs in PO1, 9% in PO2, 9% in PO3 and 6% in PO4. Other significant share of total costs in PO2, PO3 and PO4 relates to adjustment costs associated to the obligation to share (PM13), representing 15% of the total costs in PO2, 14% in PO3 and 10% in PO4.

All policy options show significant total benefits, linked to external costs savings and the introduction of commercial agreement rules for indispensable MDMS platforms (PM11) and indispensable RUs (PM12) with third parties that are expected to streamline the negotiation processes. PO1 shows the lowest total benefits estimated at EUR 12.7 billion relative to the baseline (expressed as present value over 2028-2050). PO2, PO3 and PO4 show significantly higher benefits (EUR 26.1 billion in PO2, EUR 37.6 billion in PO3 and EUR 28.9 billion in PO4) mainly due to the higher reduction in external costs. PO3 achieves the highest reduction in external costs, as it is projected to result in a more significant shift towards rail and coach. External costs saving represent around 99% of the total benefits in all policy options.

Overall, all policy options result in net benefits relative to the baseline. The net benefits are estimated at EUR 12.5 billion in PO1 relative to the baseline, expressed as present value over 2028-2050, at EUR 25.8 billion in PO2, EUR 37.3 billion in PO3 and EUR 28.4 billion in PO4. PO3 shows the highest benefits to costs ratio (123), followed by PO2 (82), PO4 (62) and PO1 (54).

7.3 COHERENCE

7.3.1 Internal coherence

Overall, the process of packaging measures into policy options has produced four internally coherent sets of measures that address all identified specific objectives. None of the PO can be considered as internally incoherent.

PO1 leaves more flexibility but still includes measures to ensure fair and neutral display of data, as well as rules on commercial agreements for indispensable MDMS and RUs. While PO1 is expected to support the development of a more comprehensive multimodal market, it does not provide transport operators access to indispensable RU platforms and does not improve completeness and transparency of information on all MDMS platforms to the same extent as other POs. PO2 would enable access to a complete rail offer on independent platforms, currently holding an estimated 3% distribution market share in the EU. PO3 would enable travellers to find, compare, combine and purchase rail and multimodal tickets seamlessly also on the incumbent platforms, which hold a much larger market share. This would generate a larger shift towards greener travel options, as shown in section 6.3. While PO4 provides an alternative that also fulfils all specific objectives it mandates indispensable RUs to unbundle their distribution and operational services resulting in significantly higher costs.

The following table describes the expected synergetic relationships among the measures included in the options.

Table 7-4: Internal coherence of Policy Options.

Thematic area	PO1	PO2	PO3	PO4
Fair display conditions for MDMS	**PM1** and **PM2** complement each other, because **PM1** sets the scope in terms of fair display and **PM2** extends to all operators the data accuracy rules needed to achieve fair display conditions.	As in PO1.	As in PO1.	As in PO1.
Obligations which may no longer fit for purpose and fair treatment of subscribers	By repealing the provisions which are no longer relevant (PM5), whilst retaining and extending the obligation for those which still are (PM3 and PM4), **PMs 3-5** are coherent with **PM1** (updating provisions not corresponding to the new technological and market	As in PO1.	As in PO1.	As in PO1.

Thematic area	PO1	PO2	PO3	PO4
	reality of ticket distribution) as well as **PM2.**			
Fair treatment of subscribers	**PM4** extends requirements for fair treatment of subscribers to all B2B MDMS and is coherent with other measures on fair display conditions (**PM1** and **PM2**)	As in PO1.	As in PO1.	As in PO1.
Platform-to-government (P2G) data sharing	**PM7** requires MDMS to share data critical for mobility management with public authorities, without interfering with other measures. **PM7** would support the efficiency, resilience, and sustainability of the EU transport system when implemented together with **PM8.**	As in PO1.	As in PO1.	As in PO1.
Information on GHG emissions	**PM8** requires MDMS to share information on GHG emissions of trips when this information is made available by transport operators This PM is also coherent with **PM1** on neutral display and **PM2** on data accuracy requirements for operators submitting information to MDMS.	As in PO1.	As in PO1.	As in PO1.
Identification of MDMS and rail operators with SMP	**PM9** sets the thresholds for MDMS platforms and rail transport operators to be considered of SMP	As in PO1.	As in PO1.	As in PO1.
Application of principles on distribution fees and provisions against imposing highly restrictive clauses	**PM11** applies these principles to B2B MDMS and B2C MDMS with significant market power **PM12** applies these principles to all rail operators with significant market power and to all other rail operators in relation to PSO and cross-border services This builds on the definition of scope brought by **PM9** and **PM10**	As in PO1.	As in PO1.	As in PO1.
Specific obligations for rail platforms	N/A	N/A	**PM14** requires indispensable rail platforms to enter into commercial agreements with willing rail transport operators to enable	**PM15** requires indispensable rail platforms to unbundle its distribution system from the systems of its parent operator.

Thematic area	PO1	PO2	PO3	PO4
			re-linking, resale and/or the distribution of tickets.	
Specific obligations for rail operators	N/A	**PM13** requires rail operators with SMP and those operating PSO and cross-border services to enter into commercial agreements with willing MDMS to enable the sale of tickets.	As in PO2 plus	As in PO2.
Enforcement of the provisions	**PM6** requires Member States to appoint a national authority to settle disputes between parties. The same authority would be responsible for overseeing the implementation of other relevant regulatory provisions identified in the other PMs	As in PO1.	As in PO1.	As in PO1.

7.3.2 Coherence with other relevant EU legislation

All policy options demonstrate strong external coherence with the existing EU and national policy frameworks (identified in the legal context chapter 1.3), ensuring alignment with broader transport, digital, and consumer protection objectives while avoiding regulatory overlaps or contradictions. All policy options have been designed to complement and reinforce key EU instruments, such as the ITS Directive91 and its Delegated Regulation on MMTIS92 fostering the development of multimodal travel information services.

All policy options also align with horizontal digital policies such as the Platform-to-Business (P2B) Regulation93 which reinforces transparency in ranking algorithms, a principle further strengthened by the neutrality requirements for MDMS platforms. In addition, all policy options complement the DMA94, by applying similar requirements to gatekeeping transport ticketing platforms that are not covered by the DMA. All POs will be further supported by other EU instruments such as the AI Act, complementing action of all POs by imposing rules on AI systems used by MDMS platforms when displaying targeted offers to consumer needs, and therefore ensuring safety and transparency of MDMS platforms' algorithms. Similarly, the upcoming Digital Fairness Act will complement all POs by preventing problematic practices in online spaces, such as MDMS platforms, by prohibiting the use of dark patterns or addictive design of platform algorithms.

PO2, PO3 and PO4 however better address the issue of access to real-time fare data. The analysis underlines that whilst some measures mandate contractual agreements, the overarching objective to ensure that passengers can access a complete mobility offer can justify the interference in the freedom to conduct business as long as it contributes to increasing multimodality and support the development of a SERA, without imposing undue burdens.

[91] OJ L, 2023/2661
[92] OJ L, 2024/490
[93] OJ L 186, 11.7.2019, p. 57–79.
[94] OJ L 265, 12.10.2022, p. 1–66

7.4 SUBSIDIARITY AND PROPORTIONALITY

EU level action can be justified from the perspective of **subsidiarity** for a number of reasons, including if the objectives of the proposed action cannot be sufficiently achieved by the Member States acting on their own and/or if the action can be implemented more successfully at the EU level. In the case of MDMS, both of these points apply:

- While MDMS services can be developed at regional or national level, **the continuity of the EU transport system requires an EU-wide approach to deal with the problems at stake**. Discrepancies between Member States and local authorities in support measures for the deployment of MDMS, including on technical specifications and associated standards could lead to a fragmented market leading to increased costs and reduced benefits for stakeholders, including service providers, Member States, local authorities and transport system users. EU-level intervention is necessary to avoid Member States imposing divergent rules and pursuing divergent strategies, with unintended effects.
- **EU-level action is expected to set a clear framework for the whole ticket distribution value chain**, both for direct and indirect services. This initiative would enable end users and subscribers to benefit from a more comprehensive and neutral offer from transport operators as well as a better choice between transport modes in order to enhance the efficiency, resilience and sustainability of the transport system across the EU. This should in turn improve the functioning of the internal market, through a smoother and more coherent travel experience for passengers, and support the EU's objective of economic, social and territorial cohesion. Action at EU level and horizontal rules will facilitate the harmonised deployment of MDMS across the EU, as well as cross-border services. Moreover, **EU level action for indirect ticket distribution services would continue to promote a level playing field in the B2B indirect distribution sector**. The 2020 ex-post evaluation concluded that the EU level is the right level for such intervention, compared to national and international intervention. This is due to the multi-national nature of both CRS providers and aviation services. If regulated at the national level, CRS providers would need to adapt to a multitude of regulatory regimes with negative impacts on efficiency. In addition, the risk of “rule shopping” would result in fragmentation of the EU single market.

Overall, EU action on MDMS is in line with subsidiarity: the promotion of multimodality cannot be sufficiently achieved by Member States and can be implemented more successfully at the EU level.

In relation to **proportionality**, all policy options comply with the principle of proportionality. PO1 takes a light touch approach to address the three specific objectives and therefore does not risk be considered disproportionate. PO2 introduces a sharing obligation fostering access to a complete rail offer on independent platforms. This is a more stringent measure which is however only imposed on RUs dominating the operational services market. PO3 further increases the availability of rail tickets for passengers by introducing a hosting obligation on indispensable RU platforms justified by the SMP these platforms enjoy through the vertical integration with a RU dominant in the operational services market. This targeted intervention is proportionate to the policy objectives, addressing a clear market failure where indispensable RU platforms dominate both rail operations and distribution, thereby restricting competition and consumer choice. The measure is necessary because voluntary approaches have failed to deliver seamless multimodal access. PO3 strikes a balance by leveraging existing passenger gateways – requiring indispensable RU platforms to host third-party tickets – without imposing organisational separation. This ensures consumers enjoy easy access to rail and multimodal tickets, competitors face a level playing field and indispensable RUs retain their dominant platforms but cannot exclude competing railway undertakings. PO3 complies with EU proportionality principles, being suitable, necessary, and non-excessive in achieving its goals. Thus, it represents a measured, effective solution aligned with EU transport policy objectives. PO4 possibly goes beyond what is necessary to reach the objectives by requiring rail incumbents to unbundle their distribution and operational services, which would result in much higher costs.

7.5 SENSITIVITY ANALYSIS

7.5.1 Modal shift

To acknowledge the uncertainty and test the robustness of the results, sensitivity analysis has been performed on the potential modal shift due to the ability to see all offerings on MDMS platforms and the ability to book all visible travel options on MDMS platforms. More specifically, half of the potential has been assumed in the 'low case' sensitivity. The impacts on external costs savings and efficiency are further compared to the base case presented previously. More details are presented in the Methodological Annex.

The table below shows that this assumption has important impacts on the external costs savings in the 'low case' sensitivity relative to the base case. Total external costs savings, expressed as present value over 2028-2050 relative to the baseline, are 34% lower in the 'low case' sensitivity relative to the base case in PO1, 37% lower in PO2, 39% lower in PO3 and 37% lower in PO4.

Table 7-5: External costs savings in the 'low case' sensitivity and base case in the POs relative to the baseline (EU27), expressed as present value over 2028-2050, in million EUR (2024 prices)

	PO1	PO2	PO3	PO4
Base case				
Total external costs savings (in million EUR), of which:	**12,685**	**25,820**	**37,329**	**28,644**
GHG emissions	2,367	4,696	6,778	5,176
Air pollutant emissions	218	455	670	502
Fatalities and injuries	7,606	14,807	21,297	16,470
Road congestion	1,758	4,352	6,438	4,833
Noise emissions	735	1,509	2,146	1,663
Low case				
Total external costs savings (in million EUR), of which:	**8,379**	**16,255**	**22,698**	**17,949**
GHG emissions	1,566	2,975	4,137	3,264
Air pollutant emissions	139	274	389	301
Fatalities and injuries	4,928	9,421	13,087	10,421
Road congestion	1,252	2,616	3,761	2,902
Noise emissions	495	969	1,324	1,061
% change 'low case' relative to the base case				
Total external costs savings, of which:	-34%	-37%	-39%	-37%
GHG emissions	-34%	-37%	-39%	-37%
Air pollutant emissions	-37%	-40%	-42%	-40%
Fatalities and injuries	-35%	-36%	-39%	-37%
Road congestion	-29%	-40%	-42%	-40%
Noise emissions	-33%	-36%	-38%	-36%

Source: Ricardo et al. (2026), Impact assessment support study

Although this assumption has important impacts on the total external costs savings, it is expected to have no impact on other adjustment costs savings for MDMS platforms and transport operators and on the total costs. The table below presents the impacts on total benefits, total costs, net benefits and benefits to costs ratio by policy option in the base case and 'low case' sensitivity. It shows that all policy options are still expected to result in net benefits in the 'low case' sensitivity considered. It also shows that the ranking of the policy options is not expected to change in the 'low case' sensitivity relative to the base case estimates.

Table 7-6: Summary of costs and benefits of policy options in the 'low case' sensitivity and base case, expressed as present value over 2028-2050 compared to the baseline (in million EUR, 2024 prices)

	PO1	PO2	PO3	PO4
Base case				
Total costs	234	317	306	469
Total benefits, of which:	12,711	26,118	37,597	28,930
Adjustment costs savings for MDMS platforms and transport operators	26	298	268	285
External costs savings	12,685	25,820	37,329	28,644
Net benefits	12,477	25,801	37,291	28,461
Benefits to costs ratio	54	82	123	62
Low case				
Total costs	234	317	306	469
Total benefits, of which:	8,405	16,553	22,966	18,234
Adjustment costs savings for MDMS platforms and transport operators	26	298	268	285
External costs savings	8,379	16,255	22,698	17,949
Net benefits	8,171	16,236	22,660	17,766
Benefits to costs ratio	36	52	75	39

Source: Ricardo et al. (2026), Impact assessment support study

7.5.2 Significant market power threshold for OTAs

The 'low SMP threshold case' results in three more platforms needing to submit information to national authorities (PM10), leading to some additional administrative costs (EUR 0.8 million one-off administrative costs in the 'low SMP threshold case' in all POs relative to EUR 0.5 million in the base case). It also requires more platforms to comply with commercial agreement rules for indispensable MDMS (PM11), leading to additional cost savings for MDMS platforms and transport operators relative to the base case (3% higher adjustment costs savings in PO1 and 6% higher adjustment costs savings in PO2, PO3 and PO4 relative to the base case, expressed as present value over 2028-2050) as shown in the table below.

Table 7-7: Administrative costs and adjustment costs savings for MDMS platforms and transport operators due to PM10 and PM11 in the 'low SMP threshold case' and base case in the POs relative to the baseline (EU27), expressed as present value over 2028-2050, in million EUR (2024 prices)

	PO1	PO2	PO3	PO4
Base case				

	PO1	PO2	PO3	PO4
MDMS platforms				
Administrative costs for the designation of indispensable MDMS and Rus (PM10)	0.5	0.5	0.5	0.5
Adjustment cost savings for commercial agreement rules for indispensable MDMS (PM11)	12.0	136.1	122.3	130.4
Transport operators				
Adjustment cost savings for commercial agreement rules for indispensable MDMS (PM11)	12.0	136.1	122.3	130.4
Low SMP threshold case				
MDMS platforms				
Administrative costs for the designation of indispensable MDMS and Rus (PM10)	0.8	0.8	0.8	0.8
Adjustment cost savings for commercial agreement rules for indispensable MDMS (PM11)	12.4	144.2	129.8	138.3
Transport operators				
Adjustment cost savings for commercial agreement rules for indispensable MDMS (PM11)	12.4	144.2	129.8	138.3
% change 'low SMP threshold case' relative to the base case				
MDMS platforms				
Administrative costs for the designation of indispensable MDMS and Rus (PM10)	75%	75%	75%	75%
Adjustment cost savings for commercial agreement rules for indispensable MDMS (PM11)	3%	6%	6%	6%
Transport operators				
Adjustment cost savings for commercial agreement rules for indispensable MDMS (PM11)	3%	6%	6%	6%

The table below shows the impacts on total benefits, total costs, net benefits and benefits to costs ratio by policy option in the base case and 'low SMP threshold case'. It shows that all policy options are still expected to result in net benefits in the 'low SMP threshold case' considered. It also shows that the ranking of the policy options is not expected to change in the 'low SMP threshold case' relative to the base case estimates.

Table 7-8: Summary of costs and benefits of policy options in the 'low SMP threshold case' and base case, expressed as present value over 2028-2050 compared to the baseline (in million EUR, 2024 prices)

	PO1	PO2	PO3	PO4
Base case				
Total costs	234.1	317.0	305.6	468.6
Total benefits	12,710.7	26,117.9	37,596.7	28,929.8
Net benefits	12,476.7	25,800.9	37,291.1	28,461.3
Benefits to costs ratio	54.3	82.4	123.0	61.7
Low SMP threshold case				
Total costs	234.4	317.3	306.0	468.9
Total benefits	12,711.5	26,134.2	37,611.9	28,945.6
Net benefits	12,477.0	25,816.9	37,305.9	28,476.6
Benefits to costs ratio	54.2	82.4	122.9	61.7

8. PREFERRED OPTION

8.1 OVERVIEW

Based on the analysis of effectiveness, efficiency, coherence, subsidiarity and proportionality, **PO3 is the preferred policy option**.

All policy options address the problems identified, their drivers and the specific objectives, and all PO2, PO3 and PO4 show a similar level of effectiveness. PO3 is, however, more efficient, with the highest benefits to cost ratio (123).

All policy options examined in this impact assessment demonstrate internal coherence, aligning with the overarching objectives of promoting fair competition, enhancing consumer choice, and ensuring seamless access to multimodal travel information and ticketing. PO3 enables travellers to search, compare, combine, and purchase rail and multimodal tickets seamlessly, including on indispensable RU platforms that dominate the market. By integrating these functionalities into existing high market share platforms, this option maximises consumer reach while ensuring compliance with fairness and transparency requirements. It strikes a balance between market-led innovation and regulatory oversight, reducing fragmentation in the ticketing system. Each option has been designed to ensure full external coherence and seek synergies with existing EU legislation while addressing identified gaps in the current framework.

All options respect the subsidiarity principle, contributing to harmonising the legal framework and fostering cross-border ticketing platforms, albeit at different levels of ambition, with PO3 allowing for a higher level of competition in the rail distribution market. With respect to proportionality, PO3 achieves best the objectives of the initiative, while maintaining a lower level of market intervention compared to PO4. PO3 is much more effective than PO2 since the addition of the 'hosting obligation' increases very substantially the number of passengers who benefit from the policy measures and the market impact of the proposal. On the other hand, the hosting obligation does not impose a change in the business model of the indispensable platforms, nor would it negatively affect their business. The hosting obligation only imposes open access and non-discriminatory treatment of the client RUs, which is a proportionate requirement for entities with such high market share. Although all policy options comply with the principle of proportionality, PO4 possibly goes beyond what is necessary to reach the objectives.

8.2 STAKEHOLDER VIEWS

The paragraphs below provide a summary of the views of the stakeholders on all the PMs that form the preferred policy option, PO3 – a full analysis of stakeholder views is provided in the stakeholder consultation report, in annex.

PM1. Obligation for all MDMS platforms to apply neutral display obligations and for transport operators (in all modes) to ensure that the data they submit are accurate

Interviews showed broad stakeholder agreement—including airline associations, MDMS providers (such as EU Travel Tech, a trade association for the sector), some OTAs, and BEUC—that the current Code of Conduct for CRS is outdated and fails to reflect today's complex distribution landscape, as it omits many new actors like aggregators and OTAs who now play key roles. These groups argued that the regulation's limited scope undermines competitive neutrality and allows some players to bypass obligations entirely.

On the issue of neutral display, views were mixed: WestBahn, EPF, and a road transport operator support neutrality if it enhances customer clarity and preserves user choice, while an airline, a rail operator, European Sleeper, and a national authority raised concerns about its enforceability and practical meaning, warning that poorly defined neutrality could reduce competition and fail to address the realities of a rapidly evolving digital market.

In terms of the survey response, stakeholders participating in the survey generally viewed **PM1** as one of the most effective interventions. It was especially well-regarded for addressing the uneven access of transport operators to MDMS platforms, with 29 out of 72 stakeholders indicating it would be effective,

32 of 72 indicating they were neutral or did not know, and only 11 considering it an ineffective approach. Transport operators, including airlines and air sector associations, strongly supported this measure, stating it is essential to prevent services from being unfairly ranked lower due to commercial arrangements. While some MDMS providers doubted its ability to resolve the underlying access issues, the broad cross-sector endorsement suggests it has strong perceived value in promoting fair treatment and transparency.

PM2. Obligation for all MDMS platforms to load and process data of operators with equal care and timeliness

PM2 received highly divided opinions, suggesting limited consensus on its added value. MDMS providers who participated in stakeholder consultation activities largely considered it ineffective, while other groups expressed views were more mixed.

In terms of the effectiveness of the measure in relation to the limited and distorted information and access to tickets for consumers on MDMS, in particular for rail, 13 of 68 considered the measure to be effective, 25 of 68 considered the measure to be ineffective and 19 of 68 were either neutral or did not know. Among MDMS providers, 5 of 20 considered the measure to be effective, whereas 13 considered it to be ineffective. For transport operators, seven of 33 considered the measure to be effective, 10 of 33 considered it ineffective, and the rest were either neutral or did not know.

As for addressing the uneven access of transport operators to MDMS platforms, 24 of 68 respondents of the survey considered it effective (11 very effective, 13 somewhat effective), 25 of 68 expected it to be ineffective (20 very ineffective, five somewhat ineffective), and 19 were either neutral or unsure. Among MDMS providers, only 5 of 21 saw it as effective, while 11 found it ineffective and seven either did not know or were neutral; vertically integrated MDMS providers expressing an opinion in the survey were mostly negative or undecided. For transport operators, seven of 27 expected effectiveness, 10 expected ineffectiveness, and the rest were neutral or unsure. Among new entrant rail operators, two of three stated they did not know and one stated the measure could be somewhat effective. National authorities were more positive, with seven of 11 expecting effectiveness and the remainder neutral or unsure. Among 'Other' stakeholders, half saw the measure as effective, two viewed it as very ineffective, and three did not know.

No specific views were captured about this topic during the interviews.

PM3: Obligation for all MDMS platforms to share marketing and booking data in a fair way, when requested by transport operators and authorities In-depth interviews revealed that one software provider, one MDMS provider and an airline association view the traditional CRS Code of Conduct as outdated. This is due to airlines' growing shift to direct distribution and the rise of alternative data providers like IRT, which have reduced the strategic importance of CRS platforms in the travel booking ecosystem. This shift is seen as eroding the informational advantage once held by CRS, making the current regulatory framework less relevant.

PM4. Obligation for all B2B MDMS plat-forms to treat subscribers fairly and clearly identify in their display banned airlines. Obligation for third countries B2B MDMS to ensure equal treatment of EU air carriers

In the interviews, mixed views were expressed by stakeholders who explicitly commented on the future of the CRS Code of Conduct definition. One transport operator agreed with the proposed policy measure, commenting on the importance of updating the regulation to cover actors not currently encompassed in the regulation. However, one MDMS platform mentioned that the Code of Conduct should not be expanded, but instead repealed, as they no longer consider it to be relevant or necessary for the industry. Skyscanner presented a similar view, indicating that updating the definition could result in overregulation and irrelevant regulation to be applied onto new actors. For the regulation to be applicable, they argue, it would need to be updated in-line with the structure of new actors. This is in-line with comments made by EU Travel Tech, ECTAA and two other MDMS providers who argued that the current framework is outdated and does not cover the full range of actors now central to distribution, leading to gaps in transparency and fair competition.

In the survey, a large number of stakeholders indicated they were unsure of the effectiveness of the policy measure in addressing the potential distortion of competition between regulated (CRS) and non-regulated B2B distribution channels performing similar functions to CRS, with 25 of 66 respondents indicated they did not know. Of those who did respond, 26 of 66 expected it would be very or somewhat effective (13 very effective, 13 somewhat effective). This was particularly true for transport operators, whereby 12 of 28 indicated they measure could be effective. MDMS operators were more negative, with nearly half of MDMS respondents (nine of 20) expecting the measure to be very ineffective (one) or somewhat ineffective (eight).

PM5. Remove provisions from CRS Code of Conduct on data protection which are no longer necessary due to GDPR

Similarly to PM4, the majority of stakeholders were unsure of the effects of PM5 onto the potential distortion of competition between regulated (CRS) and non-regulated B2B distribution channels performing similar functions to CRS, with 47 of 66 stakeholders being either neutral (22) or claiming they did not know (25). This may be due to the fact that not all stakeholders consulted as part of this study would have been familiar with the aviation sector. Of those who expressed a not neutral view, there was an even split between those who thought the measure would be effective (nine of 66) and ineffective (10 of 66).

No specific views were captured about this topic during the interviews.

PM6. Obligation for Member States to appoint a national authority to settle disputes between parties, and establish an EU enforcement network for coordination

In the survey, respondents were asked to consider the effectiveness of PM6 in addressing the limited and distorted information and access to tickets for consumers on MDMS, in particular for rail and the uneven access of operators to indispensable MDMS platforms. For PM6 ability to address the limited and distorted information and access to tickets for consumers on MDMS, in particular for rail, the largest proportion of respondents were neutral or did not know (27 of 57), 18 of 57 respondents considered that the measure could be somewhat effective, and finally, 12 of 57 considered the measure ineffective. National authorities were relatively positive, with eight of 11 expecting the measure to be effective. Seven of 17 MDMS providers thought the measure may be ineffective, whereas the majority of transport operators were neutral or unsure. For the uneven access of operators to indispensable MDMS platforms, more stakeholders considered this measure to be effective, with 36 of 71 stakeholders stating they expected the measure to be effective, with a large proportion of these responses coming from transport operators (20 of 36).

Based on the outcomes of the interviews, two airlines/airline associations, BEUC, and one “Other” organisation, strongly supported the creation of a neutral EU-level body to oversee the MDMS ecosystem, arguing that it would enhance market fairness, ensure consistent rule enforcement across Member States, and improve dispute resolution – drawing on positive experience with passenger rights regulation as a precedent. BEUC, in particular, viewed such oversight as essential for consumer protection and addressing coordination gaps between national authorities.

However, this support was not unanimous. An MDMS provider questioned the practical need for a neutral body, noting that disputes rarely require such escalation, while CER and the Czech authority argued that existing judicial and administrative systems are sufficient for market oversight. These stakeholders believe that, especially in competitive national markets, a new institution would add little value, highlighting that the necessity of EU-level oversight depends on the specific regulatory and market context.

PM7. Obligation for all B2C MDMS to share non-personal data for mobility management with public authorities

In the survey, respondents were asked to consider how effective PM7 would be at tackling the uneven access of operators to indispensable MDMS platforms.

As expressed in the interviews, a national authority and the European Passengers’ Federation, supported the sharing of trip data by MDMS providers with public authorities, highlighting its value for

improved transport planning, policy evaluation, and evidence-based decision-making – particularly in assessing the uptake of sustainable mobility options. These stakeholders believed that access to comprehensive trip data can help authorities better understand mobility patterns and inform infrastructure and service development, though EPF noted that immediate impacts may be limited.

However, concerns were raised by Snälltåget, who warned that such data sharing could be used by authorities to justify new public service obligations, potentially displacing commercially viable services. UITP added that data reciprocity is crucial, cautioning that PTA-managed platforms could accumulate large datasets while operators remain "data poor," potentially forcing operators to repurchase their own data and creating unfair structural imbalances in the mobility ecosystem

PM8. Obligation for all B2B and B2C MDMS to display information on GHG emissions of trips, where these data are provided by the operators. This is in line with Count Emissions EU and Flight Emission Label for aviation.

As part of the survey, respondents were asked to consider the effectiveness of PM8 in addressing the uneven access of operators to indispensable MDMS platforms. Respondents were evenly split between those who considered the measure to be ineffective (25 of 71) and those who expected it to be effective (28 of 71) – the rest of the stakeholders were neutral or did not know. In the context of Problem 1, stakeholders viewed this as a positive awareness-raising step, while other argued that it does not address the root issue of market access, particularly for smaller MDMS providers. There was a consensus that GHG data display should be mandatory for both operators and platforms and that standardised methodologies must be used to ensure comparability and avoid the use of misleading data.

Stakeholders SNCF, ADN Mobilités, EPF, T&E, and CER strongly supported integrating greenhouse gas emissions data into MDMS platforms. They stressed that transparent emissions information can empower passengers to make more environmentally responsible choices and encourage shifts toward sustainable transport. CER further argued that all operators should be required to display emissions data, and that MDMS platforms should estimate and present this information using standardised methods if operators do not provide it.

Other stakeholders, namely, an MDMS provider, two rail operators (including Snälltåget), and a road transport operator, cautioned that emissions data is only valuable when it allows fair comparisons across transport modes. They noted that in regions where air travel is the only viable option, emissions data may have limited relevance, and that the effectiveness of emissions transparency depends on its presentation in a broader multimodal context. Technical challenges were highlighted by two MDMS providers, two rail operators, and an airline. They included inconsistent calculation methodologies and limited collaboration, which undermine data comparability and reliability, especially for cross-border journeys.

There were also different opinions over whether emissions disclosure should be mandatory or voluntary. WestBahn advocate for a voluntary approach, suggesting that generic mode-based information may suffice. Further scepticism comes from the Czech Authority and Helsinki Region Transport, who question whether emissions data significantly influences passenger choices. BEUC, meanwhile, highlights the need to align any new requirements with ongoing initiatives such as Count EmissionsEU to avoid regulatory overlap and ensure coherent policy development.

PM9. Legislation sets thresholds to identify MDMS and rail operators in scope

During interviews, stakeholders expressed a range of views on market power in MDMS and the proposal to introduce regulatory thresholds. Only ECTAA and EPF explicitly say in the interview that they support thresholds to identify entities in scope. They argued that dominant incumbents limit access to ticketing systems and data, making it difficult for new entrants to compete. These stakeholders called for low thresholds based on booking share or user reach rather than fixed turnover values, which may quickly become outdated in a fast-changing market.

By contrast, dominant rail operator CER and three MDMS providers including ETT were more cautious. Some CRS, like Amadeus, warned that excessive regulation could constrain commercial negotiations and limit flexibility, citing lessons from the airline sector. Incumbent rail operators also raised concerns

about overregulating long-distance rail while overlooking other players, such as bus operators and regional transport providers, who often collaborate on ticketing. This, they argued, could result in uneven obligations and unintended market distortions.

One public authority, BEUC and another civil society organisation also raised important considerations. They questioned whether national-level thresholds are suitable for addressing cross-border issues and stressed the need for a multimodal regulatory approach that reflects the diversity of transport services. UITP emphasised reciprocity: if MDMS platforms are subject to obligations, operators should also be required to share their content fairly. Overall, there was no consensus on fixed thresholds, but many called for a more flexible, mode-neutral framework with clear definitions and balanced obligations for all actors.

In the survey, in relation to the limited and distorted information and access to tickets for consumers on MDMS, in particular for rail, 14 of 67 respondents considered the measure to be effective and 15 of 67 thought it would be ineffective. A majority of stakeholders were neutral (17 of 67) or did not know (21 of 67). This suggests a strong level of uncertainty on how the measure would address the problem of limited and distorted information and access to tickets for consumers.

Respondents were also asked to consider the impact of this measure in relation to the uneven access of operators to indispensable MDMS platforms. There was a mixed response to the expected effects of PM9, with 19 of 71 respondents indicating that the measure would be ineffective, and 15 of 71 indicating it would be effective. There is no significant difference across stakeholder groups. A significant number of respondents remained neutral on the measure (17 of 71) or indicated that they did not know (20 of 71).

PM10. B2C MDMS platforms and rail operators with SMP at national level notify national authorities of their market presence. B2C MDMS platforms with SMP at EU level notify EC of their market presence. National authorities designate B2C MDMS platforms and rail operators with SMP at national level. EC to publish a list of MDMS platforms and rail operators with SMP, at national and Union's level

Survey responses on the effectiveness of PM10 in addressing the uneven access of operators to indispensable MDMS platforms show conflicted expectations. Eighteen of 70 respondents expect the measure to be ineffective (10 very ineffective; eight somewhat ineffective), a significant portion of these responses come from MDMS providers (nine of 18). However, 15 of 70 respondents indicated that they expected the measure to be effective.

PM11: Applies to B2C MDMS platforms with SMP and B2B MDMS: respect principles on distribution fees and cannot impose highly restrictive clauses (exclusivity clauses, unfair and unjustified conditions, marketing clauses and other technical restrictions) when entering into commercial agreements with transport operators

In the survey, in relation to uneven access of operators to indispensable MDMS platforms, stakeholder views were mixed with most MDMS providers disagreeing that the problem exists, while most other stakeholder groups, especially airlines, agreed. Among MDMS providers, 14 out of 19 disagreed, compared to 3 that agreed and 2 that were neutral. In contrast, 16 of 29 transport operators agreed with the problem (8 disagreed and 5 were neutral), and 8 of 13 national authorities agreed (4 disagreed and 1 was neutral).

In reference to the limited and distorted information and access to tickets for consumers on MDMS, in particular for rail, a majority of stakeholders indicated this measure would be effective, with a total of 31 of 69 respondents considering this measure to be effective (25 somewhat effective; six very effective). A majority of positive responses were from transport operators, with 15 of 27 transport operators considering this measure to be effective. In contrast, 20 of 69 considered this measure to be ineffective (15 very ineffective, five somewhat ineffective), with a majority of negative responses coming from MDMS providers, with 13 of 20 MDMS providers considering this measure to be ineffective. Eighteen of 69 respondents were either neutral or did not know.

PM12: Applies to all rail operators with significant market power and to all other rail operators in relation to PSO and cross-border services: respecting the principles on distribution fees and

without imposing highly restrictive clauses (exclusivity clauses, marketing clauses and other technical restrictions) when entering into commercial agreements with MDMS

During the interviews, many stakeholders support mandatory data sharing and cooperation under FRAND (fair, reasonable, and non-discriminatory) terms to enhance transparency, competition, and consumer access in the mobility market. This includes MDMS providers like ADN Mobilités and ETT, Open Access rail operators association AllRail, a national authority, and consumer group EPF. They argue that FRAND obligations combined with open data standards would level the playing field, ensure visibility for all operators, and enable simpler, more transparent booking systems. AllRail and EPF highlight the importance of regulating both operators and MDMS platforms to avoid market imbalances, citing the UK's regulated commission model as an effective example.

However, concerns exist regarding the practicality and possible unintended effects of enforcing FRAND principles. A CRS warns that overly rigid rules could cause inefficiencies and reduce market flexibility. Incumbents (DB, CER, SNCF, and UITP) oppose regulating distribution fees at the EU level, advocating instead for negotiated agreements reflecting real service value and costs. AllRail points to the UK's capped commission rates (5% online, 9% offline) as a successful approach that prevents dominant operators from squeezing vendors while maintaining vendor profitability and keeping ticket prices affordable. Meanwhile, some operators argue that the market is naturally evolving toward fairer commercial agreements and caution against premature regulation due to unclear terms like "highly restrictive clauses."

On the topic, the airline sector consulted strongly rejects "full content" distribution obligations, citing past experiences with costly GDS mandates that limited their flexibility, stifled innovation, and increased prices. One airline, two airline associations (including A4E) and one aviation new content aggregator stress the need for commercial freedom to choose distribution partners based on cost and strategic fit and to adopt modern technologies such as NDC. Lastly, a national authority highlights a critical gap in the regulatory debate: the absence of clear definitions and conditions for FRAND compliance and distribution mandates. Without this clarity, enforcement will be difficult and the effectiveness of regulatory measures could be undermined.

In the survey, stakeholders were asked to consider the expected effectiveness of PM12 in relation to the limited and distorted information and access to tickets for consumers on MDMS, in particular for rail. A slight majority of stakeholders indicated that they expected the measure to be effective, with 19 of 69 stating this. This was evenly split across stakeholder groups, with a slight majority noted among MDMS providers (seven of 20). However, 14 of 69 stakeholders expected the measure to be ineffective, with even responses across stakeholder groups.

PM13. Applies to indispensable rail operators (rail operators with SMP or in relation to PSO and cross- border services): obligation to enter into commercial agreements with willing MDMS platforms to enable the relinking, resale and/or distribution of tickets

During the interviews, ADN Mobilités, an incumbent rail operator, two airline associations, and UITP and ECTAA prefer a cooperative, commercially driven approach over regulatory mandates for collaboration in distribution. They argue that partnerships based on mutual commercial interest are more sustainable and efficient than forced integration. They warn that imposed requirements could lead to token compliance, with competitors' services hidden or de-emphasised, undermining the intended transparency and cooperation.

Concerns about increased market concentration are also significant. CER and ECTAA caution that forcing all platforms to sell competing services might inadvertently strengthen dominant players by attracting operators seeking maximum visibility. This could pressure smaller MDMS providers to lower commissions unsustainably, risking their economic viability and potentially consolidating the market among a few large platforms. Rather than enhancing consumer choice, such measures might entrench dominant actors and reduce diversity.

Economic fairness is another contentious issue, especially regarding vertically integrated MDMS being required to sell competitor content. DoHop argues that this should only happen with fair compensation reflecting the commercial value of the service. Some stakeholders, like a new entrant rail operator,

suggest a less intrusive alternative—linking to competitor services without full sales integration—to balance openness with platform autonomy. In contrast, AllRail strongly supports full visibility on major ticketing platforms, emphasising that greater exposure is critical for Open Access operators' survival and could significantly boost rail modal shift for long-distance travel.

In the survey, responses indicate a positive view on the effects of PM17 onto to the limited and distorted information and access to tickets for consumers on MDMS, in particular for rail. A majority of respondents expected PM13 to be effective (22 of 70), a majority of responses came from MDMS providers and national authorities (seven each). However, there still remained a level of scepticism among respondents, with 14 of 70 indicating they expected it to be ineffective, especially among transport operators (eight of 14). Like other PMs the largest number of respondents were either neutral (13 of 70) or did not know (21 of 70).

PM14. Applies to indispensable rail platforms: obligation to enter into commercial agreements with willing rail transport operators (operating within the same geographical area in which the rail operator owning the indispensable rail platform has SMP) to enable re-linking, resale and/or the distribution of tickets

Survey responses received, in relation to the uneven access of operators to indispensable MDMS platforms, suggest a high level of disagreement over the potential impacts of the measure 16. 20 of 68 respondents consider the measure to be ineffective (with 19 of 20 stating it would be very ineffective). Responses largely came from transport operators (15 of 20). In contrast, 22 of 68 respondents expect the measure to be effective (10 very effective; 12 somewhat effective). The responses for those who consider the measure to be effective are more or less evenly split across stakeholder groups. A large number of respondents were either neutral or did not know (26 of 68).

No interview responses were received in relation to policy measure 14.

8.3 OTHER CONSIDERATIONS

The preferred option (PO3) complies with the principle of 'do no significant harm' as its performance in different environmental impacts is overall positive achieving reductions in GHG and air pollutants emissions, noise and congestion, as well as improving the safety performance of the EU transport system compared to the baseline. The preferred option also complies with the 'digital by default' principle, since its objective is to promote the use of digital technologies in the passenger transport sector.

Finally, PO3 also supports achieving SDG 3, SDG9 and SDG 13 (see Table 8-1), as it has positive impacts on safety, congestion, noise and air pollutants (SDG 11), as well on GHG emissions (SDG 13).

Table 8-1: Impacts of the preferred option PO3 on Sustainable Development Goals (SDGs)

Relevant SDGs	Impacts PO3
SDG 3: Ensure healthy lives and promote wellbeing for all at all ages	Cumulative (2028-2050) air emissions reduction of: 1.5 kt PM, 23.9 kt NOx, 9.2 kt VOC Less exposure to noise from transport
SDG 9: Make cities and human settlements inclusive, safe, resilient and sustainable	Cumulative (2028-2050) accident reduction of: 2,113 fatalities, 17,285 severe injuries and 119,624 slight injuries
SDG 13: Take urgent action to combat climate change and its impacts.	Cumulative CO_2 reduction of: 23.8 million tonnes cumulative over 2028-2050

9. MONITORING AND EVALUATION OF IMPACTS

It is important to regularly assess the implementation, impacts and effectiveness of this initiative. There is a role for the Commission to monitor that through several actions and a set of core indications that will measure progress towards achieving the specific objectives.

This initiative will be successful if it enables a competitive MDMS industry across the EU and that leads to the reduction of the use of private cars or other carbon intensive transport modes. A successful scenario for this initiative will thus be one where across all Member States there is number of MDMS platforms providing services across all modes of transport (including in particular more regional, national and long-distance rail and bus and coach services) from the majority of operators in the market. These relationships between MDMS and transport operators will be based on commercial agreements, following principles established to streamline commercial conditions and avoid the exploitation of a potential dominant position by entities with SMP. These should enable smaller transport operators to be available on the major MDMS, and the smaller MDMS to have access to data from major transport operators where there is a systemic market failure in transport services, such as in rail. MDMS will provide neutral display to consumers, where sorting criteria like the GHG emissions are clearly displayed, and no preference is shown to their own services. Public authorities will have greater access to data on mobility patterns allowing them to better plan their mobility strategies and to get an accurate view of the external impacts of trips.

In order to provide guidance to sector stakeholders, the legislative proposal will define the scope and contents of monitoring activities by setting out 'performance areas' (linked to the objectives of the operation, objectives and indicators). Some of the indicators are of a qualitative nature and show if the desired deliverables are being achieved and implemented, while others are based on data to be collected that will need to be analysed further.

For the monitoring of **Specific Objective 1**, the number of transport operators distributing transport products on these platforms is the most relevant indicator. This indicator will be a clear indication for a positive trend towards overcoming distortions of competition and establishing a level playing field for transport operators in terms of access and use of indispensable MDMS and indispensable RU platforms, if more transport operators are actually using these platforms for offering their transport products. The monitoring of this indicator should be limited to these indispensable platforms since they have the power to restrict access.

Another relevant indicator for SO1 is the number of agreements between platforms and transport operators. An increase in the number of agreements between MDMS platforms and transport operators would indicate a better functioning of the online distribution markets. Contrary to the above indicator on the number of transport operators distributing transport products on indispensable MDMS and indispensable RU platforms, this indicator would not be limited to only indispensable platforms, but would capture all MDMS platforms, including independent ones. Therefore the two indicators complement each other and show market dynamics and the evolution of the market in terms of transport operators' access and use of platforms, including indispensable MDMS and indispensable RU platforms.

Another indicator refers to consumer satisfaction scores on travel information availability and bookability measured by periodically conducted Eurobarometer surveys. Assuming the start of implementation in 2028, Eurobarometer surveys could be conducted every two years to measure consumer satisfaction on travel information availability and bookability among European citizens. In order to be able to compare their results to the results of the Eurobarometer survey conducted in 2024, the same set of questions should be used. Since Eurobarometer surveys are representative this indicator would provide a very robust basis to monitor the perception of consumers and therefore a good tool for monitoring progress towards achieving SO1.

As a final indicator, the number of sanctions imposed as a result of enforcement activities could provide an indication on how prevention of unfair practices and fair display is respected. In the context of the EU enforcement network to support coordination; enforcement authorities will share information on sanctions allowing for a good basis to monitor progress towards achieving SO1.

The monitoring of **Specific Objective 2** could be done on the basis of the number of indispensable RUs present on third-party platforms, measured by the number of agreements in place. An increase in the number of agreements between indispensable RUs and third-party platforms would signal improved access to rail offers as it would show that indispensable RUs are no longer relying mostly on their vertically integrated platforms for the distribution of their tickets. Another relevant indicator is the number of cross-border rail services for which tickets are available on third-party platforms. An increase in the number of cross-border services distributed through third-party platforms would signal a more integrated and competitive market, capturing the evolution of platform coverage in the fastest-moving segment of rail transport

Table 9-1 presents progress indicators to be considered to monitor the achievement of each specific objective, along with the source of data for those indicators.

Table 9-1: Draft progress indicators for the MDMS and SDBTR initiatives[95]

Specific objectives	Progress indicators	Source of data
SO1: Improve transparency and establish a level playing field for transport operators in terms of access and use of indispensable MDMS	• Achieve fair and non-discriminatory commercial agreement negotiations (limited abuse of negotiating power - reduce discriminatory contractual clauses or exclusivity arrangements) • Ensure unbiased display of travel options for end-users on all MDMS platforms and clear identification of paid prominence or sponsored listings • Minimise unjustified price divergence for identical offers across platforms	• National enforcement authorities • European Commission (via the EU enforcement network) • Eurobarometer
SO2: Improve completeness of rail offer on MDMS platforms, including indispensable RU platforms	• Increase the availability of single rail tickets (representing a multi-operator journey) across MDMS platforms. •	• National enforcement authorities

[95] Please note that the intervention logic changed compared to what is presented in chapters 2 and 4, and SO3 has now been removed from consideration.

ANNEX 1: Analytical methods used in preparing the IA

The section explains in detail the IA modelling framework. It first provides an overview of the framework and then explains how each of its constituent elements work, including key inputs and assumptions.

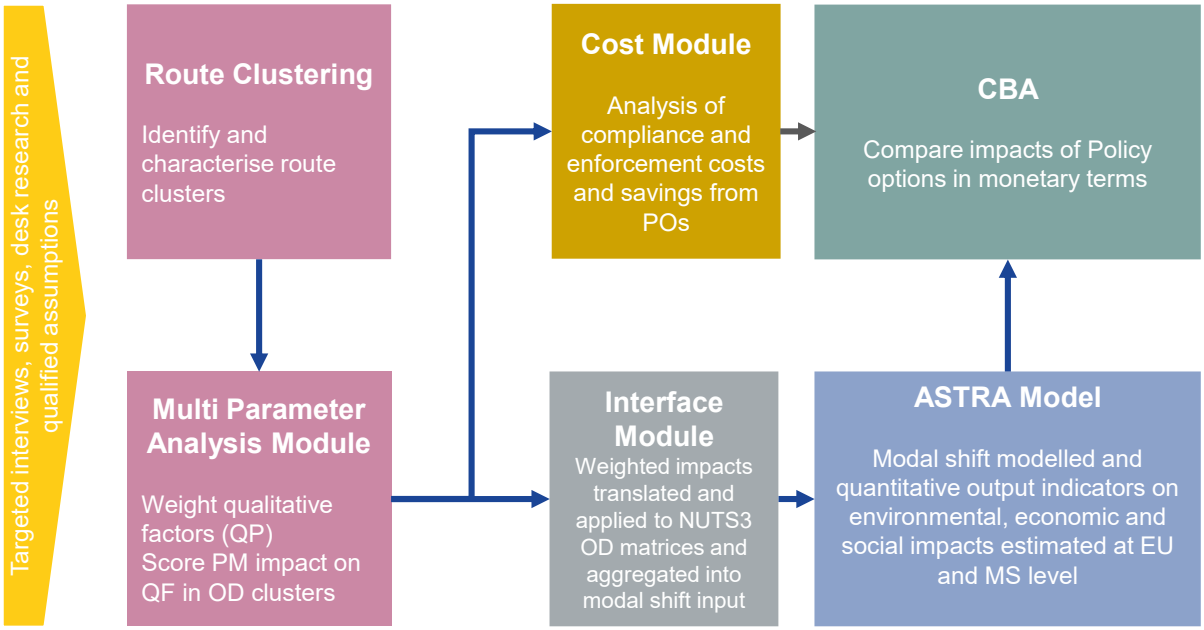
10.1 OVERVIEW OF THE IA MODELLING FRAMEWORK

As outlined in Section 6, the key mechanism where the policy options are expected to generate impacts on society is through a shift in consumer choice towards more sustainable modes of transportation. To accurately assess the impact of the different policy options, several methods have been used to translate qualitative assessments in changes to traveller experience and quantitative assessments on potential time savings into quantified impacts on modal shift for generalised route types. This series of inputs feed into the ASTRA model that is used to translate the impacts by country grouping, trip types etc. into impacts for each Member State. A short summary of ASTRA and its suite of inputs is provided below, with more detailed descriptions on each in the following sections.

- **Route clustering**. The impacts of policy measures on modal shift are likely to be highly route-dependent, depending on factors such as geography, existing transport service offerings, and MDMS market maturity. To capture the full range of impacts expected across different routes in Europe, routes are grouped into 'clusters' to reflect these characteristics. 100 representative origin-destination (OD) routes are selected across the clusters for in-depth analysis to contextualise further analysis and substantiate existing market failures.
- **Multi Parameter Analysis (MPA) module.** This module scores the effect of policy measures for each cluster on two qualitative parameters that impact modal shift: (QP1) Completeness & accuracy of service information, and (QP2) Ability to book service offerings. It then combines these scores to generate a quantitative assessment on the progress that could be achieved towards the maximum potential modal shift due to the ability to see all rail offerings on MDMS platforms and the ability to book all visible travel options on MDMS platforms.
- **Interface module.** This module applies the outputs of the MPA module (modal shift and time saving) to matrices of OD pairs at NUTS3 level in order to prepare inputs required for the ASTRA model.
- **ASTRA model.** The model provides outputs at Member State and EU level on economic, social and environmental indicators, including external costs. The ASTRA baseline scenario has been calibrated on the PRIMES-TREMOVE model results.

Finally, the results from ASTRA are combined with assessments on other costs and benefits of implementation in a **cost-benefit analysis (CBA) module** to produce final outputs that will allow for assessment and comparison between policy options. The interaction of these elements is presented in Figure 0-1.

Figure 0-1: Overall approach for the quantitative assessment of impacts



10.2 ROUTE CLUSTERING

The methodology used to categorise routes into clusters, identify possible routes, shortlist to 100 OD pairs, their subsequent characterisation, and analysis on the differences in information available booking via independent MDMS platforms or directly through operators are presented in Market Report annex. A short summary is provided here.

The analysis of the impact of policy measures on modal shift through the MFA is structured around clusters of routes to consider the fact that policy measures may have different impacts depending on the characteristics of routes where MDMS may be deployed. In particular, it is important to capture differences between routes with complex transport choices, including multi-modal and multi-operator combinations, and those with simpler transport choices, as the latter would be expected to benefit less from improved MDMS. In addition, some policy measures only affect specific transport modes (e.g. rail operators), and/or where there is a lack of competition between MDMS operators or mode operators. At the same time, the clustering approach needs to ensure that selected clusters are representative of the scope of routes within this study (i.e. regional, national long-distance and international) for the extrapolation of results at cluster level to Member State and EU level (see Interface module for more details on the extrapolation).

Based on analysis of the policy measures and expected impacts, **the following three criteria were used to define the clusters**:

- **Member State status in terms of MDMS advancement**: this criterion ensures that we capture differentiation in the impacts of the policy measures between MSs with different levels of MDMS market maturity. MS were grouped into three categories based on the availability of platforms and the number of users (as proxied through Eurobarometer 551 findings) – Leaders, Planned Adopters, and Followers.
- **Journey type:** this criterion ensures that we capture differentiated impacts between national and international routes (including cross-border). Only inter-NUTS3 trips were considered.
- **Attractiveness of origin or destination nodes**: This criterion was selected as a proxy of the route's characteristics, availability of connections, competition between operators, and attitude of passengers, which can contribute to the differentiation of the policy measure impacts. A more attractive route (likely involving higher demand) is likely to have more transport options available and more complex choices, so there might be a higher added value of MDMS

platforms. NUTS3 regions were grouped into 'Attractive' and 'Moderately attractive'[96] based on their economic output (GDP) and touristic attractiveness (bed spaces for tourism), with routes categorised according to the combination of origin and destination NUTS3 labels.

The resulting set of route clusters is presented in Table 0-1 below.

Table 0-1: Clusters of O-D routes used in the modelling framework

Cluster ID	OD journey type	MDMS advancement (MS)	OD node attractiveness
A	National	Leader	Both attractive
B	National	Planned adopters and followers	Both attractive
C	International	At least one leader	Both attractive
D	International	Planned adopters and followers	Both attractive
E	National	Leader	Hybrid[97]
F	National	Planned adopters and followers	Hybrid
G	International	At least one leader	Hybrid
H	International	Planned adopters and followers	Hybrid
I	National	Any (leaders, planned adopters, and followers)	Both moderately attractive
J	International	Any (leaders, planned adopters, and followers)	Both moderately attractive

10.3 MULTI PARAMETER ANALYSIS (MPA)

Within the Multi Parameter Analysis (MPA), the effect of policy measures are scored on a set of identified Qualitative Parameters (QPs), which are weighted in terms of their contribution, to estimate the 'progress to maximum' achieved for each cluster. This approach is combined with a maximum modal shift and maximum change in journey time due to the ability to see all rail offerings on MDMS platforms and the ability to book all visible travel options on MDMS platforms to determine the achieved level of modal shift and journey time reductions, which are inputs to the Interface module. An overview of the MPA approach is presented first, followed by additional details on the selected key inputs and assumptions. The selection of the Qualitative Parameters is explained in section 1.3.1 and the maximum potential modal shift in section 1.3.2.

Starting with the overview of the MPA approach, an illustrative scoring example is provided below to illustrate how the MPA methodology translates the qualitative assessment of policy measures performance into modal shift potential. The example of scoring refers to Cluster A in the table below (*National, Leader, Both attractive*). Scoring is assessed on a scale of -5 (very large negative) to 5 (very large positive). For QP1 – 'Completeness & accuracy of service information' – a score of 5 would indicate that the PM results directly in a complete and accurate record of journey options across all modes of transport, for the route context considered (Cluster A in this case) relative to the baseline. A score of -5 would indicate a maximal deterioration in completeness and accuracy, or in other words a removal and/or manipulation of journey options in an MDMS platform relative to the baseline. Smaller values represent proportional impacts towards these maximum values. The rationale for each score is provided in section 10.3.4.

[96] Routes were classed as moderately attractive where they did not meet the threshold on economic output or tourism metrics.

[97] I.e. where one node is attractive, and one node is moderately attractive

PMs 9-15 were 'grouped' given that these represent combinations of definitions of market players being obligated (PMs 9-10) and the specific obligations that would apply to those market players (PM 11-15). There are synergies between the measures, meaning they should not be considered in isolation. Therefore, these PMs are grouped according to the policy options in which they apply.

In this example, the scores show that within policy measures 1-8, PM6 is expected to have a small positive impact on QP1, and PMs 1 and 3 are anticipated to positively influence QP2. Within policy measures 9-15, all Groupings are projected to have a similar effect on QP1, while Grouping 3 (PO3) is expected to have a larger impact on QP2.

Table 0-2: Example scoring of policy measures within the MPA for one cluster (cluster A)

PM ID	PM short description	QP1	QP2
PM1	Neutral display and data accuracy rules for all MDMS	+3	+2
PM2	Equal care and timelines on data, for all MDMS	1	+1
PM3	Marketing and booking data, for all MDMS	0	+1
PM4	Fair treatment of subscribers, equivalent treatment, for B2B MDMS	0	0
PM5	Remove data protection provisions, for B2B MDMS	0	0
PM6	National authority for dispute resolution, EU enforcement network	+2	+2
PM7	MDMS to share data with authorities	0	0
PM8	MDMS to display GHGs on trips	+2	0
Grouping 1	PM9, PM10, PM11 and PM12 (part of PO1)	+2	0
Grouping 2	PM9, PM10, PM11, PM12, and PM13 (part of PO2)	+3	+2
Grouping 3	PM9, PM10, PM11, PM12, PM13, and PM14 (part of PO3)	+3	+4
Grouping 4	PM9, PM10, PM11, PM12, PM13, and PM15 (part of PO4)	+3	+3

Source: own elaboration from the MPA

To determine the progress toward the maximum modal shift for each policy option (PO), the effect on progress for QP1 and QP2 is assessed separately, then combined into a single progress metric. The only differentiator between the POs is the scoring for the Groupings, since PMs 1-8 apply in all PO's. We therefore construct the progress metric from two parts: the score from PMs 1-8, and the Grouping score.

The method adopted to calculate for scores for each QP involves:

- Identifying the policy measures that are meant to impact each QP (non-zero scores[98])
- Assessing the aggregate effect of these common policy measures on the two QPs by taking the maximum the non-zero scores for PMs 1-8
- Estimating the combined effect on the QPs for each Policy Option by taking the maximum of the common policy measures score with that of the grouping of policy measures for each Policy Option. We consider synergies between PMs1-8 and the Groupings qualitatively - when discussing the performance of each Grouping on QP1/2 (see section 10.3.4 for scores and underlying logic), we provide an aggregate score with this in mind.
- Next, the weighted average impact is calculated combining the results of QP1 and QP2 with an assumed 50:50 weighting. Literature suggests that the most important parameters vary

[98] Zero scores are excluded as these policy measures are not intended to have impacts on modal shift. Their inclusion would result in the weighted average involving more zero values, which would artificially suppress the impact on modal shift.

across modes (CE Delft, 2018)[99] (KiM, 2018)[100]. Given the cross-modal nature of the analysis, and that the bundling of the factors into QPs makes it more difficult to rank them based on existing evidence (see section 10.3.1), it is suggested to remain agnostic between the two.

- This generates a single estimate of the Policy Option's potential to achieve part of the "maximum" possible modal shift.
- Finally, this impact potential is multiplied by the maximum feasible modal shift of 1.7% (see next sections for justification), resulting in the estimated modal shift achievable from implementing the policy option.

An example calculation is shown for Cluster A below. For QP1, the maximum score for PMs1-8 is 3 and the Grouping score is also 3. The maximum of these two groups of scores is therefore 3. Dividing by the maximum score (5) leads to an overall score across policy measures of 60%. A similar exercise is done for QP2, and using the 50:50 weighting to combine scores across QPs, leads to an 'progress to maximum' output of 70%. This is then multiplied by the maximum modal shift assumption (1.7%) to yield the PO impact on modal shift of 0.72%. A similar exercise is performed for changes in journey time.

Table 0-3: Example modal shift calculation in one policy option for one cluster (cluster A)

Policy option	QP1 score	QP2 score	Progress to maximum (50:50 weighting)	Maximum modal shift for the PO
PO3	60%	80%	70%	70% * 1.7% = **0.72%**

The QP scoring exercise therefore delivers a modal shift potential and a journey time reduction potential per policy option and per cluster.

Further assumptions were needed to convert this into the format required by the Interface module and ASTRA model, including the changing impact over time and how different transport modes (and their combinations) are specifically impacted by this shift.

Modal shift achievement over-time: The ASTRA model requires modal shift inputs in 5-year steps. The implementation of the policy options is assumed to start in 2028 and the impacts on modal shift are assumed to materialise starting from 2029, so the key assumption windows are in 2029, 2030, 2035, and so on.

The key point of comparison comes between PO2 (obligation to sell only, PM13) and PO3 (obligations to sell and host, PM13 and PM14). In the rail ticketing market, incumbents' platforms have a higher market share than independent platforms, with other rail operators selling the remainder corresponding to their own services. In PO3, the obligation to host will lead to a more complete offer of rail operator tickets becoming immediately available on indispensable rail platforms. Most passengers only travel domestically and already look for the tickets they need on the incumbent's platform – this is expected to have a more significant immediate impact. **In PO3, we assume that 25% of the total modal shift impact could be achieved by 2029, 50% by 2030, and 100% by 2035.**

By contrast, in PO2, there is only an obligation for operators offering 'important' tickets (incumbent + PSO + international) to sell these on indispensable independent platforms (currently selling a minority of tickets). This could enhance their market share and lead to greater comparison of available options beyond the rail incumbent, but it will take time for this to happen due to human tendencies to stick to platforms that they know (typically the indispensable rail platform). **In PO2, we assume that only 20% of the total modal shift could be achieved by 2029, 40% by 2030, 85% by 2035, and 100% by 2050.**

PO4 is assumed to follow the same temporal profile as PO2. PO4 contains the same obligation to sell as in PO2, but with the additional obligation for indispensable rail platforms to unbundle (PM15).

[99] https://cedelft.eu/wp-content/uploads/sites/2/2021/03/CE_Delft_4S52_Modal_choice_criteria_in_rail-transport_Def.pdf
[100] https://www.kimnet.nl/documenten/2018/06/21/substitutiemogelijkheden-van-luchtvaart-naar-spoor

We do not expect that the removed ability of rail incumbents to promote their own tickets would accelerate the increase in market share for alternative offerings significantly, leading to a similar profile as that assumed in PO2.

PO1 has a very different impact logic, since modal shift is stemming from fairer comparison of offerings on all MDMS platforms and obligations for large companies to adhere to new principles on distribution fees. A lower overall impact is expected through the scoring exercise, but the profile is assumed similar to PO3.

Modal shift per mode: Modal shift is interpreted as a reduction in car and aviation usage (and that of their combined use with other modes), and a corresponding increase in other collective transport options – rail and bus/coach and ferry.

The table below shows the set of assumptions defining this shift of activity between modes, distinct for each cluster, developed through expert judgement informed by current levels of transport activity as modelled with the ASTRA model and moderated through stakeholder consultation.[101] These assumptions follow some key guiding principles:

- **Driving is more common than flying for national trips**. This means that the reduction in the transport activity will be more heavily weighted towards car compared to aviation for 'National' clusters, and vice versa for 'International' clusters.
- **High-speed rail is more common between attractive locations, while in less attractive locations, rail connectivity is poorer and coach more common.** The increase in the transport activity is more weighted towards high-speed rail in 'Both attractive' clusters and less towards coach and conventional rail, and vice versa for 'Both moderately attractive' clusters.
- **No differentiation is needed by MDMS advancement.** It is assumed that Leaders and Planned adopters/Followers would experience the same changes in modal share to avoid additional complexity.

The modal shift assessment outlined previously is multiplied by these percentages within the MPA to generate the mode-specific modal shift, by cluster and model year.

Table 0-4: Share of modal shift attributed to each mode[102]

Mode	Cluster									
	A	B	C	D	E	F	G	H	I	J
car	-95%	-95%	-37%	-37%	-95%	-95%	-37%	-37%	-95%	-37%
rail conv[103]	37%	37%	37%	37%	43%	43%	43%	43%	43%	43%
rail HS[104]	19%	19%	19%	19%	15%	15%	15%	15%	8%	8%
coach	24%	24%	24%	24%	23%	23%	23%	23%	26%	26%
air	-5%	-5%	-63%	-63%	-5%	-5%	-63%	-63%	-5%	-63%
ferry	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%
air+rail	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%

[101] As part of a workshop on modal shift, attended by Member State authorities, consumer organisations, and academic experts (see Stakeholder Consultation report), experts were presented with expected directional impacts by mode from each of the policy measures. Stakeholders commented that they would not expect the increase in high-speed rail to be so high given current capacity limitations. We therefore moderated the increase in high-speed rail from the share expected in ASTRA.

[102] To clarify

[103] Conventional rail

[104] High-speed rail

Mode	Cluster									
	A	B	C	D	E	F	G	H	I	J
rail+coach	10%	10%	10%	10%	10%	10%	10%	10%	14%	14%
air+coach	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
rail+ferry	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%
coach+ferry	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%
car+ferry	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
air+ferry	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%

Source: own elaboration from the MPA model, using ASTRA inputs and informed by stakeholder consultation

In the following sections we present in more detail:

- The selection of parameters for the MPA
- The assessment of the maximum modal shift potential
- The logic for scoring the QPs

10.3.1 Selection of parameters for the MPA

The QPs selected to be included in the MPA have to be the most relevant parameters that represent the way in which the policy intervention may affect passengers' modal choice.

A key first step to the MPA was therefore to identify and select the QPs that (a) contribute to modal shift, and (b) are expected to change following introduction of the proposed policy measures.

Modal choice is a complex decision, and a large range of factors are acknowledged to affect this. Moreover, these impacts must be evaluated for each PM/Cluster combination (15*10 = 150 scores). Therefore, to maintain a manageable scale to this analysis, no more than 2 qualitative parameters could be considered for the eventual analysis.

The following approach was therefore taken to identify, shortlist and group these factors. These steps are elaborated in the below sections.

- Longlist of factors affecting modal choice
- Screen longlisted factors for relevance to expected PM impacts
- Rank factors by importance in the travel decisions of EU passengers
- Group most important factors into a set of 2 QPs

10.3.1.1 Factor longlist and screening for PM relevance

The most cited factors affecting modal choice in relevant literature, mirroring those asked to consumers as part of Flash Eurobarometer 551, are listed in Table 0-5 below.

We screened the parameters affecting modal choice against the PMs to identify the ones most likely to be impacted by the policy intervention. This screening was performed as a preliminary assessment to identify the most relevant parameters to include in the analysis and eliminate irrelevant parameters and was not intended to be an exhaustive assessment.

Table 0-5: Screening of factors affecting modal choice based on a preliminary assessment of the expected impact of the policy measures (PMs)

Factors affecting modal choice	Definition	Relevant PMs (preliminary assessment)	Justification
Travel Time	The time spent for the entire door-to-door travel	Direct: PM11-15 Indirect: PM1-4	Specific obligations to prevent restrictive agreements (PM11-12) or enter agreements with willing counterparts (PM13-15) could lead to options being made available to consumers that may have lower total travel times. Fair treatment in B2B data sharing (PM1-4) could also indirectly lead to more options being made available to consumers.
Reliability	How closely the actual service matches the route timetable	Indirect: PM6, PM11-15	Policies promoting fair competition between MDMS platforms and operators (PM11-15) and related enforcement (PM6) could indirectly lead to improved accuracy of advance planning and real-time information provided to consumers.
Accessibility	The degree to which public transport is reasonably available to as many people as possible	Indirect: PM7	PM7 could enable public authorities to support the optimization of transport planning and enhance access to more consumers.
Price	The monetary cost of travel	Direct: PM11-15 Indirect: all	Prevention of highly restrictive clauses (PM11-12) and obligations to sell/host (PM13-15) could allow smaller or new entrant operators with cheaper offers to display on more platforms (prohibition of exclusivity) and/or reduce the costs operators face in being displayed on MDMS platforms, with cost savings potentially passed onto consumers. Other new costs of regulatory compliance could also be passed on.
Frequency	How often the service operates during a given period	Indirect: PM13-14	No direct effect is anticipated on the frequency of services offered by one operator (the traditional interpretation of frequency). However, obligations to sell or host (PM13-14) may increase the *perceived* number of transport options available to consumers in one place by facilitating access to offerings across modes and across operators.
Information Provision	How much information is provided about routes and interchanges	Direct: PM8, PM13-14 Indirect: PM1-4, PM11-12	Mandating display of GHG/CO2 emissions data (PM8) adds additional trip-related information that may otherwise not be available to consumers. Likewise, obligations for rail operators to sell tickets via MDMS (PM13) or MDMS platforms to enable ticket sales from all operators (PM14) will increase information availability on relevant routes. Removal of highly restrictive clauses could increase information on formerly restricted operators (PM11-12), while policies impacting B2B data accuracy transfer (PM1-4) could allow businesses to see more journey information, which they could pass onto end consumers.

Factors affecting modal choice	Definition	Relevant PMs (preliminary assessment)	Justification
Ease of Transfers /Interchanges	How simple transport connections are, including time spent waiting	Indirect: PM11-14	Specific obligations to prevent restrictive agreements (PM11-12) or enter agreements with willing counterparts (PM13-14) could lead to identification of alternative operator options that could simplify connections or reduce time spent waiting.
Vehicle Condition	The physical and mechanical condition of vehicles	N/A	The policies do not address vehicle maintenance or quality.
Comfort	How comfortable the journey is regarding noise levels, air conditioning, etc.	N/A	The policies do not address passenger comfort.
Safety	How safe from traffic accidents passengers feel during the journey as well as personal safety	N/A	The policies do not directly address passenger safety. However, they could have an indirect impact on passenger safety through changes in transport activity.
Convenience	How simple the transport service is to use and how well it adds to one's ease of mobility	Direct: PM1, PM7, PM13, PM14	Interpreting this factor to include the ease of booking and availability of travel information underway, specific obligations to prevent restrictive agreements (PM11-12) or enter agreements with willing counterparts (PM13-14) enable consumers to purchase tickets from a wider range of operators on a wider range of platforms, selecting the combination which is most convenient for them.
Aesthetics	Appeal of vehicles, stations, and waiting areas to users' senses	N/A	The policies do not influence the visual appeal, cleanliness, or design of transport facilities.

Sources: Factors affecting modal shift and definitions – Flash Eurobarometer 551, (Redman et al., 2013)[105], (CE Delft, 2018)[106]. *Relevant PMs and justifications - Ricardo analysis.*

[105] https://www.sciencedirect.com/science/article/abs/pii/S0967070X12001692?via%3Dihub

[106] https://cedelft.eu/wp-content/uploads/sites/2/2021/03/CE_Delft_4S52_Modal_choice_criteria_in_rail-transport_Def.pdf

10.3.1.2 Ranking of screened factors by importance for passengers

Taking the screened parameters affecting modal choice, we evaluated the results of Flash Eurobarometer 551 to reveal the level of importance that EU travellers assign to each factor, where response wording could be aligned to the factor in question. Questions 7, 11, and 14 of the Flash Eurobarometer 551 were deemed most relevant given that they address the barriers consumers face to greater use of multimodal solutions: booking online, booking multiple transport modes, or combining two or more rail legs, for each question respectively. The policy measures can be seen to overcome some of these barriers.

A mapping of parameters against their stated importance in the Eurobarometer survey (as indicated through the frequency of responses) is shown in the table below. Table 0-6: includes the distribution of all possible responses (excluding “Don’t know”)

In cases where responses could be aligned to multiple factors affecting modal choice, the second factor is mentioned in italics.

Table 0-6: Mapping of factors affecting modal choice against responses to Flash Eurobarometer 551 (top responses highlighted in orange)

Factors affecting modal choice	Ranking (frequency of responses as % of total) – '*specific response text*'		
	Barriers to booking online (Q7)	Barriers to combining different collective transport modes and transport operators within one mode (Q11)	Barriers to combining two or more rail legs, operated by different rail operators (Q14)
Travel Time	N/A	2nd (22%) - "The journey would have taken too long"	2nd (19%) - "The journey would have taken too long"
Reliability	N/A	N/A	N/A
Accessibility	N/A	6th (6%) – "I never thought about it, did not know it was possible" 7th (4%) - "I did not know where to search for such travel information" *[possible overlaps w/ Convenience & Information Provision]*	6th (7%) – "I did not know where to search for such travel information" 7th (6%) - "I never thought about it, did not know it was possible" *[possible overlaps w/ Convenience & Information Provision]*
Price	2nd (19%) – "Concerns about hidden costs" 5th (14%) "Concerns about the availability of all fares, including special offers" *[possible overlap w/ Information Provision]*	3rd (17%) – "It would have been more expensive"	5th (13%)– "It would have been more expensive"
Frequency	N/A	N/A	N/A
Information Provision	4th (14%) - "Concerns about completeness of information provided online" 8th (10%) - "Concerns about availability of all alternative travel options"	4th (14%) – "I could not find a suitable combination" *[possible overlap with Frequency]* 9th (2%) – "It would have been less environmentally friendly"	3rd (15%) – "I could not find a suitable combination" *[possible overlap with Frequency]*
Ease of Transfers/Interchanges	N/A	5th (12%) – "I did not want to buy several separate tickets and risk being stranded if I miss a connection" *[possible overlap w/ Reliability]*	4th (13%) – "I did not want to buy several separate tickets and risk being stranded if I miss a connection" *[possible overlap w/ Reliability]*
Convenience	7th (11%) "Websites or apps to book journeys are difficult to use"	8th (4%) - "I could not buy all the tickets I needed in one place"	8th (6%) - "I could not buy all the tickets I needed in one place"
Other	1st (36%) – "None of these" 3rd (15%) "Concerns that it may not be easy to reach a customer support service online" 6th (14%) "concerns about protection of personal information provided during the online booking process".	1st (29%) – "It was not needed (one transport service/operator brought me to my destination)" 10th (8%) – "Other"	1st (42%) – "It was not needed (one rail operator brought me to my destination" 9th (5%) – "Other"

Source: Flash Eurobarometer 551, Ricardo analysis

Note: Excludes "Don't know" responses

The following conclusions take Table 0-6 as reference (responses excluding "Don't know" only).

Results across all assessed Eurobarometer questions (7, 11, 14) reveal that Travel Time, Price and Information Provision were seen as the most important factors preventing further use of multimodal solutions. Travel Time and Price were the most cited barriers by respondents, appearing regularly in the top three barriers (excluding responses such as "it was not needed", or "none of these"). Travel Time was seen as a barrier for 19-22% of respondents, while Price was a barrier for slightly fewer (13-19%). Responses aligned to the level of Information Provision were close behind, as the top 3rd or 4th common answer representing 14-15% of travellers depending on the question.

Regarding Travel Time and Price, the initiatives impact on these factors are best treated on a quantitative basis and directly as inputs to the ASTRA model. This is the case specifically for Travel Time as elaborated in the ASTRA model assumptions description. Price impacts are however not considered as inputs to the modelling of modal shift. This is because:

- Only limited number of OD pairs provided possible price savings (23/100 compared to 31/100 for time savings) indicating a limited potential for consistently yielding price benefits
- Price benefits were often presented as a trade-off to more significant travel time benefits, suggesting that are often considered as a trade-off in passengers' journey decisions. In many cases, more modal options will not lead to simultaneous improvements in Travel Time and Price - for example, traveling direct by air or high-speed train is sometimes faster than driving or taking a combination of other land-based collective modes (e.g. rail, coach) but often comes at additional expense. Each route displays unique trade-offs for each passenger given their willingness to spend money to reduce travel time, layered on the existing availability of mode combinations for each route. The role of MDMS platforms in facilitating Price improvements could operate through two main channels: (a) making passengers aware of cheaper options within the same mode, or (b) making passengers aware of cheaper options in other modes or mode combinations. Only the latter would result in modal shift if it was sufficient to change passenger decisions, and does not intrinsically reduce ticket prices within-mode, only through the transfer of transport activity from one mode to another. We therefore consider impacts on journey time within the ASTRA model, and investigate changes in user costs through looking at changes in average expenditure per person for interurban mobility resulting from the modal shift . We therefore don't consider Travel Time or Price further as one of the qualitative parameters introduced in the MPA.

Ease of Transfers/Interchanges was the next most common barrier to multimodal travel, closely linked to **Reliability**. The response "I did not want to buy several separate tickets and risk being stranded if I miss a connection" was the 5th most common barrier cited to multimodal travel and 4th for rail-rail travel. The survey results suggests that it is a barrier that about 13% of travellers face. Fears of a missed connection could be motivated by short connections (aligning to Ease of Transfers/Interchanges) and/or delays to prior legs (aligning more to Reliability). Therefore, both are retained for further consideration.

Convenience, including ease of booking, was a relatively less important barrier to booking online and/or booking multimodal travel. Only 4-11% of travellers feel this is a barrier. However, given the importance of this factor as assessed in literature for the rail sector – see for example (CE Delft, 2018) - and its relevance to the policy measures, we retain it for further consideration.

Likewise, **Accessibility** was identified as a barrier of relatively lower importance (4-7% of respondents). The response "I did not know where to search for such travel information" was attributed to Accessibility but could just as easily have been attributed to Information Provision or Convenience given that it relates to the ease of accessing *information,* rather than the availability of the transport service itself. This factor was discarded in isolation given its lower importance, in favour of the other linked factors.

10.3.1.3 Grouping of factors into qualitative parameters (QPs)

Given the practical need to limit the parameters used, two QPs are taken forward to the MPA, which are presented in Table 0-7 below with justifications. These aim to distinguish the quantity and quality of

information provide on MDMS platforms (QP1) from the ability to access and book offerings based on that information (QP2). As explained earlier, the weighting between these two QPs is equal in the MPA.

Table 0-7: Qualitative Parameters (QPs) selected for use in the MFA

Qualitative parameter	Indicator	Elaboration
QP1: Completeness & accuracy of service information.	The degree to which all offerings are possible to see on an MDMS platform and that such information accurately reflects real-world operations.	This QP is linked to **Information Provision** as a parameter addressing both the completeness and accuracy of information provided to consumers on MDMS platforms. This can have an impact on modal choice.
QP2: Ability to book service offerings.	The degree to which consumers can book any convenient multimodal travel options that are visible on an MDMS platform.	This QP relates to **Convenience** in giving consumers the ability to book from more operators through a single MDMS platform. (This is also less closely linked to **Ease of Transfer/Interchanges** and **Reliability** in creating the ability to book journeys with lower waiting times and/or lower risk of missed connections.)

10.3.2 Maximum potential modal shift

The assessment of the modal shift potential for each policy option is crucial for the assessment of the impacts each Policy Option is expected to deliver. In specific, the modal shift achieved towards more sustainable modes of transport[107] is one of the most important determinants of level of benefits the initiative would be expected to deliver. Amongst others, it is expected to define also the level of external cost savings from a transition towards more sustainable modes of transport. Therefore, it is important to base the impact assessment on well justified and, to the extent possible, robust assumptions on the maximum level of expected modal shift.

It should be emphasised that the assumption outlined below refers to the **maximum modal shift potential (upper bound impact) due to the ability to see all offerings on an MDMS platform[108] and the ability to book all visible travel options on an MDMS platform,** relative to the baseline. This maximum is based on the results of the Flash Eurobarometer 551, explained further below. The maximum is then discounted for each policy option accounting for the bottom-up scoring of the policy measures performance via the multi-parameter analysis (MPA).

10.3.2.1 Evidence collection approach

With this imperative in mind and understanding the lack of directly comparable policies previously implemented, our approach to define the potential modal shift has relied on a number of alternative resources. These included seeking for relevant inputs and evidence via the following channels:

1. **Literature review** – identifying sources assessing the potential impact from existing or theorised implementation of similar measures.
2. **Targeted survey and interviews** – Inquiring for stakeholder views and potential evidence on the achievable modal shift due to the ability to see all offerings on an MDMS platform (and such information is complete and accurate) and the ability to book all visible travel options on an MDMS platform.

[107] For the purposes of this analysis we consider modal shift to be defined as a shift from air and road transport to other collective modes of transport.

[108] Providing such information is complete and accurate

3. **Expert workshop** – Surveying a group of multimodal digital mobility services experts for their expert judgement on the modal shift potential implementing a two-stage assessment approach to encourage discussion and pursue a convergence in views.
4. **Eurobarometer survey** – providing evidence on the potential of the examined initiatives to affect passenger behaviour.
5. **Open stakeholder workshop** – Used to validate the modal shift input assumptions developed from the previous inputs and the resulting outputs from the MPA.

The literature review (1) and targeted surveys and interviews (2) did not provide sufficient inputs by themselves to generate a robust assumption on the potential for modal shift related to the ability to see all offerings on an MDMS platform (and such information is complete and accurate) and the ability to book all visible travel options on an MDMS platform. On (1), literature assessed the modal shift potential of introducing high-speed rail (HSR)[109], demand-responsive transport (DRT)[110] or Mobility-as-a-Service (MaaS) [111] in urban settings, but none of these inputs were seen as applicable or appropriate to the cross-modal and inter-urban setting of these initiatives. On (2), stakeholders were able to provide qualitative assessments on the direction of travel for modal shift, but not a specific quantitative estimate (see separate Stakeholder Consultation report). It was therefore not possible to confirm the results described below with these inputs.

Therefore, presented below is only the core evidence feeding into the final estimate, namely from the Expert workshop (3), the Eurobarometer survey (4), and the Third open stakeholder workshop (5). .

10.3.2.2 Expert workshop

A small group of Member State representatives, travel experts and consumer organisations were invited to participate in a Delphi-like approach. Participants were requested to complete a six-question survey before the workshop, the results were presented back to the attendees during the workshop, and a round of discussions was held on the results.

A survey was taken via Mentimeter at the end of the workshop to gather the revised views of attendees on the maximum potential for modal shift due to ability to see all offerings on an MDMS platform (and such information is complete and accurate) and the ability to book all visible travel options on an MDMS platform. The questions and results are shown below.

"For each of the four clusters, in your view what is the **maximum possible impact on modal shift** that could arise compared to the current situation if passengers were given:

1. the ability to see all offerings on an MDMS platform, and such information is complete and accurate (assuming no changes in ability to book all visible travel options)? **(QP1)**
2. the ability to book all visible travel options on an MDMS platform (assuming that the level of information on the platform remains the same as it is currently)? **(QP2)**
3. A combination of (1) and (2) above, meaning (i) complete and accurate information and (ii) the ability to book all visible travel options, on an MDMS platform? **(QP1+QP2)**"

Table 0-8: Results of the Mentimeter poll taken during the impact workshop

Response options	Number of responses		
	Q1	Q2	Q3
Very high impact (>10%)	2	0	1

[109] E.g. https://transweb.sjsu.edu/sites/default/files/1223-modal-shift-high-speed-rail-literature-review.pdf

[110] E.g.https://www.transport.gov.scot/publication/strategic-business-case-transport-appraisal-report-draft-appendix-c-preliminary-appraisal-summary-tables-a96-corridor-review/preliminary-appraisal-summary-table-investment-in-demand-responsive-transport-and-mobility-as-a-service/

[111] E.g. https://www.itf-oecd.org/sites/default/files/docs/integrating-public-transport-maas.pdf

Response options	Number of responses		
	Q1	Q2	Q3
High impact (5-10%)	3	3	3
Moderate impact (2-5%)	6	4	2
Low impact (0-2%)	0	2	0
No impact (0%)	0	0	0
Negative impact (-%)	0	0	0
Total responses	11	9	6
Weighted average modal shift*	**5.8%**	**4.3%**	**6.6%**

**Note: Calculated by taking the midpoint of each range of modal shift options as laid out in the response options. For 'Very high impact (>10%)', this was assumed at 10% as a conservative estimate.*

Based on the discussions in the workshop, these figures were interpreted to represent a midpoint of the instances where potential for modal shift could be very high and very low, with the range corresponding to our route clustering criteria (see section 10.2). For example, relating to Q1, stakeholders noted that potential for modal shift would be much higher on routes where travel time is more competitive between rail and air, but for whatever reason people are not finding the competitive train options. By contrast, on routes where very long distances are involved and air is the only convenient option, the potential for shift to rail would be much lower or zero. Overall, the potential for modal shift seems to be higher for addressing QP1 than from QP2. When combined, the impact is somewhat higher but not fully additive.

As regards the robustness of these results, the workshop was attended by approximately 20 Member State experts and a couple of multimodal transport experts, however only a maximum of 11 voted in the survey. Due to the anonymous nature of the survey and the low number of participants, these results cannot be regarded as representative but provided an indication of the likely magnitude of the modal shift potential. Moreover, participants indicated the well-documented difficulty to derive a modal shift potential linked to the ability to see all offerings on an MDMS platform (and such information is complete and accurate) and the ability to book all visible travel options on an MDMS platform, since there has been little relevant application of similar initiatives that could be useful to deduct lessons. The study team identifies however consistency between the expert discussion and the voting of the topic experts concluding on an average modal shift potential of around 5% to more sustainable transport modes. This represents a 5% increase in the number of journeys performed by rail and coach at the expense of aviation and private car.

10.3.2.3 Eurobarometer findings

To complement the views of experts, the results of the Flash Eurobarometer #551 survey provides, through the analysis of responses to certain questions, an understanding of the potential magnitude of expected impacts. In specific, it identifies that:

- While the majority of passengers (76%) book tickets online, only a minority of them (26%) do so after comparing travel options and prices (Question 6)
- Costs (61%) and travel duration (47%) are the most important factors and while the initiative will not directly affect these, it might indirectly affect the perception of these as a more complete availability of travel information may unveil better travel options to passengers. The ease of finding travel options (17%) and ease of booking tickets (16%) are considered relatively important factors when planning regional and long-distance trips. These can be directly improved by the policy measures introduced (Question 3).
- Amongst the most important factors deterring passengers from booking tickets online, are: the completeness of information (14%), the availability of all relevant fares (14%) and the ease of

booking via websites and apps (10%). As mentioned earlier, these are factors the initiative is intending to affect (Question 7).

As per the analysis of the examined policy measures, the main potential of the initiative would be to improve for potential passengers the completeness of information and their ability to book tickets[112] on MDMS platforms. From the above, it can be derived, that the initiative can assist in delivering an improvement in certain factors considered relevant for planning regional and long-distance trips. Moreover, the last point showcases that improving the completeness & accuracy of service information and the ability to book service offerings may remove the barrier to using more sustainable mobility options for a certain portion of EU passengers.

Looking at the responses to the Eurobarometer Question 11[113] (Q11) above, it can be derived that a full removal of these barriers could induce more multi-modal, multi-operator trips for a certain share of transport users. These responses to Q11 refer to a subset of the total surveyed, as:

- the question is addressed to respondents that already indicated in earlier questions that they never or rarely combine different collective modes and never or rarely combined different transport operators within one mode (Q8).
- respondents indicating that they did not need relevant transport options were excluded from the assessment of the barriers.

Taking this into account, we recalculate the percentage of all respondents (transport users) that cited these barriers:

- inability to find suitable combinations (5.7%);
- lack of knowledge of relevant possibility (2.3%);
- lack of knowledge of where to search for such information (1.8%);
- **inability to buy all tickets in one place (1.7%).**

These shares are not to be seen as being necessarily cumulative as multiple response were possible in Q11. Nevertheless, very few respondents combined these answers (for example, someone who didn't even know it was possible is unlikely to cite one of the other barriers) and the percentage of travellers that cited at least one of these barriers is 8.8%. Still, translating this to a modal shift potential is not a straightforward exercise due to a number of limitations to this dataset:

- The identification of a barrier by a transport user through the Eurobarometer survey is only a stated issue and does not mean that these transport users do not already use sustainable transport modes for these trips, or that dealing with these barriers would be sufficient for all of them to shift to more sustainable modes of transport.
- A share of users hindered to book such a trip, does not mean the same share of transport activity would potentially shift to more sustainable modes if the barriers were lifted. It might well be the case that these barriers apply to trips performed less frequently by transport users.
    - Q11 is presented only to respondents indicating they rarely or never book multi-modal nor multi-operator journeys. This does not mean that other respondents would not be more prone to shift to more sustainable transport modes, even for some trips only, in the event that these barriers are lifted. In fact, this analysis excludes this large group entirely from the modal shift potential, whilst it is fair to assume that some of them would also contribute to the actual modal shift.

Acknowledging these limitations, and to be conservative, only the transport users citing an inability to buy all the tickets in one place were taken as having the potential to shift to other modes, as one might assume they indeed wanted to buy the tickets. **Thus, a 1.7% modal shift assumption was adopted as a ceiling for the potential of the Policy Options examined, which should be interpreted as a**

[112] See Policy Measures description and intervention logic

[113] Question 11 text in Flash Eurobarometer 551: "Why have you never or rarely booked journeys combining different collective transport modes and journeys combining different transport operators within one mode to reach your final destination? [MULTIPLE ANSWERS]"

1.7% increase in journeys performed via more sustainable modes and a corresponding decrease in less sustainable modes[114]. These results are more conservative than (a) the responses received on Q14[115] in the Eurobarometer survey, indicating that the total percentage of travellers whose barriers could be removed is 8.8%, and (b) the indicative magnitude resulting from the expert workshop (around 5%), outlined in the previous section.

10.3.2.4 Open stakeholder consultation workshop

The modal shift ceiling outlined above (1.7%), and the expected effectiveness of the POs in achieving the modal shift ceiling through their impact on the qualitative parameters (presented in Section 10.3.5) were shown for validation in the third open stakeholder workshop, emphasising the interpretation stated above (that this relates to a percentage increase in journeys performed via sustainable modes of transport). This workshop was held on 12th June 2025 and attended by 108 individuals excluding the study team, with representatives from transport operators across all modes, MDMS platforms, Member State officials, consumer organisations, and academics.

Broadly there was agreement from stakeholders who participated in the workshop on these inputs, as indicated through a series of Mentimeter polls**.**

- In a first question, attendees were asked on their views of the modal shift 'ceiling' at 1.7%. Around two-thirds of attendees responded (66 out of 108, or 61%), with similar numbers indicating the number was too high (24 out of 66, or 36%) and too low (27, or 41%), and the remainder indicating it was about right (15, or 23%). On balance, the study team interpreted this estimate as the rough midpoint of stakeholder expectations.
- In a second question, attendees were asked to indicate whether the assessed effectiveness of the POs in achieving the modal shift ceiling was in line with their expectations. A scale was provided for each policy option from 1 to 3, where 1 indicates the expected modal shift was too low and 3 too high. Around half of attendees replied to the questions (49 out of 108, or 45%). Average scores were 2.1 for PO1 and 1.9 for PO2[116], indicating that on average attendees agreed with the assessment. Average scores for PO3 and PO4 were both 2.4, indicating that on average respondents thought the assessed modal shift was somewhat too high. At the same time the response rate was weaker than for question 1 indicating more uncertainty among attendees on this question.

The takeaways from this workshop were that the modal shift ceiling is in line with expectations, but that there is more uncertainty on the policy options also noting the weaker response rate. Sensitivity analysis is further performed to address the uncertainty.

10.3.3 Maximum potential change in journey time

The 100 OD Pairs that are represented by the route clusters were analysed more closely to understand what journey times are possible to see via two distinct booking mechanisms, listed below. The comparison between these two channels informed the maximum possible reduction in journey times.

1. **Booking via MDMS (proxy – Omio)**: to understand what is currently possible via MDMS platforms, Omio was selected as an advanced EU-wide MDMS platform that allows users to book tickets directly within the platform. Omio only provides options for within-mode travel (e.g. rail-rail connections or bus-bus connection, multi-modal connections not included). Other EU-wide platforms like Rome2Rio only provide re-linking functionality and do not allow tickets to be booked directly on the platform. Each MDMS platform therefore has some limitations compared to an 'optimal' ticketing solution, but Omio was selected to facilitate a comparison on the prices offered by operators on direct ticket sales channels and on MDMS platforms. In particular, we note that Omio is less comprehensive in its air offers compared to other flight-specific meta-search engines (MSEs) like Skyscanner, or Online Travel Agents (OTAs) such as Etraveli.

[114] For the purposes of this analysis we consider modal shift to be defined as a shift from air and road transport to other collective modes of transport.

[115] Question 14 text in Flash Eurobarometer 551: "Why have you never or rarely booked any journeys where you combined two or more rail legs, operated by different rail operators? [MULTIPLE ANSWERS]"

[116] Mentimeter calculates the average score of all responses as a simple arithmetic mean of each individual response (1,2,or 3).

2. **Booking directly via operators (proxy – Google Maps and other direct research)**: to understand what is theoretically possible if an MDMS platform were to have access to tickets available from all transport operators, Google Maps was used to list all possible within-mode and multi-modal connections possible via land and sea and their associated journey times. Costs for these connections were collected by direct research on the websites of relevant operators. Advance tickets were researched to limit pricing volatility, since operators often employ different practices to raise ticket prices closer to the travel date[117]. This was supplemented by additional information from Google Flights on possible direct air connections and their associated journey times/costs.

This analysis assumed **travel from city centre to city centre**. Rail and bus connections therefore start and end with an appropriate station within the city convenient for passenger travel, rather than a specific alternative location (for example the home of a passenger, which will vary for each individual). By contrast, flight connections require travel to/from the airport since these are often located outside the city centre. The analysis also considers **time in transit only, and only for major connections**. This includes time spent in the vehicle on the main intercity legs (>10 mins) and time spent waiting between connections at the transit terminal, but does not include short intra-city connections (<10 mins) for walks, trams, metros or similar.

The results are shown in the table below.

Table 0-9: Maximum potential change in journey time resulting from the 100 OD pair analysis

Cluster		Maximum time change
A	National, Leader, Both attractive	-8.3%
B	National, Planned adopter/follower, Both attractive	-2.1%
C	International, At least one leader, Both attractive	-8.5%
D	International, Planned adopters/followers, Both attractive	-5.5%
E	National, Leader, Hybrid	-7.8%
F	National, Planned adopter/follower, Hybrid	-5.4%
G	International, At least one leader, Hybrid	-5.9%
H	International, Planned adopters/followers, Hybrid	-5.9%
I	National, Any, Both moderately attractive	-5.1%
J	International, Any, Both moderately attractive	-9.2%

10.3.4 MPA scoring logic

As noted previously, the model shift input to ASTRA is estimated by combining a maximum potential modal shift (described in the previous section) with a 'progress to maximum' assessment. The latter is derived by allocating a qualitative score to what each PO is expected to achieve in each cluster, separately for each qualitative parameter (QP). This section describes the logic of how these qualitative scores were allocated.

The logic relies on expert judgements, developed through theoretical application of the intervention logic of the policy measures to each route cluster, leaning also on insights gained from stakeholder consultation. In general, a range of expected scores are laid out for each PM/QP combination on a scale of -5 to +5, where positive values represent improvements relative to the baseline, and likewise

[117] Research was undertaken in May/June 2025 for travel tickets dated Wednesday 17th September (3-4 months in advance), with journeys starting at 06:00am. Some operators do not allow tickets to be purchased this far in advance. Therefore, if September tickets could not be seen, as a lower priority tickets dated Wednesday 16th July were logged.

negative scores indicate deteriorations in the QP relative to the baseline. One category within each clustering criterion is identified as highest impact (e.g. national within criterion 'journey type'). The cluster with all three of the highest impact criteria would be assigned the maximum score within the range (E.g. Cluster A: National, Both attractive, Leader), and vice versa in the cluster with all of the lowest impact criteria (E.g. Cluster J: International, Both moderately attractive, Both Planned adopters/followers). The resulting output is a score for each PM/Cluster/QP combination, which underpins the PO level.

This logic is summarised in the table below. Policy measures (PMs) 1-8 are addressed independently. **PMs 9-15 are grouped by policy option**, since these involve interactions between the definition of the specific obligations and stakeholder groups that are being obligated. Grouping 1 corresponds to measures applying in Policy Option (PO) 1, Grouping 2 corresponds to PO2 etc.

No	Policy measure	Logic for impact on QPs
PM1	Obligation for **all MDMS platforms** to apply neutral display obligations and **for transport operators (in all modes)** to ensure that the data they submit are accurate	**QP1: Completeness and accuracy of info** Direction of impact expected to be **neutral or positive**: Neutral display obligations would ensure that any operators listed on MDMS would be shown to consumers in a neutral and unbiased way. This is seen as particularly important for indispensable RU platforms and tend to favour high-volume operators, who have greater incentives to display their own services, but it will also have impacts on the third-party platforms who are not currently obligated to display options neutrally. The experience from introducing the CRS Code of Conduct was highly positive: travel agents and consumers gained access to a more comprehensive and unbiased view of available flights across multiple airlines, not just those of the airline affiliated with the CRS. This increased transparency and neutrality made it easier to compare options effectively based on established ranking criteria. If one operator were preferentially displayed over another on B2B platforms, it may prevent the travel agent to choose the travel option which is the best according to the criteria requested by the consumer as it can believe another operator may not provide services on the route. Likewise, on B2C platforms the consumer may not be able to see an operator's service best suited to their direct request. Impact scores could range from **+1 to +2**: **Journey type**: evidence of self-preferencing originates mostly from countries with large dominant RUs - transport operators have cited the example of DB in Germany acting as the dominant MDMS platform and limiting Flixtrain ticket display - suggesting that *National* routes may experience greater impacts from neutral display obligations. *International* routes are served both by third-party, country-agnostic platforms and nationally focused platforms such as SNCF Connect and DB Navigator. There is still the potential, in the absence of regulation, for third-party platforms to perform paid prominence but this biased ranking needs to be clearly indicated to end-users. **Attractiveness**: Impacts are expected to be largest where there are more alternative operators that are not being displayed fairly, which is more likely on high traffic routes (*Both attractive*). Most of the OD routes within the relevant clusters are accessible by more than one mode (typically bus and rail), meaning that impacts would be non-zero even on routes that are *Less attractive*. **MDMS advancement**: Impacts are expected to be largest where there is greatest scope for preferential treatment on MDMS platforms, in particular for indispensable RU platforms (one industry association and 3 transport operators, noted that transport operator-owned MDMS platforms often serve as a national mobility platform which disadvantages new market entrants). It is therefore expected to observe a greater impact on *Leader* Member State, where more MDMS platforms are developped and the platforms' user base is higher than the EU average. Impacts would be smaller where Member States have no rail indispensable platform or fewer or no MDMS platforms (*Planned Adopter/Follower*). **Overall assessment**: The maximum positive impact is capped at +2 because this only improves the ability of a consumer to **fairly compare transport options**, rather than encouraging more options to be displayed on platforms. The minimum impact is assessed at +1 because long, complex routes which are only possible to be performed by air would still be covered by B2B MDMS, including those who are not CRS's, and would fall under neutral display obligations when the Regulation is in place. **QP2: Ability to book** Direction of impact expected to be **positive**:

No	Policy measure	Logic for impact on QPs
		In the baseline there is evidence of preferential treatment by MDMS and indispensable railway undertaking platforms when choosing what information will be shared or promoted at different ticket distribution platforms (see Problem Definition section). A limited level of progress in preferential treatment is expected going forward (see Baseline section). This PM could make it easier to see offerings of operators that are not affiliated with the MDMS platform and therefore do not experience preferential treatment, making it easier for passengers to book those offerings. Impact scores could range from **0 and +1**: differentiation by cluster is considered consistent with QP1.
PM2	Obligation for **all MDMS platforms** to load and process data of operators with equal care and timeliness	**QP1: Completeness and Accuracy of Info** Direction of impact expected to be **neutral or slightly positive:** While this measure promotes fairness in backend data handling (e.g., timelines and care in processing data from all operators), the improvement is not necessarily visible to users. Passengers are unlikely to perceive a major difference in the accuracy or completeness of travel options. However, there is a potential for this to improve real-time information availability for consumers where delays in process data could cause the availability of services from one operator not to be shown, or to be shown later compared to another operator. Impact scores could range from **0 to +1**: differentiation by cluster consistent with PM1, omitted for brevity. **QP2: Ability to Book** Direction of impact expected to be **neutral or slightly positive:** While this policy measure will avoid preferential treatment to legacy and/or incumbent transport operators by MDMS platforms in terms of equal care and timelines, it is not considered to have a significant impact on the ability for users to book transport tickets. It is possible that it could have a partial positive impact on alternative options being made visible earlier and more consistently, however, actual booking functionality may be constrained if the MDMS does not have booking agreements in place with all operators. Impact scores could range from **0 to +1**: differentiation by cluster consistent with PM1, omitted for brevity.
PM3	Obligation for **all MDMS platforms** to share marketing and booking data in a fair way, when requested by transport operators	**QP1: Completeness and Accuracy of Info** Direction of impact expected to be **neutral:** This policy concerns how booking and marketing data is used or shared, rather than how passenger data is presented or displayed. It is therefore not considered to have a direct impact on the completeness or accuracy of the travel options shown to passengers. Impact scores would be **0**: for the reasons above. **QP2: Ability to Book** Direction of impact expected to be **indirectly positive:** Marketing and booking data can be used to identify customers purchasing decisions and preferences, and gives operators access to important facts like location, destination and booking history to enable more effective marketing practices. This means that it could be used by businesses to provide personalised services, improve services based on demand or develop a more user-centric booking option overtime, (i.e., MDMS platforms could test out different booking options and use this data to streamline more popular selections). Due to the potential of this data to improve the booking process, it is possible that there may be an indirect positive impact on the ability of consumers to book. The impact score for this measure could range between **0 and +1:**

No	Policy measure	Logic for impact on QPs
		Journey type: International journey types may benefit more from aggregated data, especially on more complex multimodal or cross-border journeys, however, the impact is expected to be small for both national and international journeys. **Attractiveness:** High traffic corridors will have the richest set of marketing and booking data, increasing the potential for improvements in how these services are integrated into booking interface, the scope for this is much smaller when both locations are less attractive as there is less data to act on. **MDMS advancement:** Impact is mostly expected in locations where more advanced platforms are available or where MDMS usage is higher (*leader)* as there is more potential for marketing data analytics to be insightful. **Overall assessment:** This PM's primary benefit is not expected until, and only if, marketing and booking data is used to optimise services and booking services. This will have the highest impact along routes where there is high usage of MDMS platforms and where data is collected to allow for this optimisation to take place.
PM4	Obligation for **all B2B MDMS platforms to treat subscribers fairly and** clearly identify in their display banned airlines. Obligation for third countries B2B MDMS to ensure equal treatment of EU air carriers	**QP1: Completeness and Accuracy of Info** Direction of impact expected to be **neutral or slightly positive:** This PM is focused on business-to-business contact, specifically in relation to the usage of subscriber data and EU airline offerings on third-country MDMS platforms. It could affect consumers if unfair treatment of EU carriers on these third-country platforms leads to different options being available for individuals who see results generated using these B2B services in the information chain. Third country GDSs are already covered by this, but the net effect is likely to be non-discrimination of EU carriers by other third country B2B MDMS (non-CRS aggregators). Impact scores could range from **0 to +1**: Greater impacts are expected on clusters involving more flights, since this intervention targets the potential imbalance in competition between regulated CRS and unregulated B2B MDMS that offer mostly aviation options. **Journey type:** International journey types may benefit more from rules on fair treatment of subscribers, as flights are more common on these routes than for national journeys. **Attractiveness:** High traffic corridors are more likely to have regular flights, meaning that high attractiveness routes are likely to experience greater impacts. **MDMS advancement:** Impacts are likely to be similar for markets where MDMS is more or less developed. **QP2: Ability to Book** Direction of impact expected to be **neutral:** As consumers do not book directly via B2B platforms, the impact on the degree to which consumers can book multimodal transport on MDMS platforms is thought to be neutral. Impact scores would be **0**: for the reasons above.
PM5	Remove provisions on data protection from CRS Code of Conduct	**QP1: Completeness and Accuracy of Info** Direction of impact expected to be **neutral:** This PM addresses the legislative burden associated with navigating existing CRS provisions on data protection and GDPR. It does not affect what data is shown or how it is displayed. No direct impact on passengers is expected. Impact scores would be **0**: for the reasons above. **QP2: Ability to Book**

No	Policy measure	Logic for impact on QPs
		Direction of impact expected to be **neutral:** As above, this PM aims to improve legal clarity for CRS platforms, however, it does not affect passengers' experience. Impact therefore expected to be neutral. Impact scores would be **0**: for the reasons above.
PM6	Obligation for **Member States** to appoint a national authority to settle disputes between parties, and establish an EU enforcement network for coordination	**QP1: Completeness and Accuracy of Info** Direction of impact expected to be **positive**. Clear enforcement and dispute-resolution processes would discourage MDMS platforms from omitting or misrepresenting smaller operators' services. National authorities will monitor platform compliance and address complaints when services are omitted and by doing so, platforms are deterred from showing bias toward larger operators. National authorities are also expected to settle disputes between parties as regards unfair conditions in distribution contracts, whether stemming from platforms imposing disproportionate terms on operators or, conversely, from operators imposing high fees or restrictive conditions that lead platforms not to sell their services. Over time, this enforcement would lead to more complete and reliable information presented to passengers. It is expected to offer a marginal improvement to completeness and accuracy of information as the improvements only occur when individual operators file complaints and authorities do find bias or omissions or unfair contractual conditions affecting distribution. Each resolved case corrects information for that operator, but platforms are not obligated to revise all listings. As a result, accuracy and completeness improve in specific instances rather than system-wide, yielding a modest overall gain. Impact scores for this measure could range between **+1 and +1**. **Journey type:** The impact is expected to be marginally stronger for national journeys where national authorities have direct oversight. International journeys may benefit slightly less as cross-border oversight relies on coordination between authorities which may slow enforcement, but due to the introduction of the EU coordination enforcement network, the score allocated to national and international trips is the same. EU Travel Tech, an industry association representing MDMS provider, indicated that current enforcement of the Code of Conduct has not always been applied, greater enforcement of the CoC by national authorities between aviation distribution channels could positively impact international journeys due to the cross-border nature of many flights. **Attractiveness:** More attractive routes, where passenger volumes and operator competition are higher, are more likely to generate disputes due to the greater profitability and number of stakeholders involved. Operators are more likely to challenge any exclusion or disadvantage on these routes, leading to more frequent interventions from national authorities. Less attractive routes may see fewer complaints, resulting in more limited impact. **MDMS advancement**: Impacts may be largest where there is greatest scope for preferential treatment on platforms, or unfair contractual conditions between parties. With more platforms competing in *Leaders,* there would naturally be more disputes, resulting in greater impact of the PM. Impacts would be smaller where Member States have fewer or no MDMS platforms, as the level of competition would remain lower (*Planned Adopter/Follower*). Stakeholder input, particularly from MDMS platforms, indicated that current competition law and enforcement is fragmented and insufficient, indicating that increased enforcement, particularly in areas with dominant transport operators, would have a more significant impact. **Overall assessment:** The maximum positive impact of this PM is capped at +1 because improvements depend on individual operators/platforms filing complaints and receiving favourable outcomes. This leads to targeted corrections rather than system-wide changes. The minimum impact is +1 because dispute resolution will still provide positive impact and even the

No	Policy measure	Logic for impact on QPs
		presence of national authorities carrying out this role may deter unfair platform/operators' practices and prompt some proactive adjustments by platforms. **QP2: Ability to Book** Direction of impact expected to be **neutral or slightly positive**. The enforcement focus under this policy measure is expected to be focusing on ensuring fair visibility and representation of transport operators on MDMS platforms, such as preventing exclusion or biased listing practices as well as on ensuring fair terms in contractual agreements. However, the expected impact remains limited because this measure is primarily enabling and corrective by nature: it improves compliance and deters unfair behaviour, but it does not in itself impose a direct obligation on platforms to host or sell services, nor on operators to sell their tickets. The largest improvements in booking availability are therefore expected to stem from other measures, while enforcement oversight mainly strengthens their effectiveness and ensures they deliver results on the ground. Impact scores for this measure could range between **0 and +1**: differentiation by cluster consistent with QP1 above, omitted for brevity. Total impact is capped at +2 as the other policy measures are only as useful as the enforcement by national authorities, but it should not exceed the maximum impact of the policy measures themselves.
PM7	Obligation for all B2C MDMS platforms to share data for mobility management	**QP1: Completeness and Accuracy of Info** Direction of impact expected to be **neutral or slightly positive**. This measure does not directly affect the information that consumers see on MDMS platforms, but it indirectly supports better planning and coordination, particularly for regional public authorities. To the extent that regional authorities are given access to the information by national public authorities, this could lead to improved understanding of services available in their region, and following their integration, lead to improvements in completeness and accuracy of information on MDMS operated or co-operated by regional authorities. By requiring B2C MDMS providers to share non-personal usage data with public authorities, the policy gives cities and regions a clearer picture of how people use transport services, such as which routes are most used, where transfers happen and what parts of the network may be underused or missing. Equipped with better knowledge, public authorities can then work to provide a more complete physical service provision, which then would become more accurately reflected on MDMS platforms. For example, if an area with poor integration or missing data is identified, action could be taken to improve availability of those services, eventually enhancing the completeness of journey options shown to relevant users. Impact scores for this measure could range between **0 and +1.** **Journey type:** This may benefit both national and international journeys. By giving public authorities access to better data, the integration of different transport modes can improve particularly for regional transport, leading to a more accurate view of available services. **Attractiveness:** The measure benefits both attractive and less attractive routes. For attractive routes, public authorities may be able to optimise services, while for less attractive routes, it may highlight gaps or underserves areas, prompting action to improve visibility and coverage.

No	Policy measure	Logic for impact on QPs
		MDMS advancement: This is likely to have a greater impact in follower regions or regions where data sharing is still developing. These regions may benefit most as they gain better data and can use it to integrate services and improve their transport offering. **Overall assessment:** The impact of this PM on the completeness and accuracy of information is expected to be **neutral or slightly positive**. By requiring B2C MDMS providers to share non-personal data with public authorities, it will help improve authorities' ability to understand transport system usage and identify service gaps. This improved insight can support better planning and the development of more accurate travel information over time. However, since most operators are private, authorities have limited control over actual service provision, i.e., they can't directly create or force operators to create new services. Even if private investment increases, there's no guarantee those new services would be displayed on MDMS platforms unless those platforms have SMP, which would make them subject to stricter rules about listing. Therefore, the impact on completeness and accuracy of information on platforms may be limited in scope. **QP2: Ability to Book** Direction of impact expected to be **neutral**. The obligation for B2C MDMS platforms to share data with public authorities does not directly impact consumers' ability to book services. While the availability of more data may help authorities improve service offerings and identify where gaps exist, it does not change the commercial agreements or the integration of booking systems on MDMS platforms. Therefore, there is no direct impact on booking availability or ease of booking through MDMS platforms. Impact scores for this measure would be **0**.
PM8	Obligation for **all B2B and B2C MDMS platforms** to display information on GHG or CO2 emissions of trips (when these data are provided by the operators in line with and Count Emissions EU and Flight Emission Label)	**QP1: Completeness and Accuracy of Info** Direction of impact expected to be **positive:** the display of GHG emissions, where provided by operators, improves the completeness of travel information by adding environmental data on displayed travel options. The accuracy of the data provided depends on the consistency and quality of operator-provided data, however, when standardized (such as through Count Emissions EU and Flight Emission Label) it is expected to be a reliable way for consumers to compare between travel options. Some MDMS platforms (e.g. Trainline) already display GHG emissions from participating operators, but this is not seen as an industry standard and many MDMS do not have this facility. The impact score for this measure could range between **0 and +1:** **Journey type:** Emissions data are no more likely to be provided by an operator within one Member State than an international operator. **Attractiveness:** There may be higher operator participation and better data availability along competitive corridors due to operators wishing to differentiate from competitors on indicators other than cost and time. When a route is less attractive/has less traffic consumers are more limited by their travel options, and therefore an operator would have less incentive to provide this data. Additionally, in European regions where air travel remains the sole viable option (low demand) displaying emissions data offers limited practical relevance (as indicated by MDMS provider via interview) as GHG emissions would remain similar, although the use of SAF might reduce emissions of some flights compared to other similar offers.

No	Policy measure	Logic for impact on QPs
		MDMS Advancement: MDMS platforms that are more developed, or more highly used *(Leaders)*, may have more participating operators (one MDMS association, ADN Mobilites indicated support for inclusion of GHG emissions via interview). This could result in more GHG emissions data for consumers to compare between. In places where there is less usage or platforms *(Followers)*, the inclusion of environmental data may have a reduced impact as there is less comparison. **Overall Assessment:** This PM can positively impact the provision of accurate and complete data to customers, specifically along more trafficked routes or places with higher MDMS usage as this will enable consumers to compare between transport operators more readily. The score is capped at +1 as some MDMS platforms already display GHG emissions, therefore limiting the additional positive impact this measure may have compared to the baseline. **QP2: Ability to Book** Direction of impact expected to be **neutral:** The display of information on GHG emissions of trips does not impact the ability of consumers to book transport tickets. Impact scores would be **0**: for the reasons above.
Grouping 1	*This grouping corresponds with policy measures in PMs 9-15 that are applicable in Policy Option 1 – PM9, PM10, PM11, PM12* • PM9: Thresholds to identify B2C MDMS platforms and railway undertakings with SMP • PM10: B2C MDMS platforms and railway undertakings with SMP at national or EU level notify national authorities or EC of their market presence. • PM11 and PM12: **B2C MDMS platforms with SMP, indispensable RU platformsm indispensable RUs and B2B MDMS**: must respect principles on distribution fees and cannot impose highly restrictive clauses (exclusivity clauses,	No impact is expected from PM9 or PM10. PM9 constitutes actions for policymakers to set SMP thresholds, while PM10 constitutes actions for platforms and RUs to notify to MS authorities when they reach those thresholds at national level, and in turn for MS authorities to notify EC authorities. When the thresholds are reached at EU level, MDMS platforms directly notify EC authorities. There are interactive effects with PM11 and PM12 which introduce obligations on those platforms and indispensable railway undertakings, but the full impacts on QPs is attributed to the obligations, accounted for below to avoid duplication. **QP1: Completeness and Accuracy of Information** Direction of impact from PM11 and PM12 expected to be **positive:** this group of policy measures aims to prohibit restrictive contractual clauses by indispensable railway undertakings and indispensable MDMS platforms and introduces fairer distribution fee principles. These principles could facilitate agreements between MDMS platforms and operators, directly targeting gatekeeping behaviour, curbing anti-competitive practices, and enhancing transparency and fairness. This group of measures can also be expected to fix existing biases and limitations in the presentation of service offerings of new entrant RUs on MDMS platforms and indispensable RU platforms. Thich could increase the number of operators on those platforms, improving completeness (referred during the interviews by three MDMS providers including ADN Mobilités and EU Travel Tech, one national authority, and the consumer organisation EPF). Thes measures will target platforms and RUs with a strategic position in the market, ensuring that the obligations are applied proportionally, avoiding overburdening smaller or emerging MDMS platforms or railway undertakings. The impact score for this group of measures could range between **0 and +2:** **Journey type:** The highest impact is expected in the context of **international journeys**, particularly **cross-border rail services**. These trips are often fragmented in terms of data availability, pricing, and booking options due to the lack of equal treatment of RUs operating national legs, vertically integrated MDMS with proprietary sales channels favouring their own services, and protectionist strategies by incumbents (this was referred during interviews by two rail incumbents including DB, but also UITP representing the view of public transport operators). By targeting indispensable RUs and MDMS with SMP, the measures would compel greater commercial openness, reducing information asymmetries and improving the visibility of

No	Policy measure	Logic for impact on QPs
	unfair and unjustified conditions, marketing clauses and other technical restrictions) when entering into commercial agreements with transport operators	available cross-border options (interviews with four stakeholders: a rail ticketing platform, an international bus and rail operator, a new-entrant railway undertakings, and a private mobility platform). Some impact is still expected in **domestic or regional trips**: MDMS platforms sometimes reflect the full inventory (interview with EMTA), but there is evidence of cases where RUs within an EU Member State are not integrated into MDMS platforms. **Attractiveness:** The measure is likely to yield the greatest improvements in **high-demand, highly populated corridors**, where RUs with SMP may control also distribution channels. On such routes, smaller RUs and alternative services often remain less visible to consumers due to lack of access to dominant MDMS platforms. Requiring non-discriminatory agreements would enhance transparency, increasing consumers' visible choices and potentially stimulating modal shift (interviews with WestBahn and T&E). On **low-demand routes**, however, where there might be a lack of alternative transport options, even full information availability is unlikely to trigger substantial behavioural change, as barriers such as frequency, speed, and service coverage dominate user preferences (interview with CER and BEUC). **MDMS advancement:** The greatest effects will likely be seen in **regions where the MDMS market is already advanced**, but where competitive distortions persist due to discrimination in the context of vertical integration or SMP (the problem of discrimination in the context of vertical integration was referred in interviews by four independent MDMS providers such as DoHop, by consumer organisations, such as EPF, and by other organisations like ECTAA). In this context, the measures introduce a governance mechanism to enable access to commercially significant distribution platforms, on a fair basis. The result is likely to be increased transparency and better coordination between platforms and RUs. In **less developed MDMS regions**, while the legal framework could provide a signal for future interoperability, the short-term impact can be expected to be more limited. The absence of mature MDMS players reduces the immediacy of the problem these measures are designed to address. The role of regional RUs particularly in Germany and France, requires separate consideration. In these contexts, regional authorities - not operators - control fare and ticketing policies (mentioned during interviews by a MDMS provider, and the incumbent rail operator SNCF and one other organisation). **Overall assessment**: These measures will likely result in a positive effect on the completeness and accuracy of information across digital mobility platforms, especially in high-demand, competitive corridors and fragmented international routes. The impact is capped at +2 as the requirement to respect the 'specific rules' will not necessarily lead to more agreements being made between platforms and operators, it will only encourage cooperation ensuring this would be on a fair basis. The impact could be neutral on national routes with little alternative journey options. **QP2: Ability to Book** Direction of impact for PM11 and PM12 expected to be **neutral or slightly positive:** the respect of specific rules applicable to those with SMP again functions as a precondition or enabler. By pinpointing where booking restrictions are likely imposed by dominant players, it justifies and refines the application of rules for commercial agreement. On its own, these principles would do little to alter booking capabilities, particularly in the case of MDMS platforms controlled by PTAs, where both operators and distribution channels are already under PTA control and the measure does not enhance this existing coordination. However, there is an argument that these rules may indirectly generate an incentive for platforms to improve ability to book: for example, by providing greater confidence on the commercial terms that MDMS platforms could negotiate with operators, this may increase the incentive to invest in new booking functionalities. The impact score for this group of measures could range between **0 and +1:**

No	Policy measure	Logic for impact on QPs
		Journey Type: functionalities on platforms may be slightly more likely to improve on international routes since cross-border rail services are automatically in-scope regardless of the market power of an individual operators, meaning that there may be broader confidence on the terms negotiated on such routes and encouraging development of cross-border booking capabilities. By contrast, national routes will only sometimes have SMP, so these incentives to invest in booking functionality will be scattered depending on the coverage of the operators or platforms with SMP. **Attractiveness:** Impact will likely be greater in attractive, high-demand corridors. Dominant players in the transport sector are typically more inclined to operate on high-demand or heavily trafficked routes, where passenger volumes ensure greater commercial viability. These corridors offer higher revenue potential and better economies of scale, allowing large operators to maximise returns on infrastructure, rolling stock, and service investments. As a result, they tend to concentrate their services in these areas, reinforcing their market position and brand visibility. To the extent that they can exert this power to negotiate unfair commercial terms, it will be more likely on these routes. **MDMS Advancement:** In follower regions, where MDMS ecosystems are still developing, this group of measures may help accelerate integration and prevent the entrenchment of gatekeeping behaviour. There will therefore be a larger, long-term effect on follower regions, while in advanced MDMS a shorter term (smaller) impact is expected. **Overall Assessment:** The positive impact is capped at +1 because booking capabilities are unlikely to be directly impacted by this group of policy measures. In areas where MDMS has more value, an increase in the integration potential may indirectly lead to an increase in MDMSs and their services (innovation), but this would be only an indirect effect. The impact could even be neutral on national routes where SMP does not exist.
Grouping 2	*This grouping corresponds with policy measures in PMs 9-15 that are applicable in Policy Option 2 – PM9, PM10, PM11, PM12, and PM13.* Measures are the same as in Grouping 1, with the addition of: • PM13: **Indispensable RU (with SMP and to all other rail undertakings in relation to PSO and cross- border services)**: must enter into commercial agreements with willing MDMS platforms to enable the re-linking, resale and/or distribution of their tickets	**QP1: Completeness and Accuracy of Info** Direction of impact expected to be **positive**: This grouping introduces obligations aimed at increasing the availability of incumbent RUs offerings on online ticketing platform. The addition of PM13 establishes an obligation for indispensable RUs to enter into agreement with willing online ticketing platform, ensuring that their services are made available on any willing platform. This addresses gaps where incumbent offerings were previously limited to direct channels or linked platforms that may prioritise their own services. The impact score for this measure could range between **+2 and +4.** **Journey type:** The measures are expected to have the greatest impact on international routes. Similar to what was outlined in Grouping 1, these journeys are typically fragmented in terms of data availability, pricing and booking options due to the lack of coordination between national RUs, the presence of MDMS with proprietary sales channels, and protectionist practices by incumbents. On these routes, the obligation to sell ensures that consumers can more easily see and compare alternative offerings. Domestic routes may see a smaller effect where incumbents already dominate distribution. **Attractiveness:** High traffic and attractive routes are likely to benefit the most. On these routes, the obligation to sell means that incumbent RUs akings' must provide their services to willing MDMS platforms, which in turn can display a broader set of options to consumers. This increases the visibility of alternative rail offerings and ensures that independent platforms are not disadvantaged by restricted access. On low-demand routes, the impact is expected to be smaller as fewer RUs provide services on these routes. Even when incumbent RUs comply with the obligation to sell, the total number of rail options available to consumers is naturally limited. In other words, consumer choice is constrained by the small number of operators rather than by access to distribution platforms, so improvements in completeness are less pronounced.

No	Policy measure	Logic for impact on QPs
		MDMS advancement: The measures are likely to have more impact in the short term in regions where advanced independent MDMS platforms exist (leaders). These platforms can already display incumbent offerings and benefit from the obligation to sell, improving their service completeness. In less developed MDMS regions (followers), the obligation supports longer-term platform development by creating a clearer business case for new entrants and preventing incumbents from restricting access. This encourages the growth of more competitive and interoperable MDMS platforms across the EU in the longer term. **Overall assessment:** These measures are expected to have a clear positive effect on the completeness and accuracy of information available to consumers. By introducing the obligation to sell for indispensable RUs, the measures ensure that incumbent services are made available on MDMS platforms, including independent ones, which enhances comparability and visibility of alternative options. The minimum impact score of +2 reflects the inherent improvement achieved simply by adding incumbent rail offerings to platforms that previously had limited access. The maximum score of +4 reflects the potential impact in high-demand and international routes, where multiple RUs compete and the obligation to sell significantly increases the number of options displayed on MDMS platforms, improving consumer choice. The limitations remain since there is no inclusion of an obligation to sell for smaller RUs and new entrants, meaning independent MDMS platforms would still not necessarily display all possible rail offerings. Additionally, there is no obligation for MDMS platforms to host all willing RUs immediately, meaning the full impact may be delayed as platforms are not required to accommodate offerings straight away, even if doing so would be in their commercial interest. **QP2: Ability to Book** Direction of impact expected to be **positive**: These measures are expected to improve the ability to book rail services on MDMS platforms. By introducing the obligation to sell for indispensable RUs, the measures allow MDMS platforms to have access to main rail offers and combine them with other transport offers therefore providing new, innovative transport journeys to consumers. Platforms are incentivized to integrate offers, enhancing the user experience and making it easier for consumers to purchase tickets without needing to visit the incumbent operator's website. Stakeholder input indicates that current practices can restrict such booking functionality. As one MDMS provider, FTO, noted: "Strong transport operators remove full content from neutral and cost effective B2B MDMS (CRS) and thus making it burdensome and expensive for B2C MDMS (travel intermediaries) to provide full and undistorted access to tickets for consumers." Another MDMS stakeholder (providing multimodal travel information) highlighted how certain commercial practices affect booking and the user experience: "…some operators restrict the information that can be shown on MDMS platforms or impose prohibitively low commission rates, forcing MDMS partners to operate at a loss on ticket sales and redirecting users to operator websites for modifications, which disrupts the user experience". The impact score for this measure could range between **+2 and +4.** **Journey type:** The positive effect is expected across both national and international routes, as the obligation to sell applies to incumbent operators regardless of route type.

No	Policy measure	Logic for impact on QPs
		Attractiveness: The measures are likely to have the greatest impact on high-traffic or popular routes, where indispensable RUs are most commonly active. On these routes, enabling booking on independent MDMS platforms provides tangible benefits to consumers by improving convenience and increasing competition between platforms. On lower-demand routes, the impact may be more limited because fewer operators are present and some platforms may not yet prioritise integration of these services. **MDMS advancement**: In regions with advanced independent platforms (leaders), the measures can have more immediate effects, as these platforms are more likely to already have the capability to relink or enable full booking for incumbent services. In less mature markets (followers), the measures are more likely to have stronger impact in the longer term, by creating a clear business case for new platforms, promoting interoperability and preventing gatekeeping behaviour by incumbents. Over time, this can encourage the development of new MDMS platforms. **Overall assessment:** The measures are expected to have a clear positive effect on the ability to book rail services across MDMS platforms. The minimum impact score of +2 reflects the improvement in routes where incumbents operate, and users may benefit from booking tickets on alternative booking channels to the incumbent website, which may have better user functionalities. The maximum score of +4 accounts for the potential benefits on high-demand routes and internationally. Limitations nonetheless remain, i.e., there is no obligation to sell for smaller RUs, and no obligation for MDMS platforms to host all willing Rus immediately. As a result, the ability to book may not improve for all rail offerings, across all platforms straight away, and full benefits may be realised more gradually.
Grouping 3	*This grouping corresponds with policy measures in PMs 9-15 that are applicable in Policy Option 3 – PM9, PM10, PM11, PM12, PM13, and PM14.* Measures are the same as in Grouping 2, with the addition of: • PM14: **Indispensable RU platforms:** must enter into commercial agreements with willing RUs (operating within the same geographical area in which the RU owning the indispensable RU platform has SMP) to enable the distribution of tickets	**QP1: Completeness and Accuracy of Info** Direction of impact expected to be **positive**: This PM grouping introduces an obligation for indispensable RU platforms to enter into commercial agreements with any willing RU[118], and an obligation on indispensable RUs to enter into commercial agreements with any willing ticketing platform. These requirements aim to close gaps in MDMS platforms and address exclusionary practices. These agreements mean that route, schedule, and pricing information for indispensable services would be more fully displayed in MDMS platforms, and indispensable RU platforms would contain information on other RUs, not just the RU they are linked to. As these services are added, the range and accuracy of information available to users would improve. Stakeholder input on the expected effectiveness of PM14 (obligation to host for indispensable RU platforms) specifically was mixed. Across all 69 respondents, 19 considered it very or somewhat effective, 14 considered it very or somewhat ineffective, and 36 were neutral or did not know. EPF and WestBahn noted that such an inclusive approach would prevent loopholes and ensure a level playing field across the sector. The impact score for this measure could range between **+3 and +4.** **Journey type:** The impact is expected to be especially strong for international and long-distance national journeys where indispensable RUs are not encouraging their services on all MDMS platforms, and where indispensable RU platforms are not displaying alternative RUs. Access to these services is often fragmented or missing from MDMS/indispensable RUs platforms due to gatekeeping or technical barriers. The inability of dominant players to provide seamless international and intermodal ticketing without “opening the game” to competition is mentioned in interviews by two new entrant RUs including WestBahn.

[118] The obligation of indispensable RU platforms to integrate the offering of RU is limited to the offers within their geographical scope of operation.

No	Policy measure	Logic for impact on QPs
		Attractiveness: In more attractive routes, where competition and demand are high, the visibility of indispensable RU services in all relevant MDMS platforms will address the imbalances in information that currently favour RUs with SMP and their affiliated services. Additionally, the obligation for indispensable RU platforms to include the offering of willing RUs will also support the presentation of a more complete service offering on platforms, as well as the obligation for indispensable RUs to share their offer to requesting platforms. In less attractive routes, the effect may be more limited but still beneficial as they may become better linked with routes with significant traffic and competition that might comprise legs of these trips. **MDMS advancement**: in the short term there is undoubtably a positive effect on advanced MDMS where visibility would increase swiftly. In the long term, this grouping would enable currently less advanced MDMS which show little integration to advance faster. Therefore, there is likely to be a positive impact on advanced MDMS and a very positive impact on less advanced MDMS. **Overall assessment:** The measure focuses on enabling provision of route, schedule and pricing information for indispensable RU on more platforms, and for indispensable RU platform to show this information for more RU. This inherently improves information completeness. At the least, this will ensure indispensable rail options are available to be seen on all willing MDMS platforms, increasing completeness of information for passengers (+3). The potential impact is capped at +4 because the obligation for MDMS only extends to indispensable RU (one MDMS mentioned there are many regional RU who do not want to be integrated in other platforms), and the obligation for railway undertaking extends only to indispensable RU platforms (which do not necessarily cover all routes). Further, this group of measures could make dominant platforms even more attractive for consumers as they can use the platform they are used to and already see more services. This could limit the role of smaller MDMS who may offer alternative information of interest to consumers. **QP2: Ability to Book** Direction of impact expected to be **positive**. This builds on the fair treatment principles in Grouping 1 but goes further by making ticketing agreements mandatory for indispensable RU and indispensable RU platforms. The main outcome of this obligation is that it forces RU to enable both re-linking and direct booking within the MDMS (depending on their business model and practice). This will help improve the user experience by allowing MDMS platforms to re-link or sell RUs offers (depending on their current business model). The impact score for this measure could range between **+3 and +4**. **Journey type:** The grouping will benefit both national and international journeys, as indispensable RU often serve high-volume routes that are central to long-distance and cross-border travel. **Attractiveness:** On high-traffic, attractive routes, indispensable RUs are more commonplace. This Grouping would mandate increased booking access to these routes, broadening competition and reduce consumers' dependency on existing services that may be vertically integrated, making the impact greater than in either Grouping 1 or Grouping 2. Indispensable RUsmay also operate some low-traffic routes, meaning that the impact would be smaller than on high-traffic routes, but still greater than in Groupings 1 or 2 where commercial agreements are only encouraged through principles rather than mandated. **MDMS advancement:** As with previous Groupings, the impact is expected to be greater in MDMS *follower* Member States, where integration is currently more limited. This Grouping would more rapidly facilitate an expansion of the MDMS' offerings to all indispensable railway undertaking, allowing some level of competition with more established platforms. **Overall assessment:** This PM grouping accelerates and streamlines the development of agreements between RUs and MDMS platforms via the principles brought on commercial agreements. This, and the mandated integration RU services into

No	Policy measure	Logic for impact on QPs
		relinking and booking MDMS platforms, provides a more stable environment for MDMS services to develop and expand. However, the impact is capped at +4 as parties have to be willing to make agreements to be made available on indispensable RU platforms – one interview with an MDMS provider suggests that some smaller regional RUs have no desire for their tickets to be available on other platforms.
Grouping 4	*This grouping corresponds with policy measures in PMs 9-15 that are applicable in Policy Option 4 – PM9, PM10, PM11, PM12, PM13, and PM15* Measures are the same as in Grouping 2, with the addition of: PM15: **Indispensable RU platforms:** must unbundle its distribution system from the systems of its parent operator	**QP1: Completeness and Accuracy of Info** Direction of impact expected to be **positive**. This grouping of policy measures will improve the completeness and accuracy of information on MDMS platforms by addressing structural barriers that limit the fair representation of transport operators' services. Initially, it provides, similar to Grouping 1, a framework for agreements between (indispensable) RU and MDMS platforms with SMP. This framework of commercial principles can simplify the conclusion of agreements and consequently accelerate the integration of services. Further, it includes an unbundling requirement, potentially limiting the commercial incentive of dominant, vertically integrated RU platforms, to provide unfair preferential treatment to their own transport services. This means dominant RU must separate their platform operations from their own transport services. Insights from the interview with a rail MDMS provider suggests that the principal issue in contract negotiations lies with vertically integrated RU that impose unfair contractual conditions on independent MDMS providers. Stakeholder survey responses on the effectiveness of an obligation to unbundle were mixed. Out of 69 respondents, 22 considered unbundling very or somewhat effective, 20 considered it ineffective, and 26 were neutral or did not know, with RU platforms being particularly sceptical (4 out of 5 considered it very ineffective) while new entrant RUs and national authorities were more positive. An MDMS provider noted that "financial separation of accounts may provide a base to verify a level playing field between own distribution system vs. independent MDMS and fair remuneration". A tourism industry association highlighted that "the unbundling requirement separates the distribution systems of vertically integrated MDMS from those of their parent operators. This structural intervention is critical to ensuring that ticket offers are not biased toward the MDMS's own transport services [therefore enhancing] neutrality and transparency in distribution". Second, it includes an obligation for indispensable RU to enter commercial agreements with requesting MDMS platforms, meaning they can no longer withhold their ticketing data or refuse to cooperate with platforms. By removing both gatekeeping practices both by platforms and by RUs, this PM grouping has the potential to make travel options more complete and accurately presented. Again, among stakeholders, there are a number of views that mutual commercial interest should guide collaboration in distribution rather than mandated access (expressed by two MDMS providers including ADN Mobilités, an incumbent RU, an association of airlines, the public transport operator's association UITP, two national authorities and other organisations such as ECTAA).Still, some also voice support for this obligation (EPF and WestBahn) as a step toward fully integrated, multimodal travel experiences that prioritise consumer needs over proprietary interests. The impact score for this measure could range between **+2 and +4**. **Journey type:** The measure is particularly impactful for cross-border and long-distance national services, where indispensable RU often provide critical links but may currently be missing from MDMS platforms due to either their lack of cooperation with platforms or MDMS bias (due to vertical integration). By unbundling and obliging indispensable RU to enter into commercial agreements, MDMS providers will be more likely to include these services fully and accurately, addressing long-standing issues with cross-border coverage and improving multimodal journeys that rely on rail.

No	Policy measure	Logic for impact on QPs
		Attractiveness: This measure will have a positive impact on both attractive and less attractive routes. Unbundling helps prevent dominant platforms from showing only their own or preferred services, ensuring travellers can see all available options. On less popular routes, it increases the chances that smaller or independent RU will also be shown fairly, improving overall visibility. The impact is expected to be slightly higher on attractive routes where competition between RU is greater, and this will be better represented in cases where visibility of this competition is being restricted by vertically integrated players. **MDMS advancement:** The effect on completeness and accuracy of information is likely to be most significant in MDMS *leader* Member States, where indispensable RU platforms' user base is broader than on other Member States, and where major railway undertaking may currently avoid certain platforms. In this context, both sides of the PM grouping (obliging indispensable RU platforms to become neutral and for indispensable RU to participate) directly address ongoing issues. In MDMS *follower* or *planned adopter* Member States, where MDMS is still emerging and these kinds of conflicts may not exist, the measure will likely have limited or no impact. **Overall assessment:** The measure improves the completeness and accuracy of information by breaking up vertically integrated RU platforms from their respective operators, removing commercial incentives for a biased representation of the linked operator. Compared to PO2, the addition of the unbundling requirement strengthens neutrality in distribution by structurally separating platform and operator interests; it reduces the likelihood that affiliated services receive preferential visibility. The impact is therefore expected to be slightly stronger than under PO2, with the potential to reach the upper end of the +2 to +4 range in markets where vertical integration currently constrains completeness and accuracy. The impact is on the margin to be lower than Grouping 3 though, as it does not force indispensable RU platforms to enter commercial agreements with any willing operator (which improve information completeness), it just removes the incentive to have any connection or bias with a linked operator. In markets where vertical integration is not present, the measure will still have a positive impact due to the inclusion of indispensable rail offerings on all MDMS (+2). **QP2: Ability to book** Direction of impact expected to be slightly **positive**. This PM grouping may support better booking options on MDMS platforms by addressing the two issues: 1) obliging indispensable RU to enter into commercial agreements and 2) requiring indispensable RU platforms to unbundle from their affiliated RU. However, while the measure improves access, the effect on the booking system is uncertain. While unbundling may reduce bias, it could also affect how efficiently booking systems operate. As a result, the overall benefit is expected to be positive but limited. The impact score for this measure could range between **+2 and +4.** **Journey type:** Both national and international journeys may benefit. International journeys see particular improvements, as indispensable RU often run cross-border services that were previously excluded from MDMS platforms. National services, especially those provided by smaller or independent operators, will also gain better booking options through the MDMS platforms. **Attractiveness:** The PM grouping is expected to be stronger on high-demand, attractive routes, where indispensable RU platforms and indispensable RU are most active and may compete the most with alternative operators. These are the areas where exclusion of certain services from booking is most common, and where platform bias can most significantly distort consumer choice. On less attractive routes, the impact is likely to be smaller, as indispensable RU platforms may not be

No	Policy measure	Logic for impact on QPs
		active and indispensable RU may not be present, though some benefits may still occur if the obligation leads to wider inclusion of smaller transport operators. **MDMS advancement**: As with previous Groupings, the impact is expected to be greater in MDMS *follower* Member States, where integration is currently more limited. This Grouping would more rapidly facilitate an expansion of the MDMS' offerings to all indispensable RUs, allowing some level of competition with more established platforms. **Overall assessment:** By combining the obligation to enter into ticketing agreements with indispensable RU and the structural unbundling of indispensable RU platforms, this measure addresses both access and fairness in the booking process. A similar impact is expected to Grouping 2, but with a slightly greater impact for attractive routes in follower Member States.

10.3.5 MPA scoring outputs

In this section we present a high-level summary of the outputs of the MPA.

The table below shows the shares of the maximum potential modal shift (1.7%) and maximum potential reduction in travel time reached in each cluster and policy option. This demonstrates that in general, PO2 presents a higher modal shift potential than PO1 due to the additional obligation to sell. PO3 presents the highest performance potential, since they force partial integration of offerings in MDMS.

Table 0-10: Share of the maximum potential modal shift and maximum potential reduction in travel time

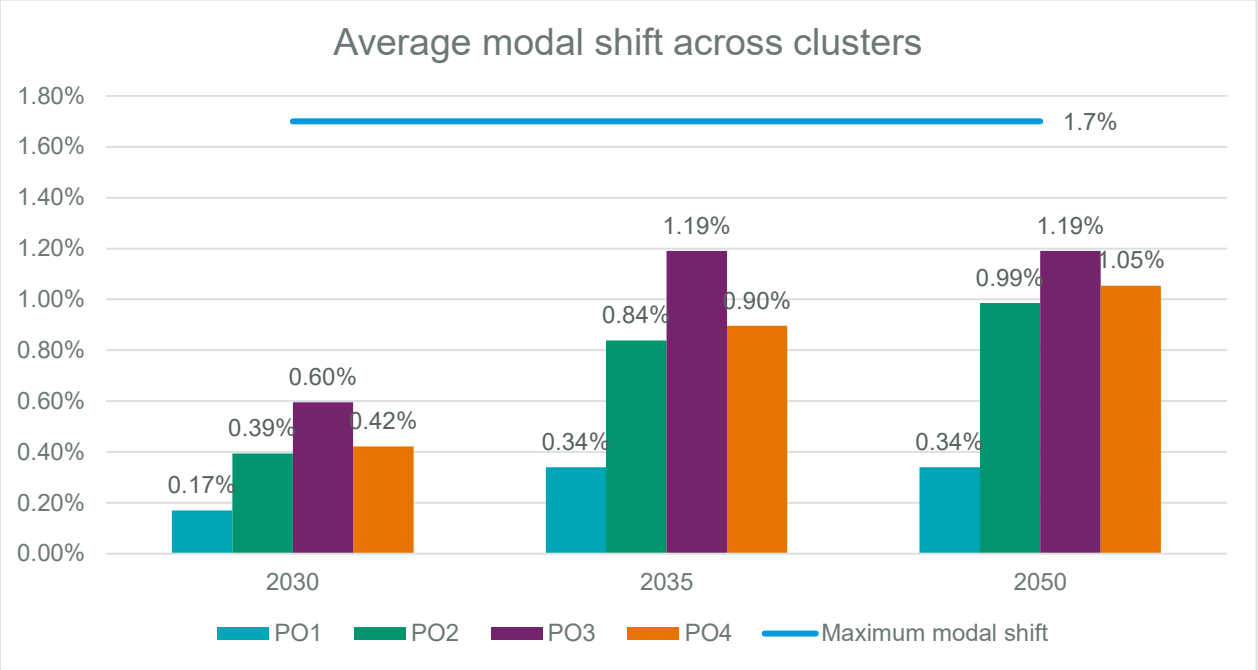
Cluster short description				Share of modal shift potential captured			
Cluster	**Route**	**MDMS**	**Attractiveness**	**PO1**	**PO2**	**PO3**	**PO4**
A	National	Leader	Both attractive	30%	60%	70%	70%
B	National	Planned adopter/follower	Both attractive	20%	80%	80%	80%
C	International	At least one leader	Both attractive	20%	60%	80%	60%
D	International	Planned adopters/followers	Both attractive	20%	80%	80%	80%
E	National	Leader	Hybrid	20%	50%	60%	60%
F	National	Planned adopter/follower	Hybrid	20%	50%	70%	50%
G	International	At least one leader	Hybrid	20%	50%	60%	60%
H	International	Planned adopters/followers	Hybrid	20%	60%	80%	60%
I	National	Any	Both moderately attractive	20%	40%	60%	50%
J	International	Any	Both moderately attractive	10%	50%	60%	50%

Source: own elaboration from the MPA model

Combining these scores with the estimated maximum **modal shift** (interpretated as the percentage increase in journeys performed by sustainable transport modes, and corresponding decrease in less sustainable modes - see section 10.3.2), and taking an average of the outcomes for each cluster, produces the outcomes displayed in the figure below. In comparison to the 1.7% theoretical maximum, PO3 achieves the greatest shift with 1.19%, while PO1 generates the lowest modal shift at 0.68%. These outputs were validated as part of the third stakeholder workshop. Commentary of the attendees, questions and answers are presented in section 10.3.2.4. In summary, there was broad agreement from stakeholders participating in the workshop on these inputs. However, given that the assessed modal shift for PO3 and PO4 may be too high (noting the weaker response rate[119]), the study team are therefore testing a lower modal shift assessment in the sensitivity run of the preferred option.

[119] Around half of attendees replied to the questions (49 out of 108, or 45%)

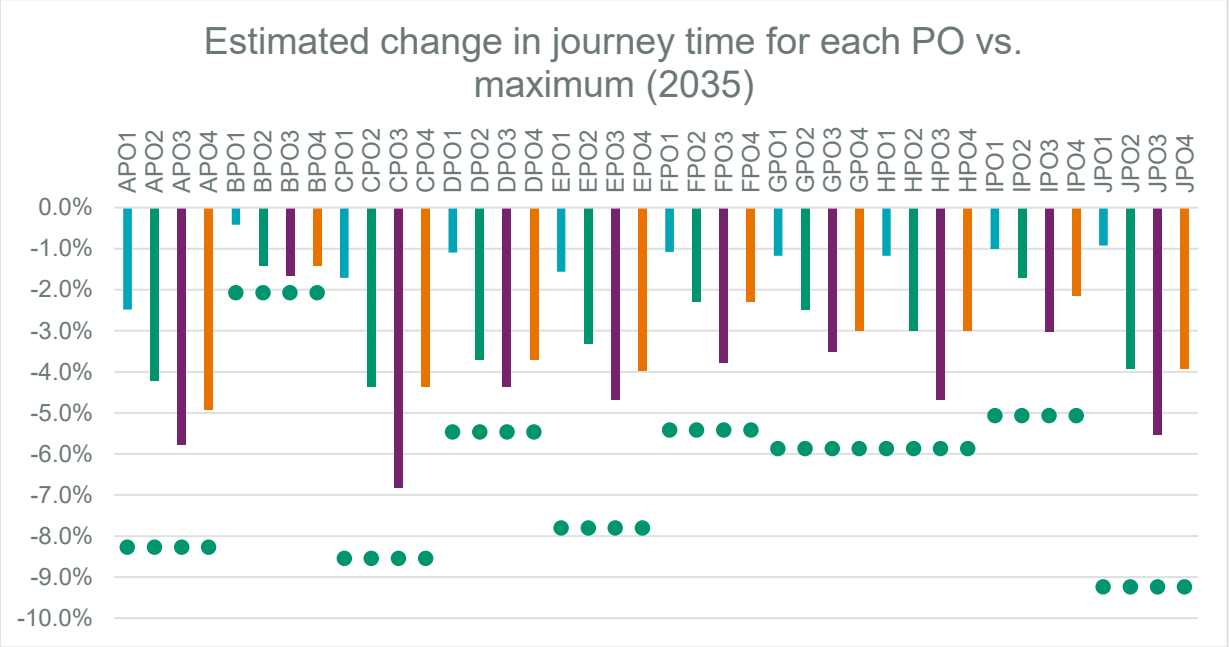
Figure 0-2: Average modal shift in each PO vs. maximum



Source: own elaboration from the MPA model

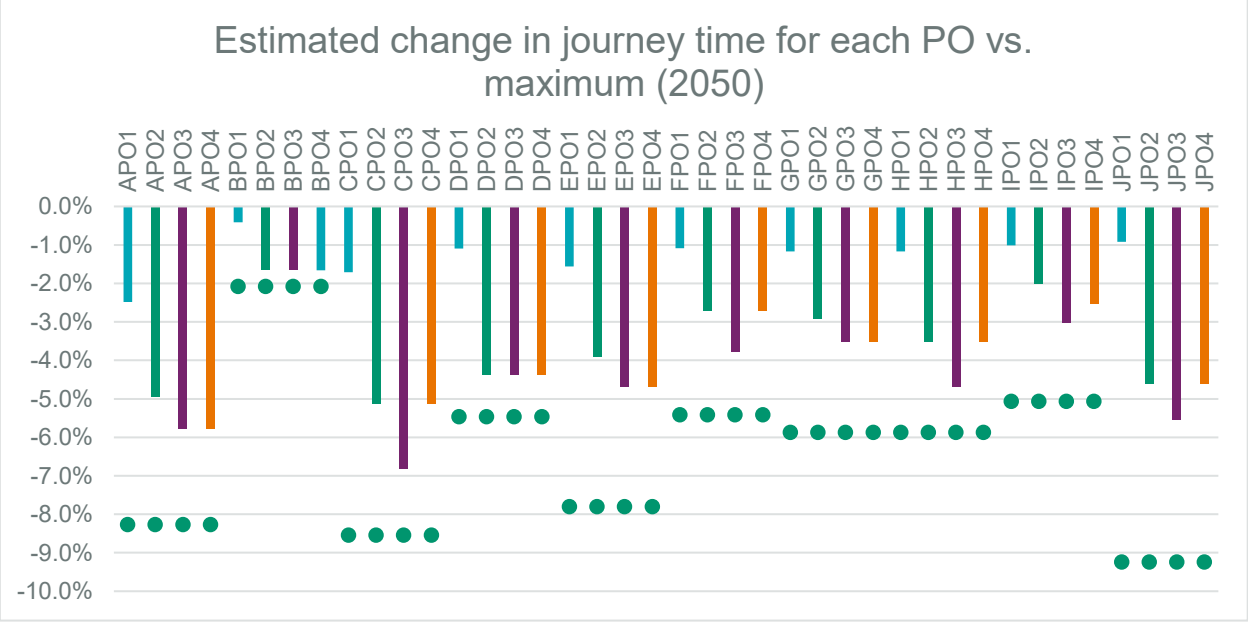
The progress to maximum scores were also applied to the maximum **journey time reduction** assumptions resulting from the 100 OD pairs analysis (see 10.3.3). Results are shown in the figure below, where the code for each bar (e.g. APO1) denotes the cluster (A-) and the policy scenario (-PO1). The maximum reduction in journey time is not the same in each cluster, so we present below the variation by cluster in 2035 (where PO1 and PO3 have delivered their modal shift potential), and in 2050 (after PO2 and PO4 have delivered their modal shift potential). The relationships between the POs are the same as those identified in the modal shift outputs above, since they are based on the same progress to maximum inputs.

Figure 0-3: Estimated change in journey time for each PO compared to the maximum potential for each cluster (in 2035)



Source: own elaboration from the MPA model

Figure 0-4: Estimated change in journey time for each PO compared to the maximum potential for each cluster (in 2050)



Source: own elaboration from the MPA model

10.4 INTERFACE MODULE

10.4.1 Module structure

The Interface Module was developed in this study to convert the outputs of the MPA model for each cluster into modal shift impacts and changes in time (where relevant and/or quantifiable) that can be used for simulations performed by the ASTRA model.

The Interface Module builds on Origin-Destination passenger matrices at NUTS3 level, covering EU27 countries, representing for each specific year:

- Passenger trips between OD pairs by mode,
- The average time of a passenger trip between OD pairs by mode,

The transport modes (and combinations) considered in the OD matrices are:

- **Unimodal:** Car, Rail conventional (regional and intercity), high speed rail, Coach, Air, Ferry (maritime),
- **Multi-modal:** Air+rail, Rail+coach, Air+coach, Car+Ferry, Rail+Ferry, Coach+Ferry, Air+Ferry

The Interface Module was developed using MySQL[120] to handle matrices of over 1.3 million OD pair combinations within the 27 EU Member States. It simulates the impacts in five-years' time steps up to 2050. The module uses the MPA results by cluster as input, performs calculations based on matrices at NUTS3 level and produces changes at aggregate level for modal split and time, in the format that can be fed as input into the ASTRA model.

The starting points of the Interface Module are the TRUST network model[121] and the OD matrices by mode of transport complemented with intra-NUTS3 trips (that were especially needed to consider regional trips in large zones). The regional trips data was derived based on the ASTRA model and EUROSTAT data. Furthermore, additional information was considered for multimodal trips, building on the Eurobarometer 2024 survey, the 2019 JRC EU Survey on issues related to transport and mobility (JRC, 2019)[122], and further literature (PWC, TIS and Steer, 2023). The average time of a passenger trip between OD pairs by mode were derived from the TRUST transport network model, supplemented by the analysis of 100 OD pairs performed as part of this study. The TRUST network model is designed to assign passenger demand by mode to different pathways/routes on the related network. Each route is associated with a cost and travel time based on its distance and characteristics (tolled motorway or main roads, high speed train or conventional services, etc.). This information is weighted based on trips assigned to each route in TRUST to calculate the average time between OD pairs by mode.

Passenger transport demand of the Interface Module evolves over time according to the baseline scenario up to 2050 (i.e. including also TEN-T network development over time, as simulated in the TRUST network model).

10.4.2 Module inputs

The module inputs to simulate the impacts of the Policy Options examined aim to represent the modal shift through two separate mechanisms:

1. Improved identification of alternative travel options and the improved ability to book multi-modal or public transport-based trips
2. Reductions in the average time of multi-modal and rail and coach transport-based trips due to passengers selecting more time-efficient options.

For the first mechanism, modal shift assumptions, differentiated per OD-pair cluster are introduced into the module based on the results of the MPA analysis. For the second mechanism, time savings introduced are

[120] MySQL is an open source relational database management system (RDBMS) that is used to store and manage data. MySQL is chosen due to its reliability, performance, scalability and ease of use, especially when dealing with large datasets.

[121] TRUST (TRansport eUropean Simulation Tool) is a European scale transport network model simulating road, rail and maritime transport for both passengers and freight. (https://www.trt.it/en/tools/trust/)

[122] 2019 version is unpublished, so the 2015 iteration is referenced instead.

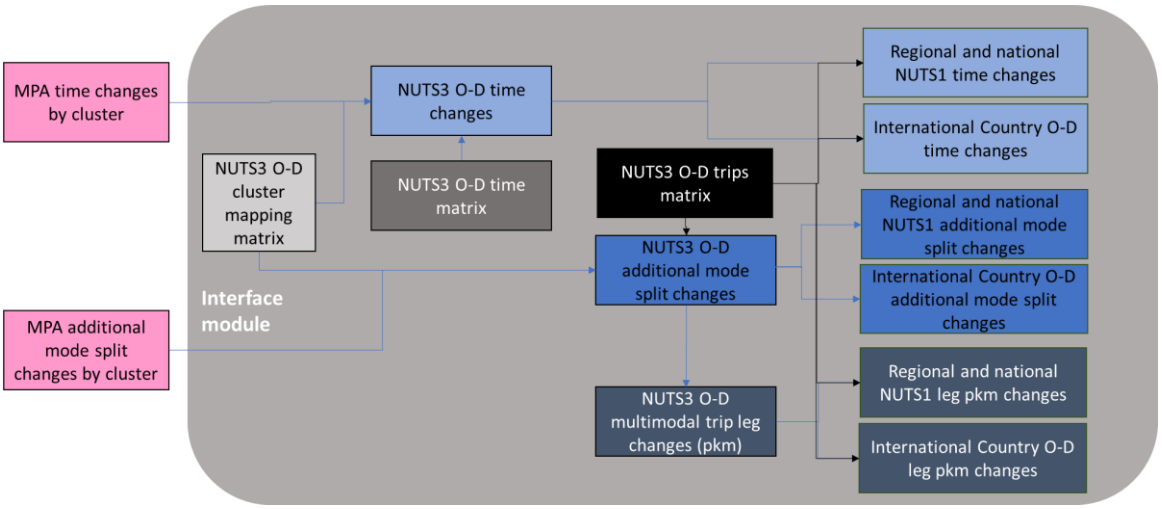
based on the time savings potentials identified in the 100 OD-pair analysis. Both sets of inputs are shown in section 10.3.5.

10.4.3 Application to assess the impacts of the POs

Figure 0-2 provides an overview of the Interface Module structure and illustrates how MPA output by cluster is converted into input for the ASTRA model according to the following steps:

1. First, the clusters defined for the MPA module are mapped into the OD input structure of the Interface Module. Each OD pair at NUTS3 level is associated to the clusters identified in this study (by journey type, MDMS advancement of MS, OD attractiveness) so that expected impacts within each cluster can be used to build up the impacts at EU level. Under the assumption that the same level of impact can be considered in all OD pairs of the same cluster, the outputs of the MPA module are applied in terms of relative changes. Of course, not all modes are available in all OD pairs of the same cluster and therefore differences are considered in this sense. Furthermore, it is assumed that trips above 1500 km (mainly performed by air) are not sensitive to the implementation of the POs[123]: thus, the related OD pairs are not affected by the changes. With the mapping of the clusters, the matrices of cost, time and additional modal split changes are estimated for each NUTS3 OD pair by mode (including multimodal combinations). The corresponding matrices are estimated as soon as MPA changes by cluster are quantified.

Figure 0-2: Interface module structure for converting the MPA output to the ASTRA model format



2.Second, the NUTS3 OD matrices by mode are aggregated according to the ASTRA transport demand format, by Member State and at EU level. This requires a twofold approach: on one hand to aggregate the detailed modes according to the main mode of transport, on the other hand to aggregate the OD pairs according to the journey type and geographical segmentation applied in the ASTRA model. The correspondences between modes and main modes and between the NUTS3 OD matrix and ASTRA format are reported in the following tables, while Figure 0-3 provides an example of the mapping of OD pairs, from cluster to the ASTRA format.

Table x0-11: Conversion from multimodal trips to ASTRA main mode approach

	Air+ rail	Rail+ coach	Air+ coach	Car+ Ferry	Rail+ Ferry	Coach+ Ferry	Air+ Ferry
Air	x		x				x

[123] as it is unlikely that further service integration would lead to any modal shift away from air in pairs where air transport has such a significant time advantage.

	Air+ rail	Rail+ coach	Air+ coach	Car+ Ferry	Rail+ Ferry	Coach+ Ferry	Air+ Ferry
Rail		x			x		
Coach						x	
Car				x			

Table x0-12: Aggregation of OD by journey type into the ASTRA model format

Journey type	Interface module	ASTRA model
Regional[124] (within country)	Nuts3 – nuts3	Intra nuts2 / nuts1 to nuts1
National (interregional)	Nuts3 – nuts3	Nuts1 to nuts1
International (including cross-borders)	Nuts3 – nuts3	Country to country

Figure 0-3: Example of conversion from NUTS3 OD matrix to the ASTRA model format

origin					destination					distance	Journey type	ASTRA		
Country	NUTS3 code	NUTS2 code	NUTS1 code	Zone Name	Country	NUTS3 code	NUTS2 code	NUTS1 code	Zone Name	km		segment	zone orig	zone dest
AT	AT130	AT13	AT1	Wien	AT	AT211	AT21	AT2	Klagenfurt-Villach	360	national long	national	AT1	AT2
AT	AT123	AT12	AT1	Sankt Pölten	AT	AT130	AT13	AT1	Wien	64	regional	national	AT1	AT1
AT	AT123	AT12	AT1	Sankt Pölten	AT	AT122	AT12	AT1	Niederösterreich-Süd	70	regional	regional	AT12	AT12
AT	AT123	AT12	AT1	Sankt Pölten	AT	AT311	AT31	AT3	Innviertel	200	national long	national	AT1	AT3
AT	AT130	AT13	AT1	Wien	BE	BE100	BE10	BE1	Bruxelles-Capitale	1100	international	international	AT	BE
AT	AT123	AT12	AT1	Sankt Pölten	BE	BE100	BE10	BE1	Bruxelles-Capitale	1050	international	international	AT	BE
AT	AT123	AT12	AT1	Sankt Pölten	BE	BE212	BE21	BE2	Arr. Mechelen	1050	international	international	AT	BE
AT	AT334	AT33	AT3	Tyrolean Oberland	IT	ITH10	ITH1	ITH	South Tyrol	165	international	international	AT	IT
AT	AT334	AT33	AT3	Tyrolean Oberland	IT	ITC4C	ITC4	ITC	Milano	400	international	international	AT	IT
AT	AT334	AT33	AT3	Tyrolean Oberland	IT	ITI43	ITI4	ITI	Roma	800	international	international	AT	IT
IT	ITC4C	ITC4	ITC	Milano	IT	ITC15	ITC1	ITC	Novara	51	regional	national	ITC	ITC
IT	ITC4C	ITC4	ITC	Milano	IT	ITC48	ITC4	ITC	Pavia	42	regional	regional	ITC4	ITC4
IT	ITH31	ITH3	ITH	Verona	IT	ITC47	ITC4	ITC	Brescia	69	regional	national	ITH	ITC
IT	ITH35	ITH3	ITH	Venezia	IT	ITC4C	ITC4	ITC	Milano	280	regional	national	ITH	ITC

To complete this step, concerning the modal split, the changes by OD are applied to the matrix of trips by mode, aggregated according to the ASTRA format and then estimated in terms of modal split changes in line with the ASTRA segmentation (NUTS1 for regional / national and country to country for international). Concerning the average time changes per passenger trip, the matrix of trips by mode is used to weight OD values to obtain the average changes per passenger trip according to the ASTRA segmentation.

3.Third, the estimated multimodal trips changes are translated into inputs for the ASTRA model, where the approach of the main mode of transport is applied. To do so, the pkm of the main and feeder modes are rebalanced with a specific procedure[125].

The relative weight in terms of trips between OD pairs associated with the different clusters influences the aggregated input used in the ASTRA model.

[124] Excluding urban and suburban trips

125 In fact, the Interface Module also considers the shift towards multimodal trips, as a result of the outputs of the MPA module for each cluster. However, when these multimodal trips are associated with their main mode, the pkm of the main mode are overestimated and those of the feeder mode are underestimated. To compensate for this and rebalance the output, a set of potential interchange zones is predefined for each zone (e.g. within a defined distance buffer) in order to estimate the distance of each segment of the multimodal trip (e.g. the rail leg and the air leg in a rail-air trip). This enables to re-estimate in detail the changes in pkm considering the modes involved in multimodal trips, and this is used as input to adjust pkm in the ASTRA model. This enables the environmental and transport impacts to be calculated coherently.

10.5 ASTRA MODEL

10.5.1 Model structure

ASTRA (ASsessment of TRAnsport Strategies) is an integrated assessment model for strategic policy assessment in transport and energy.

It covers EU27 countries plus the United Kingdom, Norway and Switzerland, and integrates nine modules linked together in manifold ways: a vehicle fleet module, transport module, emission and accident modules, population module, external trade and economic module, employment and investment modules.

The model is based on the System Dynamics approach and built in Vensim®; it runs until the year 2050.

The economic module simulates most fundamental economic variables. Some of these variables (e.g. GDP) are transferred to the transport generation module, which uses the input to generate a distributed transport demand.

In the transport module, demand is split by mode of transport. The traffic performance by mode is associated with the composition of the fleet (computed in the vehicle fleet module) and the emissions factors (defined in the environmental module), in order to estimate total emissions.

Several feedback effects take place in the ASTRA model. For instance, the economic module provides the level of income to the fleet module, in order to estimate vehicle purchase. The economic module then receives information on the total number of purchased vehicles from the fleet module to account for consumption and investment for transport purposes. Furthermore, changes in the economic system feed into changes of the transport behaviour and alter origins, destinations and volumes of European transport flows.

The environment module uses input from the transport module (in terms of vehicle-kilometres-travelled per mode and by region /country) and from the vehicle fleet module (in terms of the technological composition of vehicle fleets), in order to compute fuel consumption, greenhouse gas emissions and air pollutant emissions from transport.

A detailed description of the model is available at http://www.astra-model.eu/index.htm and information on its applications are reported at https://www.trt.it/en/tools/astra/. Furthermore, here is the MIDAS link: https://web.jrc.ec.europa.eu/policy-model-inventory/explore/models/model-astra

ASTRA is calibrated to reproduce major indicators such as transport performance, fuel consumption, CO_2 emissions and GDP according to the baseline scenario described in Chapter 5.1 for future trends.

Data inputs

The main data sources for inputs to the ASTRA model, such as for activity and energy consumption, come from EUROSTAT databases and from the Statistical Pocketbook EU transport in figures[126]. Excise taxes are derived from DG TAXUD excise duty tables. Other data comes from different sources such as research projects (e.g. New Mobility Pattern projects) and reports. In the context of this study, the ASTRA transport model is calibrated to 2005, 2010, 2015 and 2020-2023 historical data. The baseline scenario of the ASTRA model has been calibrated on the PRIMES-TREMOVE results.

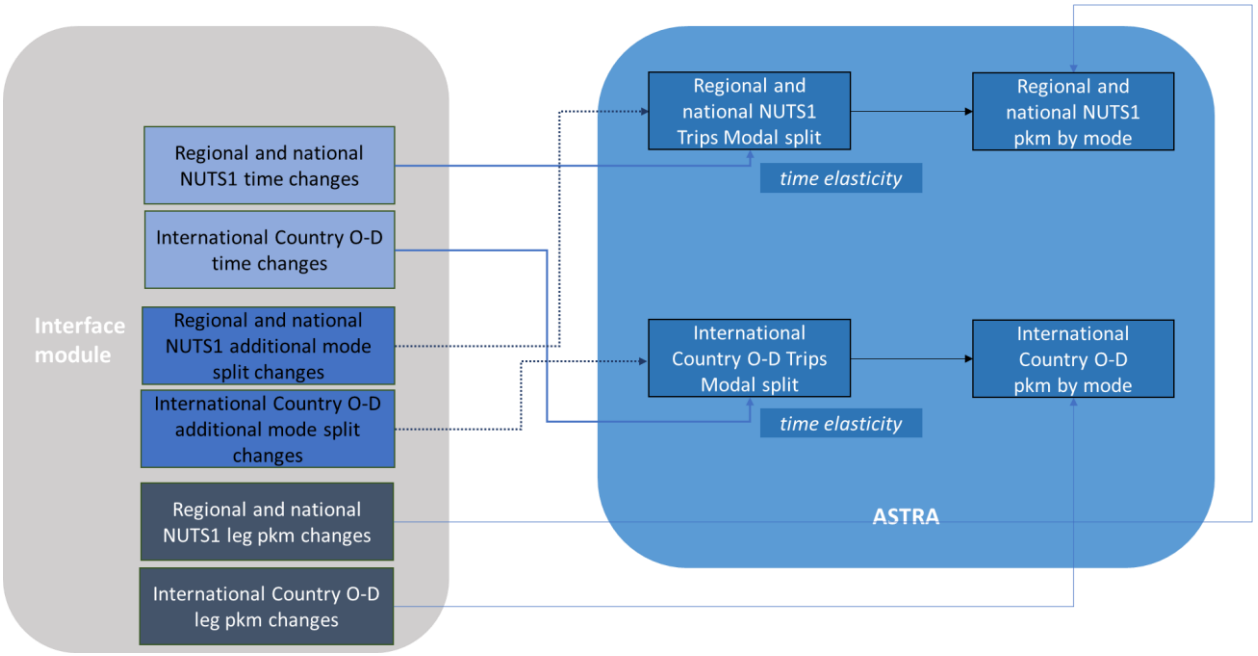
10.5.2 Assessment of the impacts of the POs

For simulating the impacts of the policy options in this study, the inputs from the interface module in the form of time changes and additional modal shift, enter the ASTRA model which then estimates the overall transport impacts, and the related environmental, economic, and social effects.

An overview of the ASTRA model application and the input for simulating the POs is provided in Figure 0-4.

[126] Statistical pocketbook 2025 - Mobility and Transport - European Commission

Figure 0-4: ASTRA model application for the quantitative assessment of impacts



The core outputs of the interface module by mode for each PO (in terms of time and additional modal split changes) are provided in the ASTRA transport demand format: at NUTS1 level for regional and national changes and at Country-to-Country level for international changes relative to the baseline. Also, the output is expressed in terms of main mode of transport, i.e. associated with the mode used for the longest part of the trip (air-rail combination is assigned to air mode, rail-coach to rail, etc.).

These inputs feed into the passenger demand module for each specific geographical domain (regional, national, international) and are then used in the modal split process performed by ASTRA. Time changes are applied on top of the evolution of the baseline and then the model estimates the resulting mode split based on the endogenous elasticity parameters. Furthermore, on top of this process the additional modal split changes are applied to reflect the impact of having complete and accurate information, as well as the ability to book on MDMS platforms.

Finally, the changes in pkm (based on distance travelled by mode in each leg) from the interface module are used to consider also changes in multimodal trips that, following the ASTRA model approach, have to be aggregated to the main mode. This allows to align the passenger-km travelled by mode for the consequent assessment of environmental impacts. As an example, an increase in multimodal trips by “coach-rail” is assigned to rail as main mode in ASTRA, but the alignment of distance travelled in each leg of the trip allows to consider also an increase of passenger-km by coach as part of that multimodal trip and consequent reduction in the distance travelled by rail (rather than the entire distance being associated with the rail mode).

Therefore, the ASTRA model components used in this exercise are:

- The **passenger demand module**, which calculates the transport activity by main mode (car, bus, train, air). This is directly affected by the POs. Based on transport activity (pkm), modal-split is estimated and using occupancy rates car vehicle-km are also provided. Transport demand by mode feeds into the environment module, the vehicle fleet model and the economic model.
  - The **vehicle fleet module**: the model depicts the car fleet development of each MS covering the different drivetrains and the cohort based aging process of cars. The model is linked to the passenger module. This is not directly influenced by the POs.
  - The **economic module** is triggered by inputs from passenger module (expenditures of households on mobility) and the vehicle fleet module (car purchase private and commercial). This is not directly influenced by the POs but affected by changes in transport activity.

- The **environment module** is fed from the passenger module and the vehicle fleet module to combine vehicle-km travelled with the efficiency and technological evolution of the fleet (for car and buses but also train and airplanes). It provides expected GHG emissions from transport by MS, air pollutants exhaust emissions (CO, VOC, NO_x and PM2.5) and energy demand. Road accidents are also estimated based on vehicle-km travelled.

ASTRA finally provides output results by Member State and by 5-year steps up to 2050 on:

- Passenger transport activity (including modal shares, passenger-kilometres, etc.).
- GHG emissions and air pollutant emissions (CO, NOx, VOC, PM2.5) for passenger transport, for all relevant transport modes.
- Energy consumption for passenger transport, for all relevant transport modes.
- Road fatalities and injuries, and other external costs of transport.
- Changes in average expenditure per person for interurban mobility relative to the baseline.

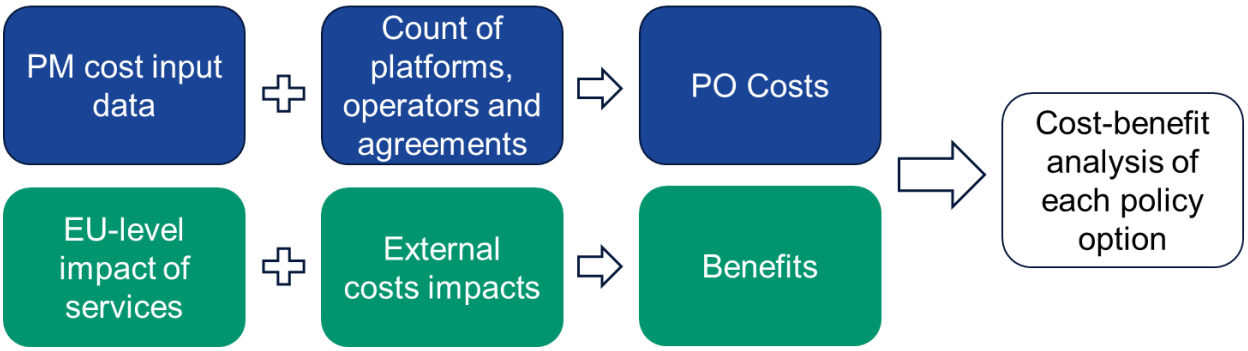
10.6 COST BENEFIT ANALYSIS (CBA) MODULE

The Cost Benefit Analysis (CBA) module is the final part of the modelling framework that is used to calculate the costs or benefits of policy measures, and compare the costs and benefits of each policy option.

The CBA estimates the cost of each policy option by combining the details of MDMS deployment, such as the number of platforms and operators, with cost data. It calculates both the individual cost of each policy measure and the total cost of each PO. Costs include a range of adjustment, enforcement, and administrative costs for public and private stakeholders, in line with the EC Better Regulation typology guidance. Section 10.6.2 provides a measure-by-measure description of the calculations.

In parallel, the model calculates the monetised impacts on external costs for each policy option relative to the baseline by combining the EU27-level impact of deployed services (based on ASTRA outputs) with the corresponding unit external cost values. Where external costs of the policy options are reduced relative to the baseline, these are described as benefits. This includes, for example, the external costs of accidents or the external costs of CO_2 emissions. The implementation costs can then be compared with the estimated benefits (costs avoided relative to the baseline) to calculate net benefits for each policy option. An overview of the CBA module is provided in Figure 0-5 below.

Figure 0-5: CBA module approach overview



Further information on the key inputs to the CBA module are provided below.

PM cost input data

- An assessment of each policy measure determines the type of costs that would be incurred by different stakeholders, in line with the Better Regulation Toolbox cost typology.

- Costs are typically based on estimates of effort required by personnel in the public and private sector. For example, effort to coordinate and develop new standards and guidelines, effort by authorities to enforce obligations and effort by platforms and operators to implement data sharing APIs and reprogramme service displays.
- Section 10.6.2 discusses the cost input data in more detail.

Parameters used for estimating the PM cost (count of platforms, operators, and agreements)

- MDMS service deployment rates (calculated in the MPA ad-hoc module) provides a reference dataset for the development of MDMS across the EU27, which varies by PO.
- The current number of platforms is based on primary research and is projected towards the future in the baseline and each policy option.
- The number of agreements between MDMS and operators is calculated for each year, considering the total agreements in place and the annual new and renewed agreements.
- The number of operators involved in MDMS is calculated from the estimated number of platforms and active agreements, and cross-checked against an estimate of the total number of passenger transport operators in operation across EU27.
- Section 1.6.2 discusses the parameters used for estimating the PM costs in more detail.

EU-level impact of services

- The MPA module calculates the development of MDMS coverage and impacts over time. These are the impacts of MDMS uptake and use across the different trip types and country groupings.
- These are fed into the ASTRA modelling environment, which calculates EU-level impacts in terms of changes in congestion/average journey speed, fuel consumption, CO_2 emissions, air pollutant emissions and number of accidents relative to the baseline.
- ASTRA outputs are then used in the CBA to calculate the changes in external costs.
- ASTRA outputs are summarised in the main report (see Chapter 6 on the impacts).

Changes in external costs

- The EU-level impacts on CO_2 emissions, air pollution emissions and number of accidents are multiplied with the unit external costs to calculate changes in external costs relative to the baseline in the CBA.
- The unit external costs draw on the 2019 Handbook of external costs of transport[127] and are summarised in Section 0 below

10.6.1 Baseline

This section summarises the baseline factors used to estimate costs across different policy measures.

10.6.1.1 Platforms

The projection of the number of MDMS platforms operating across Member States is used to reflect the implementation of several PMs, and therefore their associated costs. The methodology for estimating how the number of platforms evolves over time is based on multiplying the number of platforms in a 'mature market' by an assessed percentage of 'service coverage' in the baseline, or in other words the progress achieved in the baseline towards the mature market. This methodology requires the following inputs:

a. Current number of MDMS platforms (2025);

b. Evolution over time (2025-2050), based on assumptions regarding the evolution of service coverage.

This section summarises these estimates and their underlying assumptions.

a. Current number of MDMS platforms (2025)

[127] https://op.europa.eu/en/publication-detail/-/publication/9781f65f-8448-11ea-bf12-01aa75ed71a1

A database of MDMS platforms currently operating across EU was first created based on desk research. Only platforms with relinking capabilities or better (i.e. direct booking functionality) were included – those only providing information on travel offerings do not actually provide the ability to purchase tickets and are out of scope. Likewise, platforms operating only within cities (a.k.a. 'urban') were excluded. The initial estimate was increased by 25% to account for the fact that the information available in the database is not comprehensive[128] - a thorough online search was performed, but is likely that platforms (particularly in local languages and/or that do not pay for sponsored placement on search engines) may have been missed.

A general observation is that many B2C platforms operate at regional level or serve consumers in a handful of Member States, whereas B2B platforms (dominated by the air ticket distribution channel) tend to offer tickets EU-wide. We therefore separate the count of platforms accordingly in Table 0-13.

Table 0-13: MDMS Platforms in 2025 by platform type and business model

Platform type	Business type	No. platforms (LE + SME)	Of which SMEs
MS-specific			
Indispensable rail	B2C	19	0
Indispensable other	B2C	4	0
Other (mostly OTA)	B2C	102	55
Total	**B2C**	**125**	**55**
EU-wide			
Indispensable rail	B2C	0	0
Indispensable other[129]	B2C	3	0
OTA	B2C	26	9
TMC[130]	B2C	63	30
MSE	B2C	50	23
NCA[131]	B2B	94	72
CRS / GDS	B2B	3	0
Total	**B2C + B2B**	**239**	**134**
Total (MS-specific and EU-wide)			
	B2C	266	116
	B2B	98	72
	B2C + B2B	**364**	**189**

Source: Ricardo analysis

[128] There is no European database of these services. Not all existing platforms may be identifiable through desk research due to the way they define or market themselves. Therefore, our database is assumed to not be comprehensive.

[129] There is uncertainty with this figure due to limitations with data in particular for MSE, OTAs.

[130] https://www.businesstravelnewseurope.com/Europes-leading-TMCs/2025/Europe-rankings

[131] https://a4e.eu/wp-content/uploads/A4E-intermediaries-study_FINAL-02.pdf

Platforms were distributed among the three groupings (i.e. leader, planned adopter and follower) based on the country of origin for MS-specific platforms, and for EU-wide platforms these were distributed among the groupings proportional to their total populations.

Table -: MDMS platforms 2025 by grouping

Business type	Grouping	No. Platforms (LE + SME)	Of which SMEs
B2C	Leader[132]	116	51
B2C	Planned adopter[133]	112	49
B2C	Follower[134]	38	16
B2C	**Total**	**266**	116
B2B	Leader	37	28
B2B	Planned adopter	45	33
B2B	Follower	16	12
B2B	**Total**	**98**	72
B2C + B2B	Leader	154	78
B2C + B2B	Planned adopter	157	82
B2C + B2B	Follower	53	28
B2C + B2B	**Total**	**364**	189

Source: Own elaboration from CBA model

b. Evolution over time

The deployment of MDMS platforms is assumed to converge towards a number of platforms in a 'mature market', linked to an expansion of service coverage and service level. This mature market represents the level that is expected to be reached as service deployment approaches full coverage. The assumptions made regarding a mature MDMS platform ecosystem generally imply an expansion of platform numbers in order to improve service coverage. However, we acknowledge that existing platforms could also improve their offerings, which could further lead to a consolidation towards a lower number of platforms without negatively impacting offerings for consumers.

The characterisation of a mature market was derived based on the leader group. A 'platforms per capita' metric was calculated for the leader MS, estimated by dividing the number of platforms available in the MS by the total population.[135] A weighted average was then taken across the leaders based on population, resulting in 2.25 platforms per million people. This scaling factor is then applied to the population corresponding to the planned adopters and followers group to yield the totals presented in Table 0-14 below.

Table 0-14: Assumption on the number of platforms by grouping in a mature market

Country Grouping	Assumed number of platforms per million capita in a 'mature market'	Total population	Estimated total number of platforms in the EU27 in a 'mature market'
Leaders	2.25	171,414,582	385
Planned Adopters	2.25	206,267,080	464
Followers	2.25	71,624,522	161

[132] Country of origin for the leader platforms include DE, AT, DK, LU, FI, ES and NL.

[133] Country of origin for the planned adopter platforms include FR, PL, IT, BE, PT, MT, CY, EL, BG and EE.

[134] Country of origin for the follower platforms include HR, LT, HU, SE, CZ, IE, SI, LV, RO and SK.

[135] The platforms per capita metric was estimated as the sum of two terms: MS-specific platforms divided by MS population, and EU-wide platforms divided by EU-27 population. The second term was therefore the same for all MS, but reflects that all MS have access to some EU-wide platforms.

Country Grouping	Assumed number of platforms per million capita in a 'mature market'	Total population	Estimated total number of platforms in the EU27 in a 'mature market'
Total	2.25	**449,306,184**	1010

Source: Own elaboration from CBA model

The development over time for each grouping between the base year and mature market is linked in the calculations to the projection of services deployment calculated in the MPA module. This score is also used to project service coverage and thus the progress towards a 'mature market'. The logic for the baseline scoring within the MPA is explained in Table 0-15 below.

Table 0-15: QP scoring logic within the MPA in the baseline towards a 'mature market'

Scenario	Logic for impact on QPs
Baseline	**QP1: Completeness and accuracy of info** Direction of impact expected to be **neutral or positive**, with impact scores ranging from **0 to +1**: With the expected increase in the deployment of MDMS platforms and tickets sold via MDMS, it can be expected that, to some extent, an increased integration of rail operators in MDMS platforms will be visible. Industry initiatives, such as the CER Ticketing Roadmap, foresee actions to increase the visibility of different fares and enable the purchase of international and domestic tickets through a wider range of distribution options, including online apps. This suggests that although at least within the group of incumbent rail operators, an increased sharing of ticketing data can be expected, as CER members commit to increase the availability of tickets. However, the voluntary nature of these actions, and the lack of provisions against excluding platforms and other operators from reciprocal agreements, could possibly result in this integration following the currently observed patterns where the data sharing approach is dictated by commercial interests preventing a full integration of the transport offering in all relevant third-party platforms. With the ongoing opening of the rail market, new private operators are expected to increase their market share in the rail passenger services market. These private players have a stronger interest to sell their tickets using the most diverse range of distribution channels, as these tickets are their sole source of income. A consequence of the limited expected further integration of rail services into MDMS platforms is the limited completeness of the rail offering on the MDMS platforms. Further, even in the cases in which transport offerings are integrated in MDMS platforms, this does not secure that the information made available to different platforms will always be of the same quality as there is evidence of preferential treatment both on the side of transport operators and that of MDMS when choosing what information will be shared or promoted at different ticket distribution platforms. Therefore, a limited level of progress is expected in this respect. **QP2: Ability to book** Direction of impact expected to be **neutral or positive**, with impact scores ranging from **0 to +1**: The user experience and ease of planning and booking a multi-modal or multi-operator trip is one of the factors recognised as affecting the modal choice for a journey, as showcased by the Eurobarometer survey findings (see market report section 2.1 in Annex B). With the increasing deployment and expanding scope of MDMS platforms, more passengers are expected to find such platforms useful to plan their trips. As platforms evolve and gain a better understanding of their users, further innovations are expected to improve the user experience over time, but the incentive to do so is limited due to the lack of a regulatory framework conducive to creating a level playing field that would further encourage such ventures (see also expected evolution of Problem 2).

As explained in section 10.3.4, scores are assessed on a scale of 1-5, meaning that a score of 1 would correspond to a 'progress to a mature market' score of 20% in 2050. A linear improvement between the present and 2050 is assumed (see Table 0-16 below).

Table 0-16: Assumptions on additional service coverage resulting from the baseline, relative to 2025

Scenario	Grouping	2028	2030	2040	2050
Baseline	Leader	0%	1%	5%	10%
Baseline	Planned adopter	0%	2%	11%	20%
Baseline	Follower	0%	2%	11%	20%

Starting from the baseline service coverage, equal to the current number of platforms over the theoretical optimum (for Leaders: 154/385 = 40%), the above metrics for additional service coverage are applied as a percentage increase (Leaders in 2050: 40% * (1+10%) = 44%) and then multiplied by the optimal (Leaders 385) to yield platforms in each projection year (Leaders in 2050: 169). Outputs for the baseline are shown in Table 0-17 both by country grouping and overall.

Table 0-17: Estimated number of platforms across the EU27 in the baseline scenario.

	Number of platforms in the baseline in EU27			
Grouping	**2028**	**2030**	**2040**	**2050**
Leaders	154	155	162	169
Planned Adopters	157	160	174	188
Followers	53	54	59	64
Total	**364**	**369**	**395**	**421**

Source: Own elaboration from CBA model

10.6.1.2 Operators

Data on the number of operators active in the EU were collected in order to scale costs related to obligations on operators. The table below reflects all operators in the EU as captured from Eurostat and a variety of other corroborating sources (provided in footnotes). In the baseline, these are assumed constant over time.

Table 0-18: Total number of passenger transport operators that could be involved in multi-modal travel offerings. Assumption that the number of operators will remain constant over time.

	Passenger land transport[136]	Passenger rail[137]	Sea and inland water[138]	Passenger air[139]	Total
All operators	3,778	158	523	331	**4,790**
Of which SME	3,211	9	518	0	**3,739**

Source: Own elaboration from CBA model

A further breakdown is provided for passenger rail given that some policy measures only affect subsets of operators in this mode (PSO, cross-border, with SMEs excluded) – see Table 0-19 below.

[136] Source: Eurostat, number of operators in 2023

[137] Source: desk research based on websites of railway regulators, RUs and competent authorities.

[138] Source: Eurostat, number of operators in 2023

[139] Considering Category A active operating licences (ACOL) for passenger services. Category A operating licences refer to operators of aircraft with 20 or more seats. This categorisation is in line with Regulation (EC) No 1008/2008 on air services.

Table 0-19: Total number of rail passenger transport operators by geographic scope, PSO offering, and enterprise size

Geographic scope	Public Service Obligation (PSO)	Size	No. operators
Domestic	PSO	LE	112
		SME	7
	Non-PSO	LE	8
		SME	0
Cross-border	PSO	LE	0
		SME	0
	Non-PSO	LE	5
		SME	2
Total			**158**

10.6.1.3 MDMS-Operator Agreements

The number of agreements between platforms and operators across MSs is used for deriving several PM costs.

The number of agreements is calculated by multiplying the number of platforms (as described in Section 10.6.1.1) by the number of operators engaged with each platform. The number of operators that each platform engages with will differ depending on factors like the modal scope of the platform, its geographical coverage, and its intended level of comprehensiveness of service offerings. Simplifying assumptions have been made to quantify the number of agreements being negotiated, with emphasis placed on the relative impact of each policy measure rather than the specific number of agreements. The impact on the robustness of the CBA is small though as it is the differences between the PO's which drive the costs, rather than the accuracy of the total number of agreements in any one year.

An analysis was conducted on European MDMS to assess the number of transport operator partnerships each MDMS maintains. This review excludes EU-wide B2B platforms, which are assessed separately (and are assumed to have partnerships/agreements with all operators EU-wide and also large rail operators, given recent expansions of these platforms into the rail ticketing sector). The review found that, of the 20 MDMS identified where it was possible to identify the number of operator partnerships, MDMS operating in national/regional scopes naturally offered far fewer operator services from than EU-wide platforms, and likewise MDMS offering one mode of transport generally had fewer partnerships than MDMS offering multiple modes of transport. Table 0-20 below shows the summarized findings[140]. Among the national/regional MDMS, the number of operator partnerships ranged from 8 to 100, with a mean of 28 and a median of 20. For intra-European/EU-wide MDMS, partnerships ranged from 16 to 500, with a mean of 189 and a median of 40.

Table 0-20: Number of transport operators in partnerships with a sample of MDMS platforms, split by national/regional and EU-wide platforms

National/regional platforms		EU-wide platforms	
MDMS platform	**# operator partners**	**MDMS platform**	**# operator partners**
ARGE ÖVV	100	Omio	500
reittiopas	50	Rome2rio	423
Open Move Way	30	Trainline	270
Glimble	25	Interrail	40
Mobimeo	22	Tranzer	40
Wien Mobil	20	Eurail	35

[140] Of the 20 MDMS reviewed, exact totals for the number of transport operator partnerships were available for 8 systems: *Omio, Trainline, Interrail, Tranzer, Eurail, Wien Mobil, Upstream,* and *AccessRail*. For the remaining 12 systems - *Rome2rio, ARGE ÖVV, reittiopas, Open Move Way, Glimble, Mobimeo, HannoverMobil, Gaiyo, Turnn, OV Chipkaart, Natur Trip,* and *Ruter* - the totals are based on best available estimates. These estimates draw on publicly accessible information about known partnerships and network coverage, and were developed through analysis conducted by Ricardo.

National/regional platforms		EU-wide platforms	
HannoverMobil	20	AccessRail	16
Gaiyo	20		
Upstream	20		
Turnn	17		
OV Chipkaart	15		
Natur Trip	10		
Ruter	8		
Average	28	**Average**	189
Median	20	**Median**	40

Source: Ricardo analysis of online sources (various)

The resulting number of agreements in the baseline is shown in the table below, differentiated between total active agreements, new agreements negotiated each year, and agreements that need to be renewed. The agreements are assumed to undergo renegotiation every three years. This is consistent with a survey on CRS conducted in 2021 where CRS providers and air carriers indicated that the average contract length is around three years. Using these inputs, a projection of new annual agreements each year in the baseline scenario is calculated.

Table 0-21: Agreements made between MDMS platforms and transport operators in the baseline

Scenario	Agreement type	2028	2030	2040	2050
Baseline	Total	**48,624**	**49,321**	**52,808**	**56,295**
	New	-	349	349	349
	Renew	16,208	16,440	17,603	18,765

10.6.2 Parameters used for estimating PM costs in the Policy Options

10.6.2.1 Platforms

Similarly to the baseline, the deployment of MDMS platforms in the policy options is projected based on the assumed level of progress towards the number of platforms in a 'mature market', linked to the expansion of service coverage and service level. The 'mature market' represents the level that is expected to be reached as service deployment approaches full coverage.

The number of platforms is projected to increase in all policy options relative to the baseline due to the enhanced ability of MDMS platforms to display more travel options, promoting competition in the online ticketing market. This is assumed to imply an increase in the number of MDMS platforms although it should be acknowledged that existing platforms could also improve their offerings, which could lead to a consolidation towards a lower number of platforms. Such consolidation is assumed to take place towards 2050 in the projections. However, it should be acknowledged that the consolidation could also take place earlier. Thus, the costs for the MDMS platforms should be regarded as the upper bound.

PO1 is projected to result in the lowest number of additional MDMS platforms relative to the baseline (10 in 2030, 45 in 2040 and 19 in 2050) for all time horizon under assessment. In 2030, the sharing obligation (PM13) provides more opportunities for new platforms than in PO1. The effect is the highest in PO2 relative to the baseline (29 additional platforms in 2030), since in PO3 some platforms would anticipate a broader offer by the incumbents due to the hosting obligation (PM14) and see less margin for an alternative offer and thus new platforms (26 additional platforms relative to the baseline in 2030). The effect in PO4 is between that of PO2 and PO3 (27 additional platforms relative to the baseline in 2030) because the new platforms are expected to perceive the unbundled platform as a less strong competitor, once it is no longer tied to the incumbent rail operators. In 2040, in PO2 the incumbent platforms are expected to continue to show a limited offer, and new

platforms would exploit the opportunities that this creates. PO2 thus results in 282 additional platforms relative to the baseline in 2040. In PO3, incumbent platforms provide a full offer, and customers have no reason to switch. The number of new additional platforms is thus expected to be lower than in PO2 (235 additional platforms relative to the baseline in 2040). PO4 sits between PO2 and PO3, since the unbundled platforms are not as strong as the vertically integrated ones and leave more space for the new platform (258 additional platforms relative to the baseline in 2040). By 2050, the market is expected to converge towards the same number of platforms in PO2, PO3 and PO4 (209 additional platforms relative to the baseline). In PO2, the strong competition between platforms is expected to erode the legacy advantage of the incumbents. This creates an intense competition leading to a consolidation of the sector. In PO3 no change is expected relative to 2040, while in PO4 some consolidation also takes place but to a lesser extent than in PO2.

Table 0-22: Assumptions on the additional service coverage in the policy options relative to 2025, by grouping

	Grouping	2028	2030	2040	2050
Baseline	Leader	0%	1%	5%	10%
Baseline	Planned adopter	0%	2%	11%	20%
Baseline	Follower	0%	2%	11%	20%
PO1	Leader	0%	5%	23%	23%
PO1	Planned adopter	0%	4%	20%	20%
PO1	Follower	0%	4%	20%	20%
PO2	Leader	0%	8%	80%	68%
PO2	Planned adopter	0%	10%	91%	78%
PO2	Follower	0%	10%	91%	78%
PO3	Leader	0%	7%	68%	68%
PO3	Planned adopter	0%	9%	78%	78%
PO3	Follower	0%	9%	78%	78%
PO4	Leader	0%	8%	74%	68%
PO4	Planned adopter	0%	10%	84%	78%
PO4	Follower	0%	10%	84%	78%

Source: Ricardo et al. (2026), Impact assessment support study

The analysis takes into consideration all different types of platforms and differences between Member States, grouping them into three categories: 'leaders[141]', 'planned adopters[142]', or 'followers[143]', based on the current number of MDMS platforms and the number of users of these platforms.

Table 0-23: Assumed evolution in number of platforms, all POs (2028-2050)

Grouping	2028	2030	2040	2050
Baseline				
Leaders	154	155	162	169
Planned Adopters	157	160	174	188
Followers	53	54	59	64
Total	364	369	395	421
PO1				
Leaders	154	160	188	188
Planned Adopters	157	163	188	188

[141] Germany, Austria, Denmark, Luxembourg, Finland, Spain, Netherlands
[142] France, Poland, Italy, Belgium, Portugal, Malta, Cyprus, Greece, Bulgaria, Estonia.
[143] Croatia, Lithuania, Hungary, Sweden, Czech Republic, Ireland, Slovenia, Latvia, Romania, Slovakia

Grouping	2028	2030	2040	2050
Followers	53	56	64	64
Total	**364**	**379**	**440**	**440**
PO2				
Leaders	154	166	276	257
Planned Adopters	157	173	300	279
Followers	53	59	101	94
Total	**364**	**398**	**677**	**630**
PO3				
Leaders	154	165	257	257
Planned Adopters	157	172	279	279
Followers	53	58	94	94
Total	**364**	**395**	**630**	**630**
PO4				
Leaders	154	166	266	257
Planned Adopters	157	172	289	279
Followers	53	58	98	94
Total	**364**	**396**	**653**	**630**

Source: Own elaboration from CBA model

10.6.2.2 Operators

The same number and composition of operators is assumed in all POs as presented in the baseline (section 10.6.1.2), and are assumed constant over time.

10.6.2.3 MDMS-Operator Agreements

The baseline value of number of agreements per platform is also assumed in PO1 as principles on distribution fees alone are not expected to lead to more agreements.

Progress in the form of an expansion of service coverage and service level is assumed to be intrinsically linked to the number of operators available on each platform.

- **PM13** (PO2, PO3, PO4) introduces an **obligation to sell** for indispensable rail operators and PSO/cross-border operators. Willing platforms would therefore enter new agreements with any indispensable or PSO/cross-border rail operator. We assume that all **EU-wide platforms** would be willing to request integration with the 24 indispensable rail operators, then with any large operators who are either PSO or cross-border (117). This is because their platforms benefit from network effects. Via the same logic, **national/regional platforms** would be willing request integration with the incumbent rail operator in the main MS of operation and one of a neighbouring MS (2), then with any local operators who are either PSO or cross-border (117/25 = 5), totalling an additional 7 operators per platform.
- **PM14** (PO3 only) introduces an **obligation to host** for indispensable rail platforms (19). These platforms would therefore enter new agreements with willing rail operators active within the geographical scope covered by the MDMS. We assume integration requests would come from any local operators who are not already obligated to sell under PM13 ([158 rail operators – 24 indispensable rail operators – 117 PSO or cross-border] / 25 Member States with rail = 1 local operator).
- **PM15** (PO4 only), introduces an **obligation to unbundle** for indispensable rail platforms. We assume this does not obligate any new agreements.

Table below summarises the assumptions applied within the CBA model on the number of operators per platform, which is higher in the PO's where obligations lead to additional agreements relative to the baseline. Total agreements made by platforms are calculated by multiplying the number of relevant platforms by the number of operators engaged with each platform. The below only apply to large MDMS platforms as SMEs are exempted from obligations. However, the counterparties to these agreements (transport operators) are

assumed to comprise partly of SME's, in accordance with the current prevailing SME share in total operators. These SME's enter willingly into these agreements and are assumed to bear no costs relative to the baseline, but benefit from cost savings from simplified contract negotiations (PM11 and PM12).

Table 0-24: Assumed average number of operators per platform in each policy scenario

Scenario	Average number of operators per platform		
	National/regional platforms (excl. SMEs)		EU-wide platforms
	Indispensable rail	Other B2C	
Baseline	28	28	189
PO1	28	28	189
PO2	35	35	330
PO3	36	35	330
PO4	35	35	330

Source: Own elaboration from CBA model

Table below summarises the estimated total number of active, new, and renewed agreements between MDMS and operators in 2028, 2030, 2040, and 2050.

Table 0-25: Annual number of total, new and renewed agreements between MDMS-Operators by each scenario

Scenario	Agreement type	2028	2030	2040	2050
Baseline	Total	48,624	49,321	52,808	56,295
	New	-	349	349	349
	Renegotiated	16,208	16,440	17,603	18,765
PO1	Total	48,624	50,671	58,862	58,862
	New	-	1,024	614	-
	Renegotiated	16,208	16,890	19,621	19,621
PO2	Total	63,870	69,832	119,049	110,673
	New	15,247	2,981	4,922	-
	Renegotiated	21,290	23,277	39,683	36,891
PO3	Total	63,883	69,248	110,686	110,686
	New	15,260	2,998	4,144	-
	Renegotiated	21,294	23,083	36,895	36,895
PO4	Total	64,402	69,519	114,842	110,673
	New	15,779	2,982	4,532	-
	Renegotiated	21,467	23,173	38,281	36,891

Source: Own elaboration from CBA model

10.6.3 PM cost input data

The section discusses the input data and assumptions to the elaboration of the cost and benefit impacts of each PM in more detail.

Costs by Member State are elaborated where possible. Most B2B MDMS platforms are EU-wide (elaborated in section 10.6.1.1), meaning that it is not reasonable to portion out by Member State the costs arising from obligations on platforms. However, many B2C platforms are more localised, and based on desk research it was possible to ascertain in which Member States they offer services. Where PMs affect B2C platforms, associated costs are therefore provided by Member State, with any B2B platform costs retained at EU-level. With respect to the Groupings, costs and benefits by Member State are not presented as these costs scale with agreements between platforms and operators which are often cross-border.

Several assumptions are used consistently throughout the PMs:

- In the estimation of the policy measures costs standard hourly rates have been used for the calculation of personnel costs. These are taken from 'Eurostat Structure of earnings survey, Labour Force Survey data' and expressed in 2024 prices. More specifically: For staff time of national authorities, of MDMS platforms and transport operators relating to software updates: the MS tariff rates for *technicians and associate professionals- ISCO3 have been used*
- The number of working hours per day employed in the calculations was 7.2 hours (Eurostat, 2024), and the number of working days per year used was 220.
- For EC staff the cost per FTE in 2024 prices is EUR 118,326 at AD5 level, including overheads.

10.6.3.1 PM1: Obligation for all MDMS platforms to apply neutral display obligations and for transport operators (in all modes) to ensure that the data they submit are accurate

Summary of the type of costs

Adjustment costs for MDMS platforms (large platforms only, SMEs exempt) to reprogramme for neutral display.

- One-off costs are borne by existing platforms in the year of implementation and borne by new platforms that join the market in each year
- Limited recurrent costs considered for platforms to maintain neutral display.

Only a limited number of stakeholders provided figures on the one-off cost for platforms to comply with the neutral display requirements, which ranged widely, from minimal or none to several hundred thousand euros. It was assumed that 90 working days of a software engineer's time would be required by large MDMS platforms (excluding CRSs) for PM1, considering also the synergies with PM2, PM3 and PM8. For example, building fair trip results also supports adding emissions info, saving time on screens and data checks. This results in a total of EUR 23,125 based on the day rates outlined at the beginning of this section.

This one-off cost is multiplied by the number of large MDMS platforms estimated to be active in the implementation year, excluding SME platforms, which fall outside the scope of this obligation, as well as CRS platforms. The one-off cost is also applied to the new large MDMS platforms joining the market each year subsequently.

Recurrent costs for maintenance due to PM1 for large MDMS platforms (excluding CRSs) are assumed to be 10% of one-off costs, that is EUR 2,312 annually.

No recurrent costs are foreseen for CRSs as they already need to maintain the systems currently in place as part of the baseline.

Since each policy option involves a different number of large MDMS platforms, the total one-off and recurrent adjustment costs differ accordingly. The costs for 2028, 2030, 2040 and 2050 for each policy option relative to the baseline are provided in the Table 0-26. The costs in the table below cover large B2B and B2C MDMS platforms.

Table 0-26: One-off and recurrent adjustment cost for large MDMS platforms due to PM1 in the policy options in 2028, 2030, 2040 and 2050 relative to the baseline (in million EUR, 2024 prices)

	2028	2030	2040	2050
One-off cost for one LE MDMS platform to programme for neutral display (EUR)	23,125	23,125	23,125	23,125
Recurrent costs per MDMS platform (EUR)	2,312	2,312	2,312	2,312
PO1				
Number of LE MDMS platforms that incur one-off costs due to PM1	172	4	2	0
Number of LE MDMS platforms that incur recurrent costs due to PM1	0	176	207	209
Number of CRSs that incur one-off costs due to PM1	3			
Total one-off adjustment costs (million EUR)	4.0	0.1	0.1	0.0
Total recurrent adjustment costs (million EUR)	0.0	0.4	0.5	0.5
PO2				
Number of LE MDMS platforms that incur one-off costs due to PM1	172	8	13	0
Number of LE MDMS platforms that incur recurrent costs due to PM1	0	180	309	303
Number of CRSs that incur one-off costs due to PM1	3			
Total one-off adjustment costs (million EUR)	4.0	0.2	0.3	0.0
Total recurrent adjustment costs (million EUR)	0.0	0.4	0.7	0.7
PO3				
Number of LE MDMS platforms that incur one-off costs due to PM1	172	9	11	0
Number of LE MDMS platforms that incur recurrent costs due to PM1	0	179	289	300
Number of CRSs that incur one-off costs due to PM1	3			
Total one-off adjustment costs (million EUR)	4.0	0.2	0.3	0.0
Total recurrent adjustment costs (million EUR)	0.0	0.4	0.7	0.7
PO4				
Number of LE MDMS platforms that incur one-off costs due to PM1	172	8	12	0
Number of LE MDMS platforms that incur recurrent costs due to PM1	0	180	298	302
Number of CRSs that incur one-off costs due to PM1	3			
Total one-off adjustment costs (million EUR)	4.0	0.2	0.3	0.0
Total recurrent adjustment costs (million EUR)	0.0	0.4	0.7	0.7

The total one-off and recurrent adjustment cost per Member State for large B2C platforms for the years 2028, 2030, 2040 and 2050 are presented in Table 0-27, Table 0-28, Table 0-29, and Table 0-30 for the four policy options. Costs for some Member States are zero because no large B2C platforms are projected to operate in these countries. The totals in these tables are not equal to those in Table 0-26 because Table 0-26 also covers large B2B platforms. As already explained above, the costs for large B2B platforms cannot be provided by Member State as most of them operate EU-wide.

Table 0-27: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM1 in **PO1** in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

Member State	2028	2030	2040	2050
Germany	411.0	50.5	54.3	49.6
Austria	308.3	37.9	40.8	37.2
Denmark	205.5	25.2	27.2	24.8
Luxembourg	137.0	16.8	18.1	16.5
Finland	171.3	21.0	22.6	20.7
Spain	137.0	16.8	18.1	16.5
Netherlands	342.5	42.1	45.3	41.3
France	445.3	54.7	58.9	53.8
Poland	239.8	29.5	31.7	28.9
Italy	205.5	25.2	27.2	24.8

Member State	2028	2030	2040	2050
Belgium	205.5	25.2	27.2	24.8
Portugal	68.5	8.4	9.1	8.3
Malta	34.3	4.2	4.5	4.1
Cyprus	34.3	4.2	4.5	4.1
Greece	68.5	8.4	9.1	8.3
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	34.3	4.2	4.5	4.1
Lithuania	0.0	0.0	0.0	0.0
Hungary	102.8	12.6	13.6	12.4
Sweden	68.5	8.4	9.1	8.3
Czech Republic	102.8	12.6	13.6	12.4
Ireland	68.5	8.4	9.1	8.3
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	34.3	4.2	4.5	4.1
Total adjustment cost (thousand EUR)	3,425.2	420.8	452.9	413.5

Table 0-28: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM1 in **PO2** in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

Member State	2028	2030	2040	2050
Germany	411.0	62.2	105.0	71.8
Austria	308.3	46.7	78.8	53.9
Denmark	205.5	31.1	52.5	35.9
Luxembourg	137.0	20.7	35.0	23.9
Finland	171.3	25.9	43.8	29.9
Spain	137.0	20.7	35.0	23.9
Netherlands	342.5	51.8	87.5	59.9
France	445.3	67.4	113.8	77.8
Poland	239.8	36.3	61.3	41.9
Italy	205.5	31.1	52.5	35.9
Belgium	205.5	31.1	52.5	35.9
Portugal	68.5	10.4	17.5	12.0
Malta	34.3	5.2	8.8	6.0
Cyprus	34.3	5.2	8.8	6.0
Greece	68.5	10.4	17.5	12.0
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	34.3	5.2	8.8	6.0

Member State	2028	2030	2040	2050
Lithuania	0.0	0.0	0.0	0.0
Hungary	102.8	15.6	26.3	18.0
Sweden	68.5	10.4	17.5	12.0
Czech Republic	102.8	15.6	26.3	18.0
Ireland	68.5	10.4	17.5	12.0
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	34.3	5.2	8.8	6.0
Total adjustment cost (thousand EUR)	3425.2	518.4	875.4	598.7

Table 0-29: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM1 in **PO3** in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

Member State	2028	2030	2040	2050
Germany	411.0	63.2	95.4	71.3
Austria	308.3	47.4	71.5	53.5
Denmark	205.5	31.6	47.7	35.7
Luxembourg	137.0	21.1	31.8	23.8
Finland	171.3	26.3	39.7	29.7
Spain	137.0	21.1	31.8	23.8
Netherlands	342.5	52.6	79.5	59.4
France	445.3	68.4	103.3	77.3
Poland	239.8	36.8	55.6	41.6
Italy	205.5	31.6	47.7	35.7
Belgium	205.5	31.6	47.7	35.7
Portugal	68.5	10.5	15.9	11.9
Malta	34.3	5.3	7.9	5.9
Cyprus	34.3	5.3	7.9	5.9
Greece	68.5	10.5	15.9	11.9
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	34.3	5.3	7.9	5.9
Lithuania	0.0	0.0	0.0	0.0
Hungary	102.8	15.8	23.8	17.8
Sweden	68.5	10.5	15.9	11.9
Czech Republic	102.8	15.8	23.8	17.8
Ireland	68.5	10.5	15.9	11.9
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0

Member State	2028	2030	2040	2050
Slovakia	34.3	5.3	7.9	5.9
Total adjustment cost (thousand EUR)	3425.2	526.3	794.8	594.4

Table 0-30: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM1 in **PO4** in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

Member State	2028	2030	2040	2050
Germany	411.0	62.1	100.1	71.6
Austria	308.3	46.6	75.0	53.7
Denmark	205.5	31.1	50.0	35.8
Luxembourg	137.0	20.7	33.4	23.9
Finland	171.3	25.9	41.7	29.8
Spain	137.0	20.7	33.4	23.9
Netherlands	342.5	51.8	83.4	59.6
France	445.3	67.3	108.4	77.5
Poland	239.8	36.2	58.4	41.8
Italy	205.5	31.1	50.0	35.8
Belgium	205.5	31.1	50.0	35.8
Portugal	68.5	10.4	16.7	11.9
Malta	34.3	5.2	8.3	6.0
Cyprus	34.3	5.2	8.3	6.0
Greece	68.5	10.4	16.7	11.9
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	34.3	5.2	8.3	6.0
Lithuania	0.0	0.0	0.0	0.0
Hungary	102.8	15.5	25.0	17.9
Sweden	68.5	10.4	16.7	11.9
Czech Republic	102.8	15.5	25.0	17.9
Ireland	68.5	10.4	16.7	11.9
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	34.3	5.2	8.3	6.0
Total adjustment cost (thousand EUR)	3425.2	517.8	833.8	596.5

The present values of the adjustment cost due to PM1 for large B2B and B2C MDMS over 2028-2050 relative to the baseline per policy option are provided in Table -0-31 (2024 prices).

Table -0-31: One-off and recurrent adjustment costs due to PM1 in the policy options relative to the baseline, expressed as present value over 2028-2050 (in million EUR, 2024 prices)

	Difference to the baseline			
	PO1	PO2	PO3	PO4
Total adjustment costs	12.0	16.5	15.8	16.1
One-off	4.7	6.9	6.4	6.6
Ongoing	7.3	9.7	9.3	9.5

*10.6.3.2 PM2: Obligation for **all MDMS platforms** to load and process data of operators with equal care and timeliness*

Summary of the type of costs

Adjustment costs for MDMS platforms (large platforms only, SMEs and CRSs exempt) to reprogramme for new requirements (acceleration of data provision for some transport operators, improvement in data completeness/quality).

- One-off costs are borne by existing LE platforms in the first year of implementation and borne by new platforms that join the market in each year.
- Limited recurrent costs for LE platforms to maintain requirements.

Compliance with PM2 is anticipated to require less effort than PM1. PM2 primarily entails standardising back-end pipelines to ensure operators' data is loaded and processed with uniform care, timelines, and error-handling – eliminating preferential caching, fallbacks, or operator-specific prioritisation. This involves updates to logging, timeout harmonisation, and removal of custom prioritisation logic. In contrast, PM1 demands a comprehensive overhaul of ranking and display functions, including revisions to ranking algorithms, potential front-end redesign, and enhanced data validation or restructuring. Development of ranking algorithms, UI/UX components[144], and data-processing pipelines generally entails greater complexity than back-end standardisation. Accordingly, the PM2 cost estimate is set at 67.5 working days (75% of the workload for PM1) implementation effort to adopt a conservative approach. This accounts for synergies in work that overlaps with PM1, PM3, and PM8. For example, fixing data flows evenly also supports sharing data with partners, saving time on data handling and checks. This corresponds to a one-off cost of EUR 17,343. The one-off cost is multiplied by the number of large MDMS platforms (excluding CRS platforms which already implement these requirements in the baseline) estimated to be active in the implementation year and applied to new large platforms joining the market in each subsequent year. Maintenance of the system is expected to deliver an annually recurring cost equal to 10% of the one-off cost. This would come at EUR 1,734 for all, non-CRS, large platforms. SME platforms are exempt from the obligation under this policy measure. As shown in Table 0-33, the one-off adjustment cost for large MDMS platforms in all policy options in 2028 is approximately EUR 3.0 million (2024 prices).

Recurrent costs for maintenance (assumed to be 10% of one-off costs, as in PM1) are applied annually to each large MDMS already on the market from 2029 onward.

Table 0-32 summarises the number of LE MDMS platforms under the different policy options in 2028, 2030, 2040 and 2050, as well as the corresponding total one-off and recurrent adjustment costs relative to the baseline.

[144] User interface and User experience

Table 0-32: One-off and recurrent adjustment cost for LE MDMS platforms (excluding CRS platforms) due to PM2 in the policy options in 2028, 2030, 2040 and 2050 relative to the baseline (in million EUR, 2024 prices)

	2028	2030	2040	2050
One-off cost for one LE MDMS platform to programme (EUR)	17,343	17,343	17,343	17,343
Recurrent costs per LE MDMS platform (EUR)	0	1,734	1,734	1,734
PO1				
Number of LE MDMS platforms that incur one-off costs due to PM2	172	4	2	0
Number of LE MDMS platforms that incur recurrent costs due to PM2	0	179	210	212
Total one-off adjustment costs (million EUR)	3.0	0.1	0.0	0.0
Total recurrent adjustment costs (million EUR)	0.0	0.3	0.4	0.4
PO2				
Number of LE MDMS platforms that incur one-off costs due to PM2	172	8	13	0
Number of LE MDMS platforms that incur recurrent costs due to PM2	0	183	312	306
Total one-off adjustment costs (million EUR)	3.0	0.1	0.2	0.0
Total recurrent adjustment costs (million EUR)	0.0	0.3	0.5	0.5
PO3				
Number of LE MDMS platforms that incur one-off costs due to PM2	172	9	11	0
Number of LE MDMS platforms that incur recurrent costs due to PM2	0	182	292	303
Total one-off adjustment costs (million EUR)	3.0	0.2	0.2	0.0
Total recurrent adjustment costs (million EUR)	0.0	0.3	0.5	0.5
PO4				
Number of LE MDMS platforms that incur one-off costs due to PM2	172	8	12	0
Number of LE MDMS platforms that incur recurrent costs due to PM2	0	183	301	305
Total one-off adjustment costs (million EUR)	3.0	0.1	0.2	0.0
Total recurrent adjustment costs (million EUR)	0.0	0.3	0.5	0.5

Table 0-33, Table 0-34, Table 0-35, and Table 0-36 present the total one-off and recurrent adjustment costs for 2028, 2030, 2040 and 2050 for large B2C MDMS platforms[145] per Member State under the four policy options. Costs for some Member States are zero because no large B2C platforms are projected to operate in these countries. As already explained above, the costs for large B2B platforms (excluding CRSs) cannot be provided by Member State as most of them operate EU-wide.

Table 0-33: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms (excluding CRS platforms) per Member State due to PM2 in **PO1** in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

Member State	2028	2030	2040	2050
Germany	306.5	38.4	41.3	37.7
Austria	229.9	28.8	31.0	28.3
Denmark	153.2	19.2	20.6	18.9
Luxembourg	102.2	12.8	13.8	12.6
Finland	127.7	16.0	17.2	15.7
Spain	102.2	12.8	13.8	12.6
Netherlands	255.4	32.0	34.4	31.5
France	332.0	41.6	44.7	40.9
Poland	178.8	22.4	24.1	22.0
Italy	153.2	19.2	20.6	18.9

[145] The analysis is conducted for B2C platforms only, as their proportion can be estimated at Member State level, whereas assigning B2B platforms to specific Member States cannot be robustly estimated.

Member State	2028	2030	2040	2050
Belgium	153.2	19.2	20.6	18.9
Portugal	51.1	6.4	6.9	6.3
Malta	25.5	3.2	3.4	3.1
Cyprus	25.5	3.2	3.4	3.1
Greece	51.1	6.4	6.9	6.3
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	25.5	3.2	3.4	3.1
Lithuania	0.0	0.0	0.0	0.0
Hungary	76.6	9.6	10.3	9.4
Sweden	51.1	6.4	6.9	6.3
Czech Republic	76.6	9.6	10.3	9.4
Ireland	51.1	6.4	6.9	6.3
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	25.5	3.2	3.4	3.1
Total adjustment cost (thousand EUR)	2,554.1	320.0	344.1	314.6

Table 0-34: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms (excluding CRS platforms) per Member State due to PM2 in **PO2** in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

Member State	2028	2030	2040	2050
Germany	306.5	47.2	79.3	54.4
Austria	229.9	35.4	59.5	40.8
Denmark	153.2	23.6	39.7	27.2
Luxembourg	102.2	15.7	26.4	18.1
Finland	127.7	19.7	33.0	22.7
Spain	102.2	15.7	26.4	18.1
Netherlands	255.4	39.3	66.1	45.3
France	332.0	51.1	85.9	59.0
Poland	178.8	27.5	46.3	31.7
Italy	153.2	23.6	39.7	27.2
Belgium	153.2	23.6	39.7	27.2
Portugal	51.1	7.9	13.2	9.1
Malta	25.5	3.9	6.6	4.5
Cyprus	25.5	3.9	6.6	4.5
Greece	51.1	7.9	13.2	9.1
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0

Member State	2028	2030	2040	2050
Croatia	25.5	3.9	6.6	4.5
Lithuania	0.0	0.0	0.0	0.0
Hungary	76.6	11.8	19.8	13.6
Sweden	51.1	7.9	13.2	9.1
Czech Republic	76.6	11.8	19.8	13.6
Ireland	51.1	7.9	13.2	9.1
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	25.5	3.9	6.6	4.5
Total adjustment cost (thousand EUR)	2,554.1	393.2	661.0	453.5

Table 0-35: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms (excluding CRS platforms) per Member State due to PM2 in **PO3** in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

Member State	2028	2030	2040	2050
Germany	306.5	47.9	72.1	54.0
Austria	229.9	35.9	54.1	40.5
Denmark	153.2	24.0	36.0	27.0
Luxembourg	102.2	16.0	24.0	18.0
Finland	127.7	20.0	30.0	22.5
Spain	102.2	16.0	24.0	18.0
Netherlands	255.4	39.9	60.1	45.0
France	332.0	51.9	78.1	58.5
Poland	178.8	27.9	42.0	31.5
Italy	153.2	24.0	36.0	27.0
Belgium	153.2	24.0	36.0	27.0
Portugal	51.1	8.0	12.0	9.0
Malta	25.5	4.0	6.0	4.5
Cyprus	25.5	4.0	6.0	4.5
Greece	51.1	8.0	12.0	9.0
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	25.5	4.0	6.0	4.5
Lithuania	0.0	0.0	0.0	0.0
Hungary	76.6	12.0	18.0	13.5
Sweden	51.1	8.0	12.0	9.0
Czech Republic	76.6	12.0	18.0	13.5
Ireland	51.1	8.0	12.0	9.0
Slovenia	0.0	0.0	0.0	0.0

Member State	2028	2030	2040	2050
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	25.5	4.0	6.0	4.5
Total adjustment cost (thousand EUR)	2,554.1	399.2	600.6	450.3

Table 0-36: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms (excluding CRS platforms) per Member State due to PM2 in PO4 in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

Member State	2028	2030	2040	2050
Germany	306.5	47.1	75.6	54.2
Austria	229.9	35.4	56.7	40.7
Denmark	153.2	23.6	37.8	27.1
Luxembourg	102.2	15.7	25.2	18.1
Finland	127.7	19.6	31.5	22.6
Spain	102.2	15.7	25.2	18.1
Netherlands	255.4	39.3	63.0	45.2
France	332.0	51.1	81.9	58.7
Poland	178.8	27.5	44.1	31.6
Italy	153.2	23.6	37.8	27.1
Belgium	153.2	23.6	37.8	27.1
Portugal	51.1	7.9	12.6	9.0
Malta	25.5	3.9	6.3	4.5
Cyprus	25.5	3.9	6.3	4.5
Greece	51.1	7.9	12.6	9.0
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	25.5	3.9	6.3	4.5
Lithuania	0.0	0.0	0.0	0.0
Hungary	76.6	11.8	18.9	13.6
Sweden	51.1	7.9	12.6	9.0
Czech Republic	76.6	11.8	18.9	13.6
Ireland	51.1	7.9	12.6	9.0
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	25.5	3.9	6.3	4.5
Total adjustment cost (thousand EUR)	2,554.1	392.8	629.8	451.8

The present values of the adjustment costs due to PM2 for LE MDMS over 2028-2050 relative to the baseline for each policy option are provided in Table 0-37.

Table 0-37: Adjustment costs due to PM2 in all policy options relative to the baseline, expressed as present value over 2028-2050 (in million EUR, 2024 prices)

	Difference to the baseline			
	PO1	PO2	PO3	PO4
Total adjustment costs	9.0	12.4	11.8	12.1
One-off	3.5	5.1	4.8	5.0
Ongoing	5.4	7.3	7.0	7.1

*10.6.3.3 PM3: Obligation for **MDMS platforms** to share marketing information data tapes (or equivalent) and booking data in a fair way, when requested by transport operators*

Summary of the type of costs

Adjustment costs for MDMS platforms (SMEs exempt, large platforms only – CRSs and NCAs already obliged to perform in the baseline) to reprogramme for marketing and booking data requirements (prohibiting system vendors to identify travel agents in the MIDT, obligation for system providers to maintain a clear functional and operational separation between the MDMS platform and the internal reservation systems of any parent transport operators, obligation for system vendors to provide equal access to MIDT to all transport operators)

- One-off costs are borne by existing platforms in the first year of implementation and borne by new platforms that join the market in each year.
- Limited recurrent costs for platforms to maintain requirements.

The adjustment cost estimate for PM3 is aligned with that of PM2 in terms of implementation effort (67.5 working days). As with PM2, PM3 affects only backend data-handling and governance processes, without requiring the extensive reprogramming of ranking logic, display behaviour or user-interface components that drives PM1's higher workload. Although PM3 concerns a different data domain, the technical scope remains comparably narrower and predominantly limited to adjustments of the automated data flows that already exist, access controls and audit mechanisms. This estimated programming time was deducted estimated accounting for work (e.g. processing and checks) that overlaps with the other measures requiring software updates (PM1, PM2, PM8).

The adjustment cost is calculated by multiplying the total number of hours required to program the system by the staff hourly cost (ISCO 3- technicians and associate professionals) and by the number of large MDMS platforms per year (SME platforms are exempt from the obligation under this policy measure and CRS and NCA are excluded from the number of large platforms in scope, as they already implement these requirements in the baseline). Recurrent costs for maintenance (assumed to be 10% of on-off costs) are applied to each large MDMS annually.

As shown in Table 0-38, the one-off adjustment cost for large MDMS platforms (excluding CRS and NCA platforms) in all policy options in 2028 is approximately EUR 2.3 million (2024 prices). The table also show the number of large MDMS platforms, and the one-off and recurrent adjustment cost under the different policy options in 2028, 2030, 2040 and 2050.

Table 0-38: One-off and recurrent adjustment cost for large MDMS platforms (excluding CRSs and NCAs) due to PM3 in the policy options in 2028, 2030, 2040 and 2050 relative to the baseline (in million EUR, 2024 prices)

	2028	2030	2040	2050
One-off cost for one LE MDMS platform to programme (EUR)	17,343	17,343	17,343	17,343
Recurrent costs per LE MDMS platform (EUR)	0	1,734	1,734	1,734

	2028	2030	2040	2050
PO1				
Number of LE MDMS platforms that incur one-off costs due to PM3	133	3	2	0
Number of LE MDMS platforms that incur recurrent costs due to PM3	0	136	159	161
Total one-off adjustment costs (million EUR)	2.3	0.0	0.0	0.0
Total recurrent adjustment costs (million EUR)	0.0	0.2	0.3	0.3
PO2				
Number of LE MDMS platforms that incur one-off costs due to PM3	133	6	10	0
Number of LE MDMS platforms that incur recurrent costs due to PM3	0	139	236	232
Total one-off adjustment costs (million EUR)	2.3	0.1	0.2	0.0
Total recurrent adjustment costs (million EUR)	0.0	0.2	0.4	0.4
PO3				
Number of LE MDMS platforms that incur one-off costs due to PM3	133	7	9	0
Number of LE MDMS platforms that incur recurrent costs due to PM3	0	138	222	230
Total one-off adjustment costs (million EUR)	2.3	0.1	0.1	0.0
Total recurrent adjustment costs (million EUR)	0.0	0.2	0.4	0.4
PO4				
Number of LE MDMS platforms that incur one-off costs due to PM3	133	6	9	0
Number of LE MDMS platforms that incur recurrent costs due to PM3	0	138	229	231
Total one-off adjustment costs (million EUR)	2.3	0.1	0.2	0.0
Total recurrent adjustment costs (million EUR)	0.0	0.2	0.4	0.4

Table 0-39, Table 0-40, Table 0-41, and Table 0-42 present the adjustment costs for 2028, 2033, 2040 and 2050 for large B2C MDMS platforms per Member State under the four policy options. These estimates are derived by multiplying the total adjustment cost by the proportion of B2C platforms within the large MDMS group and their distribution across Member States. Costs for some Member States are zero because no large B2C platforms are projected to operate in these countries. The totals in these tables are not equal to those in Table 0-38 because Table 0-38 also covers large B2B platforms (excluding CRSs). As already explained above, the costs for large B2B platforms cannot be provided by Member State as most of them operate EU-wide.

Table 0-39: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM3 in **PO1** in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

MS	2028	2030	2040	2050
Germany	236.5	29.1	31.3	28.6
Austria	177.4	21.8	23.5	21.5
Denmark	118.3	14.6	15.7	14.3
Luxembourg	78.8	9.7	10.4	9.5
Finland	98.5	12.1	13.1	11.9
Spain	78.8	9.7	10.4	9.5
Netherlands	197.1	24.3	26.1	23.9
France	256.2	31.6	33.9	31.0
Poland	138.0	17.0	18.3	16.7
Italy	118.3	14.6	15.7	14.3
Belgium	118.3	14.6	15.7	14.3
Portugal	39.4	4.9	5.2	4.8
Malta	19.7	2.4	2.6	2.4
Cyprus	19.7	2.4	2.6	2.4
Greece	39.4	4.9	5.2	4.8

MS	2028	2030	2040	2050
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	19.7	2.4	2.6	2.4
Lithuania	0.0	0.0	0.0	0.0
Hungary	59.1	7.3	7.8	7.2
Sweden	39.4	4.9	5.2	4.8
Czech Republic	59.1	7.3	7.8	7.2
Ireland	39.4	4.9	5.2	4.8
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	19.7	2.4	2.6	2.4
Total adjustment cost (thousand EUR)	1970.9	242.7	261.0	238.6

Table 0-40: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM3 in **PO2** in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

MS	2028	2030	2040	2050
Germany	236.5	35.8	60.2	41.3
Austria	177.4	26.8	45.1	31.0
Denmark	118.3	17.9	30.1	20.6
Luxembourg	78.8	11.9	20.1	13.8
Finland	98.5	14.9	25.1	17.2
Spain	78.8	11.9	20.1	13.8
Netherlands	197.1	29.8	50.1	34.4
France	256.2	38.8	65.2	44.7
Poland	138.0	20.9	35.1	24.1
Italy	118.3	17.9	30.1	20.6
Belgium	118.3	17.9	30.1	20.6
Portugal	39.4	6.0	10.0	6.9
Malta	19.7	3.0	5.0	3.4
Cyprus	19.7	3.0	5.0	3.4
Greece	39.4	6.0	10.0	6.9
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	19.7	3.0	5.0	3.4
Lithuania	0.0	0.0	0.0	0.0
Hungary	59.1	8.9	15.0	10.3
Sweden	39.4	6.0	10.0	6.9
Czech Republic	59.1	8.9	15.0	10.3
Ireland	39.4	6.0	10.0	6.9

MS	2028	2030	2040	2050
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	19.7	3.0	5.0	3.4
Total adjustment cost (thousand EUR)	1970.9	298.3	501.3	344.0

Table 0-41: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM3 in **PO3** in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

MS	2028	2030	2040	2050
Germany	236.5	36.3	54.7	41.0
Austria	177.4	27.2	41.0	30.7
Denmark	118.3	18.2	27.3	20.5
Luxembourg	78.8	12.1	18.2	13.7
Finland	98.5	15.1	22.8	17.1
Spain	78.8	12.1	18.2	13.7
Netherlands	197.1	30.3	45.6	34.2
France	256.2	39.4	59.2	44.4
Poland	138.0	21.2	31.9	23.9
Italy	118.3	18.2	27.3	20.5
Belgium	118.3	18.2	27.3	20.5
Portugal	39.4	6.1	9.1	6.8
Malta	19.7	3.0	4.6	3.4
Cyprus	19.7	3.0	4.6	3.4
Greece	39.4	6.1	9.1	6.8
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	19.7	3.0	4.6	3.4
Lithuania	0.0	0.0	0.0	0.0
Hungary	59.1	9.1	13.7	10.2
Sweden	39.4	6.1	9.1	6.8
Czech Republic	59.1	9.1	13.7	10.2
Ireland	39.4	6.1	9.1	6.8
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	19.7	3.0	4.6	3.4
Total adjustment cost (thousand EUR)	1970.9	302.8	455.5	341.5

Table 0-42: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM3 in PO4 in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

MS	2028	2030	2040	2050
Germany	236.5	35.8	57.3	41.1
Austria	177.4	26.8	43.0	30.8
Denmark	118.3	17.9	28.7	20.6
Luxembourg	78.8	11.9	19.1	13.7
Finland	98.5	14.9	23.9	17.1
Spain	78.8	11.9	19.1	13.7
Netherlands	197.1	29.8	47.8	34.3
France	256.2	38.7	62.1	44.5
Poland	138.0	20.9	33.4	24.0
Italy	118.3	17.9	28.7	20.6
Belgium	118.3	17.9	28.7	20.6
Portugal	39.4	6.0	9.6	6.9
Malta	19.7	3.0	4.8	3.4
Cyprus	19.7	3.0	4.8	3.4
Greece	39.4	6.0	9.6	6.9
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	19.7	3.0	4.8	3.4
Lithuania	0.0	0.0	0.0	0.0
Hungary	59.1	8.9	14.3	10.3
Sweden	39.4	6.0	9.6	6.9
Czech Republic	59.1	8.9	14.3	10.3
Ireland	39.4	6.0	9.6	6.9
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	19.7	3.0	4.8	3.4
Total adjustment cost (thousand EUR)	1970.9	297.9	477.7	342.7

The present values of these costs over 2028–2050 for each policy option, relative to the baseline, are summarised in Table 0-43 (2024 prices).

Table 0-43: Adjustment costs due to PM3 in all policy options relative to the baseline, expressed as present value over 2028-2050 (in million EUR, 2024 prices)

	Difference to the baseline			
	PO1	PO2	PO3	PO4
Total adjustment costs	6.9	9.5	9.1	9.3
One-off	2.7	3.9	3.7	3.8

	Difference to the baseline			
Ongoing	4.2	5.6	5.4	5.5

*10.6.3.4 PM4: Obligation for **B2B MDMS platforms to treat subscribers fairly and** clearly identify in their display banned airlines. Obligation for third countries B2B MDMS to ensure equal treatment of EU air carriers*

Summary of the type of costs

- This policy measure extends certain CRS Code of Conduct's rules to all B2B MDMS. No significant costs are expected because the fair treatment rule mainly involves slightly changes in contracts (and potentially practices), while any costs from the equivalent airline treatment rule borne by third country B2B platforms outside the EU would remain limited .

Extending the fair treatment rule to all EU B2B MDMS mainly involves removing unfair contractual clauses and practices, and does not require major platform engineering changes. Extending the CRS Code of Conduct to all B2B MDMS would result in negligible one-off adjustment costs and negligible recurrent IT expenditure. Stakeholders reported no significant contractual revisions, no material system changes and no additional administrative burden for public authorities. For the same reasons, ensuring equivalent treatment of EU airlines on third-country B2B MDMS is also expected to generate negligible costs for platforms outside the EU, if any. Any potential revenue loss arising from increased competition would reflect market redistribution rather than a net economic cost. On this basis, PM4 implementation costs are considered immaterial at EU level and are not modelled separately.

10.6.3.5 PM5: Remove provisions from CRS Code of Conduct on data protection which are no longer necessary due to GDPR

Summary of the type of costs

- No cost expected as the review/revision of the Article is anticipated to require minimal effort.
- No cost savings expected either as MDMS platforms and operators will still need to comply with data protection provisions outlined in other EU legislation.

*10.6.3.6 PM6: Obligation for **Member States** to appoint a national authority to settle disputes between parties, and establish an EU enforcement network for coordination*

Summary of the type of costs

Recurrent administrative costs for national authorities (administrative compliance, operational adjustments, and legal processes) to settle disputes

Member States already have competent authorities responsible for resolving disputes in relevant areas, such as competition authorities, transport regulatory authorities, and rail regulators. In addition, the EU Data Act requires Member States to ensure that a competent authority or appropriate mechanism is in place to address disputes and oversee compliance with FRAND (Fair, Reasonable, and Non-Discriminatory) conditions, particularly in relation to data access and sharing.

It is therefore assumed that Member States will not need to establish new bodies. At most, existing authorities may need to expand their operational capacity. This could involve recruiting additional staff, legal and competition specialists to handle potential increases in disputes.

Enforcement costs incurred by national authorities to monitor correct implementation and monitor the market for entities with SMP.

Adjustment costs for EC.

- Recurrent adjustment costs for EC for organising meetings of the EU-wide enforcement network, to exchange best practices, and for monitoring the market.

Recurrent administrative costs for national authorities. This PM requires national authorities to make an ongoing effort to settle disputes among parties. According to PM6, this will be carried out by 27 national authorities. 1 FTE is assumed to be needed per Member State. Accordingly, the administrative costs per Member State are calculated by multiplying the average hourly labour cost for the ISCO I 3 personnel category (technicians and associate professionals) by the average number of working days and by the average number of daily working hours in the EU. The average recurrent administrative cost per Member State is therefore estimated at EUR 56,527. Across the 27 Member States in the EU, this corresponds to total recurrent administrative costs of EUR 1.5 million per year from 2028 onwards.

The overall present values of the administrative costs, by type and total, due to PM6 for Member States over 2028-2050 relative to the baseline are provided in Table 0-45 (2024 prices). The present value over the period 2028–2050 is estimated at EUR 25.8 million, relative to the baseline (2024 prices).

Table 0-44: Recurrent administrative costs for national authorities due to PM6 in all policy options in 2028, 2030, 2040 and 2050 relative to the baseline (2024 prices)

	2028	2030	2040	2050
Administrative costs per MS (EUR)	56,527	56,527	56,527	56,527
All POs				
Recurrent administrative costs for the 27 MSs (million EUR)	1.5	1.5	1.5	1.5

Table 0-45: Administrative costs for national authorities due to PM6 in all policy options relative to the baseline, expressed as present value over 2028-2050 (in million EUR, 2024 prices)

	Difference to the baseline			
	PO1	PO2	PO3	PO4
Total administrative costs	25.8	25.8	25.8	25.8
One-off	-	-	-	-
Ongoing	25.8	25.8	25.8	25.8

Recurrent enforcement costs. National authorities will also need to monitor correct implementation and monitor the market for entities with SMP. Respondents to the survey mentioned 4 FTEs for compliance monitoring, while noting that costs are difficult to separate by individual policy measure. This corresponds to EUR 226,106 based on the day rates outlined at the beginning of this section.

As shown in the table below, the total recurrent cost is estimated at approximately EUR 6.1 million per year (2024 prices). Expressed as present value over 2028-2050 this is estimated at EUR 106.5 million per Policy Option relative to the baseline.

Table 0-46: Recurrent enforcement costs for national authorities due to PM6 in all policy options in 2028, 2030, 2040 and 2050 relative to the baseline (2024 prices)

	2028	2030	2040	2050
Cost of compliance monitoring per MS (EUR)	226,106	226,106	226,106	226,106
All POs				
Recurrent enforcement cost for the 27 MSs (million EUR)	6.1	6.1	6.1	6.1

Table 0-47: Enforcement costs for national authorities due to PM6 in all policy options relative to the baseline, expressed as present value over 2028-2050 (in million EUR, 2024 prices)

	Difference to the baseline			
	PO1	PO2	PO3	PO4
Total costs	106.5	106.5	106.5	106.5
One-off	-	-	-	-
Recurrent	106.5	106.5	106.5	106.5

Recurrent adjustment costs for the European Commission. The European Commission is assumed to organise one meeting of the EU-wide enforcement network per year from 2028 onwards, to exchange best practices. The average cost for a two-day in-person meeting hosted by EC, where participants are reimbursed by the EC, is around EUR 30,000. Thus, the recurrent adjustment costs for the European Commission are estimated at EUR 30,000 per year from 2028 onwards. In addition, each two years from 2030 onwards, a Eurobarometer survey is assumed to be conducted. The costs for the Eurobarometer survey, are assumed at EUR 100,000 per year based on the costs of the Eurobarometer survey conducted in 2024. Expressed as present value over 2028-2050 relative to the baseline, total recurrent adjustment costs for the European Commissions are estimated at EUR 1.3 million in all policy options.

Table 0-48: Adjustment costs for the EC due to PM6 in all policy options relative to the baseline, expressed as present value over 2028-2050 (in million EUR, 2024 prices)

	Difference to the baseline			
	PO1	PO2	PO3	PO4
Total adjustment costs	1.29	1.29	1.29	1.29
One-off	-	-	-	-
Recurrent	1.29	1.29	1.29	1.29

10.6.3.7 PM7: Obligation for all large B2C MDMS to share non-personal data for mobility management with public authorities

Summary of the type of costs

Adjustment costs for B2C platforms (large platforms only, SMEs exempt) to set up and maintain data sharing interfaces with public authorities.

- One-off costs: set up API
- Recurrent costs: maintenance costs for the API

To enable the sharing of data critical for mobility management with public authorities, platforms are expected to incur costs associated with setting up and maintaining an API with the relevant authority. Drawing on stakeholder feedback, the one-off adjustment cost borne by a B2C platform is estimated at EUR 117,719 per

API (2024 prices)[146].The one-off cost is then multiplied by the number of large B2C MDMS platforms estimated to be active in the implementation year (2028) and applied to new large B2C platforms joining the market from 2029. SME platforms are exempt from the obligation under this policy measure.

Additionally, to account for the maintenance of the API, a recurrent annual cost equal to 10% of the initial setup cost has been applied per large B2C MDMS from 2029 onwards. This concerns the platforms that are operational each year and have already incurred the one-off setup cost.

The B2C MDMS platforms involved and the costs for 2028, 2030, 2040 and 2050 for each policy option relative to the baseline are provided in the Table 0-49 (2024 prices).

Table 0-49: One-off and recurrent adjustment cost for large B2C MDMS platforms due to PM7 in the policy options in 2028, 2030, 2040 and 2050 relative to the baseline (in million EUR, 2024 prices)

	2028	2030	2040	2050
One-off cost for one B2C platform for setting up the API (EUR)	117,719	117,719	117,719	117,719
Recurrent costs per MDMS platform (EUR)	11,772	11,772	11,772	11,772
PO1				
Number of LE B2C MDMS platforms that incur one-off costs due to PM7	150	3	2	0
Number of LE B2C MDMS platforms that incur recurrent costs due to PM7	0	153	179	181
Total one-off adjustment costs (million EUR)	17.6	0.4	0.2	0.0
Total recurrent adjustment costs (million EUR)	0.0	1.8	2.1	2.1
PO2				
Number of LE B2C MDMS platforms that incur one-off costs due to PM7	150	7	11	0
Number of LE B2C MDMS platforms that incur recurrent costs due to PM7	0	157	267	261
Total one-off adjustment costs (million EUR)	17.6	0.8	1.3	0.0
Total recurrent adjustment costs (million EUR)	0.0	1.8	3.1	3.1
PO3				
Number of LE B2C MDMS platforms that incur one-off costs due to PM7	150	7	10	0
Number of LE B2C MDMS platforms that incur recurrent costs due to PM7	0	156	250	260
Total one-off adjustment costs (million EUR)	17.6	0.9	1.1	0.0
Total recurrent adjustment costs (million EUR)	0.0	1.8	2.9	3.1
PO4				
Number of LE B2C MDMS platforms that incur one-off costs due to PM7	150	7	11	0
Number of LE B2C MDMS platforms that incur recurrent costs due to PM7	0	156	258	260
Total one-off adjustment costs (million EUR)	17.6	0.8	1.2	0.0
Total recurrent adjustment costs (million EUR)	0.0	1.8	3.0	3.1

Table 0-50, Table 0-51, Table 0-52, and Table 0-53 present the adjustment costs, relative to the baseline, for 2028, 2030, 2040 and 2050 for large B2C MDMS platforms per Member State under the four policy options (2024 prices).

Table 0-50: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM7 in PO1 in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

MS	2028	2030	2040	2050
Germany	2,116.5	260.7	280.3	256.2
Austria	1,587.4	195.5	210.2	192.2
Denmark	1,058.3	130.3	140.1	128.1
Luxembourg	705.5	86.9	93.4	85.4
Finland	881.9	108.6	116.8	106.8

[146] The estimate was derived by calculating the average of the values submitted by stakeholders, after removing two extreme outliers, one unusually low and one unusually high.

MS	2028	2030	2040	2050
Spain	705.5	86.9	93.4	85.4
Netherlands	1,763.8	217.2	233.6	213.5
France	2,292.9	282.4	303.6	277.6
Poland	1,234.7	152.1	163.5	149.5
Italy	1,058.3	130.3	140.1	128.1
Belgium	1,058.3	130.3	140.1	128.1
Portugal	352.8	43.4	46.7	42.7
Malta	176.4	21.7	23.4	21.4
Cyprus	176.4	21.7	23.4	21.4
Greece	352.8	43.4	46.7	42.7
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	176.4	21.7	23.4	21.4
Lithuania	0.0	0.0	0.0	0.0
Hungary	529.1	65.2	70.1	64.1
Sweden	352.8	43.4	46.7	42.7
Czech Republic	529.1	65.2	70.1	64.1
Ireland	352.8	43.4	46.7	42.7
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	176.4	21.7	23.4	21.4
Total cost (thousand EUR)	17,637.9	2,172.3	2,335.7	2,135.2

Table 0-51: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM7 in PO2 in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

MS	2028	2030	2040	2050
Germany	2,116.5	320.3	537.8	369.3
Austria	1,587.4	240.2	403.4	277.0
Denmark	1,058.3	160.2	268.9	184.7
Luxembourg	705.5	106.8	179.3	123.1
Finland	881.9	133.5	224.1	153.9
Spain	705.5	106.8	179.3	123.1
Netherlands	1,763.8	266.9	448.2	307.8
France	2,292.9	347.0	582.6	400.1
Poland	1,234.7	186.8	313.7	215.4
Italy	1,058.3	160.2	268.9	184.7
Belgium	1,058.3	160.2	268.9	184.7
Portugal	352.8	53.4	89.6	61.6
Malta	176.4	26.7	44.8	30.8

MS	2028	2030	2040	2050
Cyprus	176.4	26.7	44.8	30.8
Greece	352.8	53.4	89.6	61.6
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	176.4	26.7	44.8	30.8
Lithuania	0.0	0.0	0.0	0.0
Hungary	529.1	80.1	134.5	92.3
Sweden	352.8	53.4	89.6	61.6
Czech Republic	529.1	80.1	134.5	92.3
Ireland	352.8	53.4	89.6	61.6
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	176.4	26.7	44.8	30.8
Total cost (thousand EUR)	17,637.9	2,669.2	4,481.8	3,077.9

Table 0-52: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM7 in PO3 in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

MS	2028	2030	2040	2050
Germany	2,116.5	326.3	488.9	366.8
Austria	1,587.4	244.7	366.7	275.1
Denmark	1,058.3	163.2	244.5	183.4
Luxembourg	705.5	108.8	163.0	122.3
Finland	881.9	136.0	203.7	152.8
Spain	705.5	108.8	163.0	122.3
Netherlands	1,763.8	271.9	407.4	305.6
France	2,292.9	353.5	529.7	397.3
Poland	1,234.7	190.3	285.2	213.9
Italy	1,058.3	163.2	244.5	183.4
Belgium	1,058.3	163.2	244.5	183.4
Portugal	352.8	54.4	81.5	61.1
Malta	176.4	27.2	40.7	30.6
Cyprus	176.4	27.2	40.7	30.6
Greece	352.8	54.4	81.5	61.1
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	176.4	27.2	40.7	30.6
Lithuania	0.0	0.0	0.0	0.0
Hungary	529.1	81.6	122.2	91.7
Sweden	352.8	54.4	81.5	61.1

MS	2028	2030	2040	2050
Czech Republic	529.1	81.6	122.2	91.7
Ireland	352.8	54.4	81.5	61.1
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	176.4	27.2	40.7	30.6
Total cost (thousand EUR)	17,637.9	2,719.3	4,074.5	3,056.3

Table 0-53: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM7 in PO4 in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

MS	2028	2030	2040	2050
Germany	2,116.5	320.1	512.4	368.0
Austria	1,587.4	240.1	384.3	276.0
Denmark	1,058.3	160.0	256.2	184.0
Luxembourg	705.5	106.7	170.8	122.7
Finland	881.9	133.4	213.5	153.3
Spain	705.5	106.7	170.8	122.7
Netherlands	1,763.8	266.7	427.0	306.6
France	2,292.9	346.8	555.1	398.6
Poland	1,234.7	186.7	298.9	214.6
Italy	1,058.3	160.0	256.2	184.0
Belgium	1,058.3	160.0	256.2	184.0
Portugal	352.8	53.3	85.4	61.3
Malta	176.4	26.7	42.7	30.7
Cyprus	176.4	26.7	42.7	30.7
Greece	352.8	53.3	85.4	61.3
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	176.4	26.7	42.7	30.7
Lithuania	0.0	0.0	0.0	0.0
Hungary	529.1	80.0	128.1	92.0
Sweden	352.8	53.3	85.4	61.3
Czech Republic	529.1	80.0	128.1	92.0
Ireland	352.8	53.3	85.4	61.3
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0

MS	2028	2030	2040	2050
Romania	0.0	0.0	0.0	0.0
Slovakia	176.4	26.7	42.7	30.7
Total cost (thousand EUR)	**17,637.9**	**2,667.3**	**4,270.3**	**3,066.4**

The total present value of the adjustment costs for MDMS platforms over the 2028-2050 period, relative to the baseline, are provided in Table 0-54 per policy option (2024 prices).

Table 0-54: Adjustment costs for LE B2C MDMS platforms due to PM7 in all policy options relative to the baseline, expressed as present value over 2028-2050 (in million EUR, 2024 prices)

	Difference to the baseline			
Total adjustment cost	**PO1**	**PO2**	**PO3**	**PO4**
Total adminsitrative costs	52.9	72.6	69.4	70.8
One-off	20.8	30.0	28.3	29.1
Ongoing	32.1	42.6	41.1	41.8

*10.6.3.8 PM8: Obligation for **all B2B and B2C MDMS platforms** to display information on GHG or CO2 emissions of trips (when these data are provided by the operators in line with and Count Emissions EU and Flight Emission Label)*

Summary of the type of costs

Adjustment costs for platforms (large platforms only, SMEs exempt) to present GHG and CO2 data when available

- One-off cost for IT development to adjust their display criteria.

  Since large platforms (with SMEs exempt) must also modify how transport offers are displayed to ensure a neutral presentation - including if they choose to do so with the integration of GHG and CO_2 criteria - it is reasonable to assume that they will leverage economies of scale and simultaneously update their interfaces to include information on GHG and CO_2 emissions.

- Recurrent system maintenance costs

The estimate of the one-off cost for platforms to adjust their systems to display the relevant environmental information draws on stakeholder feedback on the software-engineering effort needed to implement the upgrade. Approximately 90 working days are estimated to be required for a software technician to carry out the upgrade. To this programming time accounts also for work that overlaps with software updates required in PM1, PM2, PM3. This cost is estimated at EUR 23,125 per MDMS platform in 2024 prices. This is multiplied by the number of large MDMS platforms operational in 2028, as well as the new large MDMS entering the market in subsequent years (SME platforms are exempt from the obligation). In addition, a 10% annual system-maintenance cost is applied from 2029 onwards to all platforms that are operational in a given year and have previously incurred the one-off costs.

Table 0-55 summarises the number of LE MDMS platforms under the different policy options in 2028, 2030, 2040 and 2050, as well as the corresponding total one-off and recurrent administrative costs relative to the baseline (2024 prices).

Table 0-55: One-off and recurrent adjustment cost for LE B2C MDMS platforms due to PM8 in the policy options in 2028, 2030, 2040 and 2050 relative to the baseline (in million EUR, 2024 prices)

	2028	2030	2040	2050
One-off cost for one LE MDMS platform to programme (EUR)	23,125	23,125	23,125	23,125
Recurrent costs per LE MDMS platform (EUR)	2,312	2,312	2,312	2,312
PO1				
Number of LE MDMS platforms that incur one-off costs due to PM8	175	4	2	0
Number of LE MDMS platforms that incur recurrent costs due to PM8	0	179	210	212
Total one-off administrative costs (million EUR)	4.1	0.1	0.1	0.0
Total recurrent administrative costs (million EUR)	0.0	0.4	0.5	0.5
PO2				
Number of LE MDMS platforms that incur one-off costs due to PM8	175	8	13	0
Number of LE MDMS platforms that incur recurrent costs due to PM8	0	183	312	306
Total one-off administrative costs (million EUR)	4.1	0.2	0.3	0.0
Total recurrent administrative costs (million EUR)	0.0	0.4	0.7	0.7
PO3				
Number of LE MDMS platforms that incur one-off costs due to PM8	175	9	11	0
Number of LE MDMS platforms that incur recurrent costs due to PM8	0	182	292	303
Total one-off administrative costs (million EUR)	4.1	0.2	0.3	0.0
Total recurrent administrative costs (million EUR)	0.0	0.4	0.7	0.7
PO4				
Number of LE MDMS platforms that incur one-off costs due to PM8	175	8	12	0
Number of LE MDMS platforms that incur recurrent costs due to PM8	0	183	301	305
Total one-off administrative costs (million EUR)	4.1	0.2	0.3	0.0
Total recurrent administrative costs (million EUR)	0.0	0.4	0.7	0.7

Table 0-56, Table 0-57, Table 0-58, and Table 0-59 present the adjustment costs for 2028, 2030, 2040 and 2050 for large B2C MDMS platforms per Member State under the four policy options.

Table 0-56: Total adjustments cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM8 in PO1 in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

MS	2028	2030	2040	2050
Germany	415.8	51.2	55.1	50.3
Austria	311.8	38.4	41.3	37.7
Denmark	207.9	25.6	27.5	25.2
Luxembourg	138.6	17.1	18.4	16.8
Finland	173.2	21.3	22.9	21.0
Spain	138.6	17.1	18.4	16.8
Netherlands	346.5	42.7	45.9	41.9
France	450.4	55.5	59.6	54.5
Poland	242.5	29.9	32.1	29.4
Italy	207.9	25.6	27.5	25.2
Belgium	207.9	25.6	27.5	25.2
Portugal	69.3	8.5	9.2	8.4
Malta	34.6	4.3	4.6	4.2
Cyprus	34.6	4.3	4.6	4.2
Greece	69.3	8.5	9.2	8.4

MS	2028	2030	2040	2050
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	34.6	4.3	4.6	4.2
Lithuania	0.0	0.0	0.0	0.0
Hungary	103.9	12.8	13.8	12.6
Sweden	69.3	8.5	9.2	8.4
Czech Republic	103.9	12.8	13.8	12.6
Ireland	69.3	8.5	9.2	8.4
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	34.6	4.3	4.6	4.2
Total administrative cost (thousand EUR)	3,464.8	426.7	458.8	419.4

Table 0-57: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM8 in PO2 in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

MS	2028	2030	2040	2050
Germany	415.8	62.9	105.8	72.6
Austria	311.8	47.2	79.3	54.4
Denmark	207.9	31.5	52.9	36.3
Luxembourg	138.6	21.0	35.3	24.2
Finland	173.2	26.2	44.1	30.2
Spain	138.6	21.0	35.3	24.2
Netherlands	346.5	52.4	88.1	60.5
France	450.4	68.2	114.6	78.6
Poland	242.5	36.7	61.7	42.3
Italy	207.9	31.5	52.9	36.3
Belgium	207.9	31.5	52.9	36.3
Portugal	69.3	10.5	17.6	12.1
Malta	34.6	5.2	8.8	6.0
Cyprus	34.6	5.2	8.8	6.0
Greece	69.3	10.5	17.6	12.1
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	34.6	5.2	8.8	6.0
Lithuania	0.0	0.0	0.0	0.0
Hungary	103.9	15.7	26.4	18.1
Sweden	69.3	10.5	17.6	12.1
Czech Republic	103.9	15.7	26.4	18.1
Ireland	69.3	10.5	17.6	12.1

MS	2028	2030	2040	2050
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	34.6	5.2	8.8	6.0
Total administrative cost (thousand EUR)	3,464.8	524.3	881.3	604.7

Table 0-58: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM8 in PO3 in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

MS	2028	2030	2040	2050
Germany	415.8	63.9	96.1	72.0
Austria	311.8	47.9	72.1	54.0
Denmark	207.9	31.9	48.0	36.0
Luxembourg	138.6	21.3	32.0	24.0
Finland	173.2	26.6	40.0	30.0
Spain	138.6	21.3	32.0	24.0
Netherlands	346.5	53.2	80.1	60.0
France	450.4	69.2	104.1	78.0
Poland	242.5	37.3	56.1	42.0
Italy	207.9	31.9	48.0	36.0
Belgium	207.9	31.9	48.0	36.0
Portugal	69.3	10.6	16.0	12.0
Malta	34.6	5.3	8.0	6.0
Cyprus	34.6	5.3	8.0	6.0
Greece	69.3	10.6	16.0	12.0
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	34.6	5.3	8.0	6.0
Lithuania	0.0	0.0	0.0	0.0
Hungary	103.9	16.0	24.0	18.0
Sweden	69.3	10.6	16.0	12.0
Czech Republic	103.9	16.0	24.0	18.0
Ireland	69.3	10.6	16.0	12.0
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	34.6	5.3	8.0	6.0
Total administrative cost (thousand EUR)	3,464.8	532.2	800.7	600.4

Table 0-59: Total adjustment cost (one-off and recurrent) for Large B2C MDMS platforms per Member State due to PM8 in PO4 in 2028, 2030, 2040 and 2050 relative to the baseline (thousand EUR; 2024 prices)

MS	2028	2030	2040	2050
Germany	415.8	62.9	100.8	72.3
Austria	311.8	47.1	75.6	54.2
Denmark	207.9	31.4	50.4	36.1
Luxembourg	138.6	21.0	33.6	24.1
Finland	173.2	26.2	42.0	30.1
Spain	138.6	21.0	33.6	24.1
Netherlands	346.5	52.4	84.0	60.2
France	450.4	68.1	109.2	78.3
Poland	242.5	36.7	58.8	42.2
Italy	207.9	31.4	50.4	36.1
Belgium	207.9	31.4	50.4	36.1
Portugal	69.3	10.5	16.8	12.0
Malta	34.6	5.2	8.4	6.0
Cyprus	34.6	5.2	8.4	6.0
Greece	69.3	10.5	16.8	12.0
Bulgaria	0.0	0.0	0.0	0.0
Estonia	0.0	0.0	0.0	0.0
Croatia	34.6	5.2	8.4	6.0
Lithuania	0.0	0.0	0.0	0.0
Hungary	103.9	15.7	25.2	18.1
Sweden	69.3	10.5	16.8	12.0
Czech Republic	103.9	15.7	25.2	18.1
Ireland	69.3	10.5	16.8	12.0
Slovenia	0.0	0.0	0.0	0.0
Latvia	0.0	0.0	0.0	0.0
Romania	0.0	0.0	0.0	0.0
Slovakia	34.6	5.2	8.4	6.0
Total administrative cost (thousand EUR)	3,464.8	523.8	839.7	602.4

Table 0-60 presents the present value of the adjustment costs for large MDMS platforms over 2028–2050 for each policy option, relative to the baseline (2024 prices).

Table 0-60: Adjustment costs for large B2C MDMS platforms due to PM8 in all policy options relative to the baseline, expressed as present value over 2028-2050 (in million EUR, 2024 prices)

	Difference to the baseline			
	PO1	PO2	PO3	PO4
Total adjustment costs	12.1	16.7	15.9	16.3
One-off	4.8	6.9	6.5	6.7

	Difference to the baseline			
Ongoing	7.4	9.8	9.4	9.6

10.6.3.9 PM9: Legislation sets thresholds to identify MDMS and rail operators in scope: for rail operators: within one calendar year, equivalent or above 50% share of the total rail services operated in a Member State (including domestic and EU cross-border services to/from that Member State), expressed in yearly passenger kilometres; for B2C MDMS: within one calendar year, a certain turnover and or number of users per month in a national market.

There is no direct cost expected for this PM, which only leads to costs in combination with PMs 10, 11; 12, 13, 14, 15.

10.6.3.10 PM10: B2C MDMS platforms: must notify national authorities or the EC about their market presence. National authorities designate B2C MDMS platforms and RUs with SMP at national level, while the EC designates B2C MDMS platforms with SMP at EU level. The EC publishes a list of MDMS platforms (including indispensable RU platforms) and RUs with SMP at both national and EU level

Summary of the type of costs

- Administrative costs (one-off):
  - for platforms to notify to authorities in order to determine Significant Market Presence (SMP)
  - for MS relevant authorities (designated under PM6), to receive notification from B2C MDMS and notify EC about designated entities with SMP at national level and potentially deal with related complaints
  - for RU operators with SMP to provide a list to authorities of their platforms
- Adjustment costs (recurrent):
  - For EC to designate B2C MDMS with SMP at EU level and deal with related complaints.

Recurrent adjustment costs for the EC. PM10 introduces a requirement for the EC to designate B2C MDMS platforms with SMP at EU-level, after receiving notifications from platforms. EC might also need to deal with complaints/further investigation related to the designation process. Over time, EC will need to monitor developments and manage the list of designated entities (with potential additions or removals to the list). This is assumed to require 2 FTE per year. The cost per FTE in 2024 prices was assumed at EUR 118,326 at AD5 level, including overheads. Thus, the total recurrent adjustment costs for EC total EUR 236,652 per year in all PO's.

Table 0-61: Adjustment costs for the EC (recurrent) in PO1 (EUR, 2024 prices)

All POs	2028	2030	2040	2050
Total recurrent costs to designate platforms with SMP and deal with complains (PM10)	236,652	236,652	236,652	236,652

	Difference to the baseline			
	PO1	PO2	PO3	PO4
Total adjustment costs	4.01	4.01	4.01	4.01
One-off	-	-	-	-

	Difference to the baseline			
Ongoing	4.01	4.01	4.01	4.01

Table 0-62: Present value of adjustment costs for the EC due to PM10 in all policy options relative to the baseline (million EUR, 2024 prices)

	Difference to the baseline			
	PO1	PO2	PO3	PO4
Total adjustment costs	4.01	4.01	4.01	4.01
One-off	-	-	-	-
Ongoing	4.01	4.01	4.01	4.01

One-off administrative costs for national authorities. Member States are expected to incur costs relating to processing notification from platforms with SMP and submitting this to the EC (PM10) in 2028 (the year of implementation). This is assumed at 2 FTE, applicable to each of the 27 Member States, coming to a total recurrent administrative cost of EUR 3,052,437. National authorities might also need to deal with complaints/further investigation related to the designation process, this cost along the one related to monitoring market developments is already accounted for in PM6.

Table 0-63: One-off administrative cost for MS due to PM10 (EUR, 2024 prices)

	2028	2030	2040	2050
Cost of processing market information per MS (PM10)	113,053	0.0	0.0	0.0
All POs				
Total one-off administrative cost (million EUR)	3.1	0.0	0.0	0.0

Table 0-64: Present value of administrative costs for MS due to PM10 (million EUR, 2024 prices)

	Difference to the baseline			
	PO1	PO2	PO3	PO4
Total administrative costs	3.05	3.05	3.05	3.05
One-off	3.05	3.05	3.05	3.05
Ongoing	-	-	-	-

Administrative costs for MDMS platforms with SMP. MDMS platforms are expected to incur costs relating to notifying national authorities (PM10). In the baseline, it is assumed that rail operators already submit the required information through the RMMS scheme.[147] This is assumed to be a new requirement for MDMS platforms. Evidence for the costs incurred is taken from the impact assessment for the Digital Market Act, which assumed 20 FTEs per 'Gatekeeper' for submission of relevant data to authorities.[148] In this case, the

[147] https://transport.ec.europa.eu/transport-modes/rail/market/rail-market-monitoring-rmms_en
[148] https://eur-lex.europa.eu/resource.html?uri=cellar:57a5679e-3f85-11eb-b27b-01aa75ed71a1.0001.02/DOC_2&format=PDF

entities are far smaller than those regulated under the DMA (Apple, Google, etc.) and the process is assumed to be far lighter (platforms only need to notify that they have reached a threshold). We therefore assume 2 FTE per platform. Only platforms reaching the threshold set in PM9 (4 MDMS platforms) would be requested to submit this information, and once submitted, those designated would not be obliged to submit any further notification in the consecutive years. We therefore assume costs are incurred by large platforms in the year of implementation (2028).

Table 0-65: One-off administrative costs for MDMS platforms due to PM10 (EUR, 2024 prices)

	2028	2030	2040	2050
One-off costs per MDMS platform (EUR)	113,053			
PO1				
Number of LE MDMS platforms that incur recurrent costs due to PM10	4	0	0	0
Total one-off administrative costs (million EUR)	**0.5**	**0.0**	**0.0**	**0.0**
PO2				
Number of LE MDMS platforms that incur recurrent costs due to PM10	4	0	0	0
Total one-off administrative costs (million EUR)	**0.5**	**0.0**	**0.0**	**0.0**
PO3				
Number of LE MDMS platforms that incur recurrent costs due to PM10	4	0	0	0
Total one-off administrative costs (million EUR)	**0.5**	**0.0**	**0.0**	**0.0**
PO4				
Number of LE MDMS platforms that incur recurrent costs due to PM10	4	0	0	0
Total one-off administrative costs (million EUR)	**0.5**	**0.0**	**0.0**	**0.0**

Table 0-66: Present value of administrative cost for large MDMS platforms due to PM10 (million EUR, 2024 prices)

	Difference to the baseline			
	PO1	**PO2**	**PO3**	**PO4**
Total administrative costs	0.45	0.45	0.45	0.45
One-off	0.45	0.45	0.45	0.45
Ongoing	-	-	-	-

Administrative costs for RU with SMP. RUs with SMP are expected to incur costs relating to informing national authorities about the list of their platforms that are opened to other RUs (PM10). This is assumed to be a new requirement for RUs with SMP. It is assumed that 2 hours are needed per RU with SMP for this task. Only RUs with SMP as detailed in PM9, and whose platforms are already opened to other RUs (19) would be requested to submit this information, and once submitted, they would not be obliged to submit any further information in the consecutive years, unless a change occurs. We therefore assume costs are incurred by large platforms in the year of implementation (2028). Considering the hourly rates presented in section 3.2 of Annex 4, they are estimated at EUR 71.4 per RU. Thus, the total one-off administrative costs at EU level for RUs are estimated at EUR 1,356 in 2028.

Table 0-67: One-off administrative costs for RUs due to PM10 (EUR, 2024 prices)

	2028	2030	2040	2050
One-off costs per MDMS platform (EUR)	71			
PO1				
Number of LE MDMS platforms that incur recurrent costs due to PM10	19	0	0	0

	2028	2030	2040	2050
Total one-off administrative costs (million EUR)	**0.001**	**0.0**	**0.0**	**0.0**
PO2				
Number of LE MDMS platforms that incur recurrent costs due to PM10	19	0	0	0
Total one-off administrative costs (million EUR)	**0.001**	**0.0**	**0.0**	**0.0**
PO3				
Number of LE MDMS platforms that incur recurrent costs due to PM10	19	0	0	0
Total one-off administrative costs (million EUR)	**0.001**	**0.0**	**0.0**	**0.0**
PO4				
Number of LE MDMS platforms that incur recurrent costs due to PM10	19	0	0	0
Total one-off administrative costs (million EUR)	**0.001**	**0.0**	**0.0**	**0.0**

*10.6.3.11 PM11: **B2C MDMS platforms with SMP, indispensable RU platforms and B2B MDMS**: must respect principles on distribution fees and cannot impose highly restrictive clauses (exclusivity clauses, unfair and unjustified conditions, marketing clauses and other technical restrictions) when entering into commercial agreements with transport operators*

Summary of the type of costs

- Adjustment cost savings (recurrent) due to simplification in commercial agreements from the use of principles on distribution fees. These apply only to commercial agreements entered by B2C MDMS with SMP, or B2B MDMS.

PM11 requires indispensable MDMS platforms who enter commercial agreements with willing operators to adhere to principles on distribution fees and preventing restrictive practices. This is expected to lower the costs of contract negotiation and renegotiation for both sides of the agreement (i.e. transport operators and MDMS platforms).

During the stakeholders' survey, stakeholders provided a range of costs associated with negotiating new service licence agreements between a transport operator and an MDMS platform. A rail operator estimated EUR 20,000 per service licence agreement and a public transport operator suggested 6 months to a year of negotiation time. A cost of EUR 20,000 is assumed, expressed in 2024 prices. Responses to the same consultation suggested contract renegotiation costs of EUR 11,830.

A contract negotiation simplification of 10% is assumed, implying cost savings of EUR 2,000 per new agreement and EUR 1,183 per renegotiation.

These per-agreement costs are then scaled by the difference in new and renegotiated agreements entered by obligated entities relative to the baseline (B2C MDMS with SMP – comprising the 19 indispensable rail platforms, one OTA, and three MSE in 2025 - and large B2B MDMS – comprising 26 platforms in 2025). The method for estimating these new agreements in each year is shown in section 10.6.1.3. The distribution of savings between large companies and SMEs is assumed proportional to the prevailing share of SMEs within each group – 74% SME within B2B platforms and 78% for transport operators at aggregate level for all modes.

Total New and renegotiated agreements are higher in POs 2-4 due to (a) a higher assumed number of active platforms, and (b) interactive effects with obligations to sell and host in PM13 and PM14.

Table 0-68: Adjustment cost savings (recurrent) for operators due to PM11 (2024 prices)

	2028	2030	2040	2050
Cost savings per new agreement (EUR)	2,000	2,000	2,000	2,000
Cost savings per renegotiated agreement (EUR)	1,183	1,183	1,183	1,183
PO1				
New agreements by large operators (changes relative to the baseline)	0	58	23	0
New agreements by SME operators (changes relative to the baseline)	0	206	81	0

	2028	2030	2040	2050
Renegotiated agreements by large operators (changes relative to the baseline)	0	39	173	73
Renegotiated agreements by SME operators (changes relative to the baseline)	0	137	616	261
Total adjustment cost savings for large operators (million EUR)	0.0	0.2	0.3	0.1
Total adjustment cost savings for SME operators (million EUR)	0.0	0.6	0.9	0.3
PO2				
New agreements by large operators (changes relative to the baseline)	906	206	360	0
New agreements by SME operators (changes relative to the baseline)	3,220	732	1,279	0
Renegotiated agreements by large operators (changes relative to the baseline)	302	439	1,639	1,317
Renegotiated agreements by SME operators (changes relative to the baseline)	1,073	1,561	5,825	4,681
Total adjustment cost savings for large operators (million EUR)	2.2	0.9	2.7	1.6
Total adjustment cost savings for SME operators (million EUR)	7.7	3.3	9.4	5.5
PO3				
New agreements by large operators (changes relative to the baseline)	909	206	298	0
New agreements by SME operators (changes relative to the baseline)	3,230	732	1,060	0
Renegotiated agreements by large operators (changes relative to the baseline)	303	423	1,418	1,318
Renegotiated agreements by SME operators (changes relative to the baseline)	1,077	1,505	5,039	4,684
Total adjustment cost savings for large operators (million EUR)	2.2	0.9	2.3	1.6
Total adjustment cost savings for SME operators (million EUR)	7.7	3.2	8.1	5.5
PO4				
New agreements by large operators (changes relative to the baseline)	1,023	206	329	0
New agreements by SME operators (changes relative to the baseline)	3,635	732	1,170	0
Renegotiated agreements by large operators (changes relative to the baseline)	341	431	1,528	1,317
Renegotiated agreements by SME operators (changes relative to the baseline)	1,212	1,531	5,430	4,681
Total adjustment cost savings for large operators (million EUR)	2.4	0.9	2.5	1.6
Total adjustment cost savings for SME operators (million EUR)	8.7	3.3	8.8	5.5

Table 0-69: Adjustment cost savings (recurrent) for MDMS platforms due to PM11 (2024 prices)

	2028	2030	2040	2050
Cost savings per new agreement (EUR)	2,000	2,000	2,000	2,000
Cost savings per renegotiated agreement (EUR)	1,183	1,183	1,183	1,183
PO1				
New agreements by large platforms (changes relative to the baseline)	0	75	29	0
New agreements by SME platforms (changes relative to the baseline)	0	189	75	0
Renegotiated agreements by large platforms (changes relative to the baseline)	0	50	223	95
Renegotiated agreements by SME platforms (changes relative to the baseline)	0	126	566	240
Total adjustment cost savings for large platforms (million EUR)	0.0	0.2	0.3	0.1
Total adjustment cost savings for SME platforms (million EUR)	0.0	0.5	0.8	0.3
PO2				
New agreements by large platforms (changes relative to the baseline)	1,483	276	481	0
New agreements by SME platforms (changes relative to the baseline)	2,642	662	1,158	0
Renegotiated agreements by large platforms (changes relative to the baseline)	494	678	2,281	1,857
Renegotiated agreements by SME platforms (changes relative to the baseline)	881	1,322	5,183	4,141
Total adjustment cost savings for large platforms (million EUR)	3.6	1.4	3.7	2.2
Total adjustment cost savings for SME platforms (million EUR)	6.3	2.9	8.4	4.9
PO3				
New agreements by large platforms (changes relative to the baseline)	1,496	276	399	0
New agreements by SME platforms (changes relative to the baseline)	2,642	662	960	0
Renegotiated agreements by large platforms (changes relative to the baseline)	499	660	1,990	1,861
Renegotiated agreements by SME platforms (changes relative to the baseline)	881	1,268	4,467	4,141

	2028	2030	2040	2050
Total adjustment cost savings for large platforms (million EUR)	3.6	1.3	3.2	2.2
Total adjustment cost savings for SME platforms (million EUR)	6.3	2.8	7.2	4.9
PO4				
New agreements by large platforms (changes relative to the baseline)	2,015	276	440	0
New agreements by SME platforms (changes relative to the baseline)	2,642	662	1,059	0
Renegotiated agreements by large platforms (changes relative to the baseline)	672	667	2,133	1,857
Renegotiated agreements by SME platforms (changes relative to the baseline)	881	1,295	4,825	4,141
Total adjustment cost savings for large platforms (million EUR)	4.8	1.3	3.4	2.2
Total adjustment cost savings for SME platforms (million EUR)	6.3	2.9	7.8	4.9

Table 0-70: Present value of adjustment cost savings due to PM10 (million EUR, 2024 prices)

	Difference to the baseline			
Total adjustment cost savings (recurrent)	**PO1**	**PO2**	**PO3**	**PO4**
Large MDMS platforms	3.4	42.3	38.4	41.6
SME MDMS platforms	8.6	93.7	83.9	88.8
Large operators	2.6	29.9	26.9	28.6
SME operators	9.4	106.2	95.4	101.8

10.6.3.12 PM12: ***Indispensable RU (with SMP and to all other rail undertakings in relation to PSO and cross- border services)****: must respect principles on distribution fees without imposing restrictive clauses (exclusivity clauses, marketing clauses and other technical restrictions) when entering into commercial agreements with MDMS platforms*

Summary of the type of costs

- Adjustment cost savings (recurrent) for both operators and platforms due to simplification in commercial agreements from the use of principles on distribution fees. These apply only to commercial agreements entered by indispensable rail operators with willing platforms.

As with PM11, PM12 requires adherence to principles on distribution fees and preventing restrictive practices, but this time applying to agreements entered by rail operators with SMP (24 operators in 2025) and other large operators of PSO or international rail services (117 operators in 2025) with MDMS platforms.

The same assumptions on cost savings are assumed as for PM11. The method for estimating these new agreements in each year is shown in section 10.6.1.3. The distribution of savings between large companies and SMEs is assumed proportional to the prevailing share of SMEs within each group – 7% SME within PSO and cross-border rail operators, and 56% within MDMS platforms (B2C or B2B).

New and renegotiated agreements are higher in POs 2-4 due to (a) a higher assumed number of active platforms, and (b) interactive effects with obligations to sell and host in PM13 and PM14.

Table 0-71: Adjustment cost savings (recurrent) for operators due to PM12 (2024 prices)

	2028	2030	2040	2050
Cost savings per new agreement (EUR)	2,000	2,000	2,000	2,000
Cost savings per renegotiated agreement (EUR)	1,183	1,183	1,183	1,183
PO1				
New agreements made by large operators (changes relative to the baseline)	0	20	8	0

	2028	2030	2040	2050
New agreements made by SME operators (changes relative to the baseline)	0	1	0	0
Renegotiated agreements made by large operators (changes relative to the baseline)	0	13	59	25
Renegotiated agreements made by SME operators (changes relative to the baseline)	0	1	4	2
Total adjustment cost savings for large operators (million EUR)	0.0	0.1	0.1	0.0
Total adjustment cost savings for SME operators (million EUR)	0.0	0.0	0.0	0.0
PO2				
New agreements made by large operators (changes relative to the baseline)	449	77	135	0
New agreements made by SME operators (changes relative to the baseline)	29	5	9	0
Renegotiated agreements made by large operators (changes relative to the baseline)	150	201	650	534
Renegotiated agreements made by SME operators (changes relative to the baseline)	10	13	41	34
Total adjustment cost savings for large operators (million EUR)	1.1	0.4	1.0	0.6
Total adjustment cost savings for SME operators (million EUR)	0.1	0.0	0.1	0.0
PO3				
New agreements made by large operators (changes relative to the baseline)	449	78	112	0
New agreements made by SME operators (changes relative to the baseline)	29	5	7	0
Renegotiated agreements made by large operators (changes relative to the baseline)	150	196	568	534
Renegotiated agreements made by SME operators (changes relative to the baseline)	10	12	36	34
Total adjustment cost savings for large operators (million EUR)	1.1	0.4	0.9	0.6
Total adjustment cost savings for SME operators (million EUR)	0.1	0.0	0.1	0.0
PO4				
New agreements made by large operators (changes relative to the baseline)	464	78	123	0
New agreements made by SME operators (changes relative to the baseline)	30	5	8	0
Renegotiated agreements made by large operators (changes relative to the baseline)	155	198	609	534
Renegotiated agreements made by SME operators (changes relative to the baseline)	10	13	39	34
Total adjustment cost savings for large operators (million EUR)	**1.1**	**0.4**	**1.0**	**0.6**
Total adjustment cost savings for SME operators (million EUR)	**0.1**	**0.0**	**0.1**	**0.0**

Table 0-72: Adjustment cost savings (recurrent) for MDMS Platforms due to PM12 (2024 prices)

	2028	2030	2040	2050
Cost savings per new agreement (EUR)	2,000	2,000	2,000	2,000
Cost savings per renegotiated agreement (EUR)	1,183	1,183	1,183	1,183
PO1				
New agreements made by large platforms (changes relative to the baseline)	0	9	4	0
New agreements made by SME platforms (changes relative to the baseline)	0	12	5	0
Renegotiated agreements made by large platforms (changes relative to the baseline)	0	6	28	12
Renegotiated agreements made by SME platforms (changes relative to the baseline)	0	8	35	15
Total adjustment cost savings for large platforms (million EUR)	0.0	0.0	0.0	0.0
Total adjustment cost savings for SME platforms (million EUR)	0.0	0.0	0.1	0.0
PO2				
New agreements made by large platforms (changes relative to the baseline)	210	36	63	0
New agreements made by SME platforms (changes relative to the baseline)	268	46	80	0
Renegotiated agreements made by large platforms (changes relative to the baseline)	70	94	304	249
Renegotiated agreements made by SME platforms (changes relative to the baseline)	89	120	388	318
Total adjustment cost savings for large platforms (million EUR)	0.5	0.2	0.5	0.3
Total adjustment cost savings for SME platforms (million EUR)	0.6	0.2	0.6	0.4
PO3				
New agreements made by large platforms (changes relative to the baseline)	210	36	52	0
New agreements made by SME platforms (changes relative to the baseline)	268	47	67	0
Renegotiated agreements made by large platforms (changes relative to the baseline)	70	91	265	249

	2028	2030	2040	2050
Renegotiated agreements made by SME platforms (changes relative to the baseline)	89	117	339	319
Total adjustment cost savings for large platforms (million EUR)	0.5	0.2	0.4	0.3
Total adjustment cost savings for SME platforms (million EUR)	0.6	0.2	0.5	0.4
PO4				
New agreements made by large platforms (changes relative to the baseline)	217	36	58	0
New agreements made by SME platforms (changes relative to the baseline)	277	46	74	0
Renegotiated agreements made by large platforms (changes relative to the baseline)	72	93	284	249
Renegotiated agreements made by SME platforms (changes relative to the baseline)	92	118	363	318
Total adjustment cost savings for large platforms (million EUR)	0.5	0.2	0.5	0.3
Total adjustment cost savings for SME platforms (million EUR)	0.7	0.2	0.6	0.4

Table 0-73: Present value of adjustment cost savings (recurrent) for operators and MDMS platforms due to PM12 (2024 prices)

	Difference to the baseline			
Total adjustment cost savings (recurrent)	**PO1**	**PO2**	**PO3**	**PO4**
Large MDMS platforms	0.4	5.7	5.2	5.4
SME MDMS platforms	0.5	7.3	6.6	6.9
Large operators	0.9	12.2	11.0	11.6
SME operators	0.1	0.8	0.7	0.7

10.6.3.13 PM13: ***Indispensable RU (with SMP and to all other rail undertakings in relation to PSO and cross- border services)****: must enter into commercial agreements with willing MDMS platforms to enable the re-linking, resale and/or distribution of their tickets*

Summary of the type of costs

- Adjustment costs (one-off) related to negotiating new agreements (not existing in the baseline) between rail operators with SMP or PSO/cross-border operators and MDMS platforms, and the setup of data-sharing via API.

PM13 introduces obligations for rail operators with SMP and PSO/cross-border operators to enable re-linking and/or the sale of tickets to any requesting MDMS platform. Since obligated operators would not have entered these agreements in the absence of policy intervention, obligated entities will therefore incur costs to facilitate this. The cost is assumed to take two parts:

- **The cost of negotiating the agreement**: given that PM11 and PM12 apply in all policy options, principles on distribution fees and terms preventing highly restrictive clauses are assumed to reduce contract negotiation costs by 10%, leading to an assumed total negotiation cost of EUR 18,000 per agreement.
- **The cost of facilitating data transfer:** costs related to data sharing via APIs should already be accounted for in the baseline since TSI Telematics impose interoperability requirements in rail – the only additional cost that could be foreseen would relate to ensuring that your API is ready for the third party to connect – this is estimated at 10% of setting up the API, or EUR 11,772, including management of any technical request from the distributor.

Combining the above two elements yields a total cost of onboarding a new counterparty at EUR 29,772. This is assumed to apply only for the obligated entity (in this case the operator). While costs would also reasonably be expected for the MDMS platform that wants to display the operator, as profit-making business that benefit from economies of scale from the passengers they serve, they would also be expected to generate revenues

that would at least outweigh the costs. If they did not, then the platform would not be 'willing' to enter the agreement.

Total costs are therefore calculated by multiplying this onboarding cost with the additional agreements negotiated by the obligated entities relative to the baseline in each PO. The method for estimating the additional new agreements brought about by PM13 in each year is shown in section 10.6.1.3.

Table 0-74: Adjustment costs (one-off) for operators due to PM13 (2024 prices)

	2028	2030	2040	2050
Cost to onboard new willing MDMS platform (EUR)	29,772	29,772	29,772	29,772
PO2				
New agreements made by indispensable (large) rail operators (change relative to the baseline)	449	77	135	0
Total adjustment costs indispensable (large) rail operators (million EUR)	**13.4**	**2.3**	**4.0**	**0.0**
PO3				
New agreements made by indispensable (large) rail operators (change relative to the baseline)	449	78	112	0
Total adjustment costs indispensable (large) rail operators (million EUR)	**13.4**	**2.3**	**3.3**	**0.0**
PO4				
New agreements made by indispensable (large) rail operators (change relative to the baseline)	155	198	609	534
Total adjustment costs indispensable (large) rail operators (million EUR)	**4.6**	**5.9**	**18.1**	**15.9**

Table 0-75: Present value of adjustment costs (one-off) for operators due to PM13 (2024 prices)

	Difference to the baseline			
	PO1	PO2	PO3	PO4
Total adjustment costs	-	48.2	42.2	45.2
One-off	-	48.2	42.2	45.2
Ongoing	-	-	-	-

10.6.3.14 PM14: ***Indispensable RU platforms:*** *must enter into commercial agreements with requesting RUs (operating within the same geographical area in which the RU owning the indispensable RU platform has SMP) to enable the distribution of tickets*

Summary of the type of costs

- Adjustment costs (one-off) related to negotiating new agreements (not existing in the baseline) between indispensable RU's platforms and other rail operators, and the setup of data-sharing via API.

PM14 introduces obligations for rail operators' platforms that reach at least 50% of the operational market to host the tickets of any other willing rail operator. Since obligated platforms would not have entered these agreements in the absence of policy intervention, these platforms will therefore incur costs to facilitate this.

As with PM13, the cost is assumed to take two parts - the cost of negotiation and the cost of establishing an API – and again, costs are only assumed for the obligated party since operators would only be assumed to be willing to enter the agreement if they expected an increase in ticket sales to at least cover the aforementioned setup costs (see section 10.6.3.13).

Total costs are therefore calculated by multiplying this onboarding cost with the additional agreements negotiated by the obligated entities relative to the baseline in PO3. The method for estimating the additional new agreements brought about by PM14 in each year is shown in section 10.6.1.3.

Table 0-76: Adjustment costs (one-off) for large MDMS platforms due to PM14 in PO3 (2024 prices)

	2028	2030	2040	2050
Cost to negotiate new commercial agreement (EUR)	29,772	29,772	29,772	29,772
PO3				
New agreements made by indispensable rail platforms (change relative to the baseline)	13	0	0	0
Total adjustment costs for large platforms (million EUR)	**0.4**	**0.0**	**0.0**	**0.0**

Table 0-77: Present value of adjustment costs (one-off) for MDMS platforms due to PM14 (2024 prices)

	Difference to the baseline			
	PO1	PO2	PO3	PO4
Total adjustment costs	-	-	0.38	-
One-off	-	-	0.38	-
Ongoing	-	-	-	-

*10.6.3.15 PM15: **Indispensable RU platforms**: must unbundle its distribution system from the systems of its parent operator*

Summary of the type of costs

- Adjustment costs (one-off) for indispensable RU platforms to unbundle their distribution system from the systems of its parent operator.

Vertical separation can occur at three different levels of intensity. The application of PM15 is assumed to constitute the **middle** of the below three levels.

- Accounting separation: operator and distribution channel make up one company but their accounts are distinct.
- Organisational separation: operator and distribution channel make up distinct organisations (companies) within one holding company, and their accounts are – thus – separated.
- Legal separation: operator and distribution channel constitute totally distinct organisations (companies).

The main costs from separation of a distribution channel from its related operator are therefore expected to: *(one-off) costs related to reorganisation* (including legal and administrative costs of separation, personnel restructuring, setup costs for new systems and processes for the separated entity, and contract renegotiations), *recurrent costs* (including loss of economies of scale and increased transaction costs through co-ordination challenges), and *potential loss of revenue* (through loss of cross-selling opportunities and reduced capacity to offer a seamless customer service). As estimate has been provided only for one-off costs based on the expected impacts of legal separation of a distribution channel (see below).

Costs of separation are likely to vary significantly from organisation to organisation based on their ownership structure, existing legal entities, and the existing integration of operation and distribution channels. Efforts to research a precedent for costs incurred from vertical separation of an operator from its distribution channel

shows that such evidence is thin. Unbundling requirements are in place for some organisations within the Digital Markets Act, but no organisation has yet been required to fulfil those obligations.

The closest comparable evidence was found in a study investigating the costs of vertical separation in the context of owners of rail infrastructure and the operators of rail rolling stock (Mizutani, 2015)[149]. The study estimates that the annual cost of imposing full 'legal' vertical separation on operators across the EU that were not already separated (approximately 50%) could exceed EUR 5.8 billion. These costs were described as system-level efficiency costs from reduced capacity for co-ordination. We therefore interpret this as a combination of the one-off and recurrent costs described above, which we translate into a purely one-off cost given limited operational inefficiencies are expected from legal separation of a distribution channel.

According to data from the European Union Agency for Railways' ERADIS licensing database, there were 176 licensed passenger railway operators[150] active across Europe at the time of the study (ERADIS, 2014). Taking the assumption from (Mizutani, 2015) that 50% of European railway networks had already imposed vertical separation, this implies that the total costs were spread over approximately 88 passenger rail operators, yielding an average per-operator cost of approximately EUR 85 million annually.

A further transformation was made to reflect that unbundling of a distribution channel is likely to be less costly than full legal separation of an operator from an infrastructure entity. We therefore conservatively assume that a vertically integrated operator would incur only 10% of the assessed per-operator cost. This translates to an average cost of approximately EUR 8.5 million when expressed in 2024 prices.

This is scaled to EU-level by multiplying the cost by the number of indispensable rail operators that have their own distribution channel (19 in total). Costs are applied over the first three years of implementation (2028-2030) to reflect that costs are likely to be incurred soon after implementation. This aligns with input from one stakeholder during the consultation for this study who claimed that it cost them 'tens of millions [of euros]' to setup their existing distribution channel, so the cost of separation would likely be lower given the distribution channel is already developed.

Table 0-78: Adjustment costs (one-off) for MDMS platforms due to PM15 (2024 prices)

	2028	2030	2040	2050
Cost to unbundle per platform (EUR)	8,546,432	8,546,432	8,546,432	8,546,432
PO4				
Number of indispensable rail platforms requiring unbundling	19	19	0	0
Total adjustment costs for large platforms (million EUR)	**54.1**	**54.1**	**0.0**	**0.0**
Total adjustment costs for SME platforms (million EUR)	**0.0**	**0.0**	**0.0**	**0.0**

Note: One-off costs of EUR 54.1 million are also estimated for 2029 although not shown in the table.

Expressed as present value over 2028-2050 relative to the baseline, the total one-off adjustment costs due to PM15 for indispensable RU platforms are provided in the table below for PO4.

Table 0-79: One-off adjustment costs for indispensable RUs due to PM15 in PO4, expressed as present value over 2028-2050 relative to the baseline (in million EUR, 2024 prices)

	Difference to the baseline			
	PO1	**PO2**	**PO3**	**PO4**
Total adjustment costs	-	-	-	157.7
One-off	-	-	-	157.7

[149] https://www.b.kobe-u.ac.jp/papers_files/2014_37.pdf

[150] Assumed the sum of 'passenger' and 'freight and passenger' undertakings, consistent with assumptions in section 1.6.1.3.

	Difference to the baseline			
Ongoing	-	-	-	-

10.6.4 Summary of costs and costs savings by policy option and stakeholder group

This section provides the costs and costs savings by policy option and stakeholder group for 2028, 2030, 2040 and 2050 relative to the baseline. The present value of the costs and costs savings by stakeholder group over 2028-2050, relative to the baseline, are presented in the main text of the study.

10.6.4.1 *MDMS platforms*

Table 0-80: One-off and recurrent costs, and costs savings for MDMS platforms in the POs relative to the baseline (EU27), in 2028, 2030, 2040 and 2050, in million EUR (2024 prices)

	PO1				PO2				PO3				PO4			
	2028	**2030**	**2040**	**2050**	**2028**	**2030**	**2040**	**2050**	**2028**	**2030**	**2040**	**2050**	**2028**	**2030**	**2040**	**2050**
Adjustment costs	**31.0**	**3.8**	**4.1**	**3.8**	**31.0**	**4.7**	**7.9**	**5.4**	**31.4**	**4.8**	**7.2**	**5.4**	**85.1**	**58.8**	**7.5**	**5.4**
PM1 (Neutral display)	4.0	0.5	0.5	0.5	4.0	0.6	1.0	0.7	4.0	0.6	0.9	0.7	4.0	0.6	1.0	0.7
PM2 (Equal care for data)	3.0	0.4	0.4	0.4	3.0	0.5	0.8	0.5	3.0	0.5	0.7	0.5	3.0	0.5	0.7	0.5
PM3 (Marketing and booking data sharing)	2.3	0.3	0.3	0.3	2.3	0.3	0.6	0.4	2.3	0.4	0.5	0.4	2.3	0.3	0.6	0.4
PM7 (Data for mobility management)	17.6	2.2	2.3	2.1	17.6	2.7	4.5	3.1	17.6	2.7	4.1	3.1	17.6	2.7	4.3	3.1
PM8 (GHG emission data)	4.1	0.5	0.5	0.5	4.1	0.6	1.0	0.7	4.1	0.6	0.9	0.7	4.1	0.6	1.0	0.7
PM14 (Obligation to host)									0.4	0.0	0.0	0.0				
PM15 (Obligation to unbundle)													54.1	54.1	0.0	0.0
Administrative costs	**0.5**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**
PM10 (Designation of indispensable MDMS and RUs)	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Adjustment cost savings	**0.0**	**0.8**	**1.2**	**0.4**	**11.0**	**4.7**	**13.2**	**7.8**	**11.1**	**4.6**	**11.3**	**7.8**	**12.3**	**4.6**	**12.3**	**7.8**
PM11 (Commercial agreement rules indispensable MDMS)	0.0	0.7	1.1	0.4	9.9	4.2	12.1	7.1	9.9	4.2	10.4	7.1	11.2	4.2	11.2	7.1

	PO1				PO2				PO3				PO4			
	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050
PM12 (Commercial agreement rules indispensable RUs)	0.0	0.1	0.1	0.0	1.1	0.4	1.1	0.7	1.1	0.4	1.0	0.7	1.2	0.4	1.0	0.7
Net costs (-) or net benefit (+)	**-31.4**	**-3.0**	**-2.9**	**-3.3**	**-20.4**	**0.0**	**5.3**	**2.4**	**-20.8**	**-0.2**	**4.1**	**2.4**	**-73.2**	**-54.2**	**4.7**	**2.4**

Table 0-81: One-off costs for MDMS platforms in the POs relative to the baseline (EU27), in 2028, 2030, 2040 and 2050, in million EUR (2024 prices)

	PO1				PO2				PO3				PO4			
	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050
Adjustment costs	**31.0**	**0.7**	**0.4**	**0.0**	**31.0**	**1.5**	**2.4**	**0.0**	**31.4**	**1.5**	**2.0**	**0.0**	**85.1**	**55.6**	**2.2**	**0.0**
PM1 (Neutral display)	4.0	0.1	0.1	0.0	4.0	0.2	0.3	0.0	4.0	0.2	0.3	0.0	4.0	0.2	0.3	0.0
PM2 (Equal care for data)	3.0	0.1	0.0	0.0	3.0	0.1	0.2	0.0	3.0	0.2	0.2	0.0	3.0	0.1	0.2	0.0
PM3 (Marketing and booking data sharing)	2.3	0.0	0.0	0.0	2.3	0.1	0.2	0.0	2.3	0.1	0.1	0.0	2.3	0.1	0.2	0.0
PM7 (Data for mobility management)	17.6	0.4	0.2	0.0	17.6	0.8	1.3	0.0	17.6	0.9	1.1	0.0	17.6	0.8	1.2	0.0
PM8 (GHG emission data)	4.1	0.1	0.1	0.0	4.1	0.2	0.3	0.0	4.1	0.2	0.3	0.0	4.1	0.2	0.3	0.0
PM14 (Obligation to host)									0.4	0.0	0.0	0.0				
PM15 (Obligation to unbundle)													54.1	54.1	0.0	0.0
Administrative costs	**0.5**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**	**0.5**	**0.0**	**0.0**	**0.0**
PM10 (Designation of indispensable MDMS and RUs)	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Adjustment cost savings	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

	PO1				PO2				PO3				PO4			
	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050
PM11 (Commercial agreement rules indispensable MDMS)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PM12 (Commercial agreement rules indispensable RUs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total one-off costs	**31.4**	**0.7**	**0.4**	**0.0**	**31.4**	**1.5**	**2.4**	**0.0**	**31.8**	**1.5**	**2.0**	**0.0**	**85.6**	**55.6**	**2.2**	**0.0**

10.6.4.2 Transport operators

Table 0-82: One-off costs and costs savings for transport operators in the POs relative to the baseline (EU27), in 2028, 2030, 2040 and 2050, in million EUR (2024 prices)

	PO1				PO2				PO3				PO4			
	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050
Adjustment costs	**0.0**	**0.0**	**0.0**	**0.0**	**13.4**	**2.3**	**4.0**	**0.0**	**13.4**	**2.3**	**3.3**	**0.0**	**4.6**	**5.9**	**18.1**	**15.9**
PM13 (Obligation to share)					13.4	2.3	4.0	0.0	13.4	2.3	3.3	0.0	4.6	5.9	18.1	15.9
Administrative costs	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
PM10 (Designation of indispensable MDMS and RUs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adjustment cost savings	**0.0**	**0.8**	**1.2**	**0.4**	**11.0**	**4.7**	**13.2**	**7.8**	**11.1**	**4.6**	**11.3**	**7.8**	**12.3**	**4.6**	**12.3**	**7.8**
PM11 (Commercial agreement rules indispensable MDMS)	0.0	0.7	1.1	0.4	9.9	4.2	12.1	7.1	9.9	4.2	10.4	7.1	11.2	4.2	11.2	7.1

	PO1				PO2				PO3				PO4			
	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050
PM12 (Commercial agreement rules indispensable RUs)	0.0	0.1	0.1	0.0	1.1	0.4	1.1	0.7	1.1	0.4	1.0	0.7	1.2	0.4	1.0	0.7
Net costs (-) or net benefit (+)	**0.0**	**0.8**	**1.2**	**0.4**	**-2.3**	**2.4**	**9.2**	**7.8**	**-2.3**	**2.2**	**8.0**	**7.8**	**7.7**	**-1.3**	**-5.9**	**-8.1**

Table 0-83: One-off costs for transport operators in the POs relative to the baseline (EU27), in 2028, 2030, 2040 and 2050, in million EUR (2024 prices)

	PO1				PO2				PO3				PO4			
	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050
Adjustment costs	**0.0**	**0.0**	**0.0**	**0.0**	**13.4**	**2.3**	**4.0**	**0.0**	**13.4**	**2.3**	**3.3**	**0.0**	**4.6**	**5.9**	**18.1**	**15.9**
PM13 (Obligation to share)					13.4	2.3	4.0	0.0	13.4	2.3	3.3	0.0	4.6	5.9	18.1	15.9
Administrative costs	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
PM10 (Designation of indispensable MDMS and RUs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adjustment cost savings	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
PM11 (Commercial agreement rules indispensable MDMS)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PM12 (Commercial agreement rules indispensable RUs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total one-off costs	**0.0**	**0.0**	**0.0**	**0.0**	**13.4**	**2.3**	**4.0**	**0.0**	**13.4**	**2.3**	**3.3**	**0.0**	**4.6**	**5.9**	**18.1**	**15.9**

10.6.4.3 *National authorities*

Table 0-84: One-off and recurrent costs for national authorities in the POs relative to the baseline (EU27), in 2028, 2030, 2040 and 2050, in million EUR (2024 prices)

	PO1				PO2				PO3				PO4			
	2028	**2030**	**2040**	**2050**	**2028**	**2030**	**2040**	**2050**	**2028**	**2030**	**2040**	**2050**	**2028**	**2030**	**2040**	**2050**
Enforcement cost	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**
PM6 (Enforcement authority)	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
Administrative costs	**4.6**	**1.5**	**1.5**	**1.5**	**4.6**	**1.5**	**1.5**	**1.5**	**4.6**	**1.5**	**1.5**	**1.5**	**4.6**	**1.5**	**1.5**	**1.5**
PM6 (Enforcement authority)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
PM10 (Designation of indispensable MDMS and RUs)	3.1	0.0	0.0	0.0	3.1	0.0	0.0	0.0	3.1	0.0	0.0	0.0	3.1	0.0	0.0	0.0
Net costs	**10.7**	**7.6**	**7.6**	**7.6**	**10.7**	**7.6**	**7.6**	**7.6**	**10.7**	**7.6**	**7.6**	**7.6**	**10.7**	**7.6**	**7.6**	**7.6**

Table 0-85: One-off costs for national authorities in the POs relative to the baseline (EU27), in 2028, 2030, 2040 and 2050, in million EUR (2024 prices)

	PO1				PO2				PO3				PO4			
	2028	**2030**	**2040**	**2050**	**2028**	**2030**	**2040**	**2050**	**2028**	**2030**	**2040**	**2050**	**2028**	**2030**	**2040**	**2050**
Enforcement cost	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
PM6 (Enforcement authority)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Administrative costs	**3.1**	**0.0**	**0.0**	**0.0**	**3.1**	**0.0**	**0.0**	**0.0**	**3.1**	**0.0**	**0.0**	**0.0**	**3.1**	**0.0**	**0.0**	**0.0**
PM6 (Enforcement authority)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PM10 (Designation of indispensable MDMS and RUs)	3.1	0.0	0.0	0.0	3.1	0.0	0.0	0.0	3.1	0.0	0.0	0.0	3.1	0.0	0.0	0.0

	PO1				PO2				PO3				PO4			
	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050
Net costs	**3.1**	**0.0**	**0.0**	**0.0**	**3.1**	**0.0**	**0.0**	**0.0**	**3.1**	**0.0**	**0.0**	**0.0**	**3.1**	**0.0**	**0.0**	**0.0**

10.6.4.4 European Commission

Table 0-86: Recurrent adjustment costs for the European Commission in the POs relative to the baseline (EU27), in 2028, 2030, 2040 and 2050, in million EUR (2024 prices)

	PO1				PO2				PO3				PO4			
	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050	2028	2030	2040	2050
Adjustment costs	**0.27**	**0.37**	**0.37**	**0.37**	**0.27**	**0.37**	**0.37**	**0.37**	**0.27**	**0.37**	**0.37**	**0.37**	**0.27**	**0.37**	**0.37**	**0.37**
PM6 (Enforcement authority)	0.03	0.13	0.13	0.13	0.03	0.13	0.13	0.13	0.03	0.13	0.13	0.13	0.03	0.13	0.13	0.13
PM10 (Designation of indispensable MDMS and RUs)	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Net costs	**0.27**	**0.37**	**0.37**	**0.37**	**0.27**	**0.37**	**0.37**	**0.37**	**0.27**	**0.37**	**0.37**	**0.37**	**0.27**	**0.37**	**0.37**	**0.37**

Input data used to calculate the external costs

All unit costs used to calculate the external cost are taken from the Handbook on the external costs of transport, Version 2019 – 1.1 (European Commission, 2019), and are shown in Table 0-87 below. Cost estimates are all adjusted to the CBA base year (€2024) using the HICP 'all items' inflation index.

Table 0-87: Inputs used for calculating total external costs

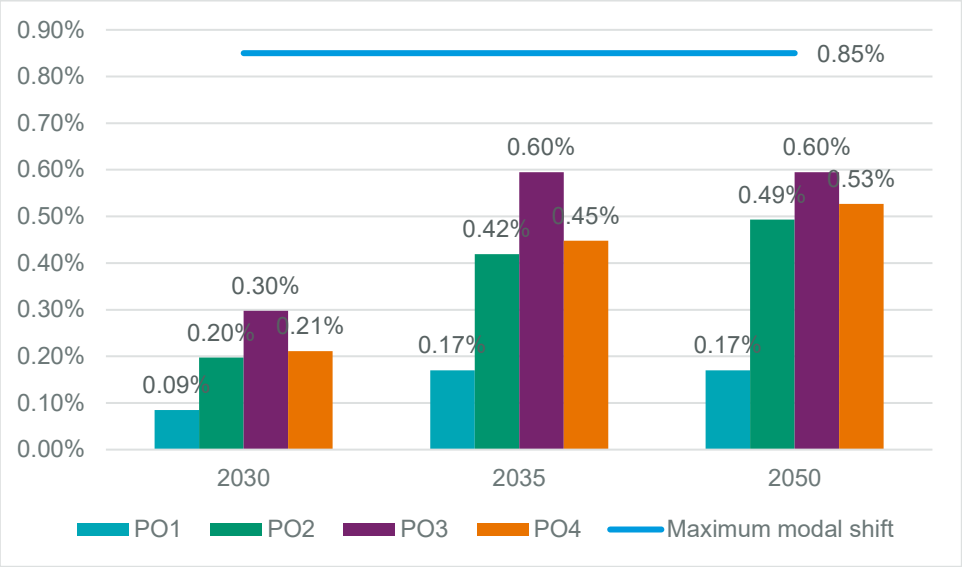
Impact category	Input factor	Unit cost to calculate the external costs
External costs of GHG emissions	GHGs from tank-to-wheel by passenger mode, expressed in CO2-equivalent Source: ASTRA	Source: EC Handbook on the external costs of transport Table 82 – Climate avoidance costs in €/tCO2 eq.
External costs of air pollutant emissions	Emissions of NOx and Particulate Matter (PM) from passenger transport, with differentiation between urban and rural settings Source: ASTRA	Source: EC Handbook on the external costs of transport Table 14 – Air pollution costs: average damage cost in €/kg emission, national averages for transport emissions (excl. maritime) (All effects: health effects, crop loss, biodiversity loss, material damage)
External costs of road congestion	Level of road passenger transport activity Source: ASTRA	Source: EC Handbook on the external costs of transport Table 41 - Total and average congestion costs borne by road vehicle and only for inter-urban context (given the scope of initiative)
External costs of noise emissions	Level of passenger transport activity Source: ASTRA	Source: EC Handbook on the external costs of transport Table 35 - Total and average noise costs for land-based modes, and Table 36 – Total and average noise costs for aviation for 33 selected EU airports The above give constant factors for all modes. Given the expected shift to electrified vehicles in road transport and subsequent reduction in noise, we take expected changes over time from the PRIMES-TREMOVE[151] model.
External costs of accidents	Number of accidents per severity category Source: ASTRA	Source: EC Handbook on the external costs of transport Table 7 – External accident costs components per casualty

10.7 SENSITIVITY ANALYSIS

Sensitivity analysis on the potential modal shift. A 'low modal shift case' has been assessed, assuming half of the potential identified for modal shift due to the ability to see all offerings on MDMS platforms and the ability to book all visible travel options on MDMS platforms. Therefore, the maximum potential modal shift in the MPA module has been assumed at 0.85%. The progress towards the maximum in the policy options is shown in the figure above based on the MPA module results.

[151] https://web.jrc.ec.europa.eu/policy-model-inventory/explore/models/model-primes-tremove/

Figure 0-6: Average modal shift across route clusters relative to the baseline in a lower sensitivity case



The impacts on transport activity due to the changes in modal shift and travel time in the policy options in the 'low modal shift' case are shown in the table below.

Table 0-88: Impact on transport activity in passenger-kilometres at EU level (percentage change relative to the baseline) in the 'low modal shift' case

		% change to baseline			
		PO1	PO2	PO3	PO4
Car	2030	-0.1%	-0.2%	-0.2%	-0.2%
	2040	-0.2%	-0.4%	-0.6%	-0.5%
	2050	-0.2%	-0.5%	-0.7%	-0.5%
Coach	2030	0.4%	0.7%	0.9%	0.7%
	2040	0.9%	1.5%	1.9%	1.6%
	2050	0.9%	1.5%	1.9%	1.6%
Rail	2030	0.6%	1.1%	1.5%	1.2%
	2040	1.0%	2.1%	2.8%	2.2%
	2050	1.0%	2.2%	2.8%	2.4%
Air	2030	0.0%	-0.1%	-0.1%	-0.1%
	2040	-0.2%	-0.4%	-0.5%	-0.4%
	2050	-0.2%	-0.6%	-0.6%	-0.6%
Waterborne	2030	0.0%	0.0%	0.0%	0.0%
	2040	0.0%	0.0%	0.0%	0.0%

		% change to baseline			
		PO1	PO2	PO3	PO4
	2050	0.0%	0.0%	0.0%	0.0%

Source: Own elaboration from the CBA model

The impacts on external costs savings and efficiency are further compared to the 'base case' presented in section 7.5. The table below shows that this assumption has important impacts on the external costs savings in the 'low modal shift case' relative to the base case. Total external costs savings, expressed as present value over 2028-2050 relative to the baseline, are 34% lower in the 'low modal shift case' relative to the base case in PO1, 37% lower in PO2, 39% lower in PO3 and 37% lower in PO4.

Table 0-89: External costs savings in the 'low modal shift' case and base case in the POs relative to the baseline (EU27), expressed as present value over 2028-2050, in million EUR (2024 prices)

	PO1	PO2	PO3	PO4
Base case				
Total external costs savings (in million EUR), of which:	**12,685**	**25,820**	**37,329**	**28,644**
CO_2 emissions	2,367	4,696	6,778	5,176
Air pollutant emissions	218	455	670	502
Fatalities and injuries	7,606	14,807	21,297	16,470
Road congestion	1,758	4,352	6,438	4,833
Noise emissions	735	1,509	2,146	1,663
Low modal shift case				
Total external costs savings (in million EUR), of which:	**8,379**	**16,255**	**22,698**	**17,949**
CO_2 emissions	1,566	2,975	4,137	3,264
Air pollutant emissions	139	274	389	301
Fatalities and injuries	4,928	9,421	13,087	10,421
Road congestion	1,252	2,616	3,761	2,902
Noise emissions	495	969	1,324	1,061
% change 'low modal shift' case relative to the base case				
Total external costs savings, of which:	-34%	-37%	-39%	-37%
CO_2 emissions	-34%	-37%	-39%	-37%
Air pollutant emissions	-37%	-40%	-42%	-40%
Fatalities and injuries	-35%	-36%	-39%	-37%
Road congestion	-29%	-40%	-42%	-40%
Noise emissions	-33%	-36%	-38%	-36%

Source: Own elaboration from CBA model

Although this assumption has important impacts on the total external costs savings, it is expected to have no impact on other adjustment costs savings for MDMS platforms and transport operators and on the total costs. The table below presents the impacts on total benefits, total costs, net benefits and benefits to costs ratio by policy option in the base case and 'low modal shift case'. It shows that all policy options are still expected to result in net benefits in the 'low modal shift' case considered. It also shows that the ranking of the policy options is not expected to change in the 'low modal shift' case relative to the base case estimates.

Table 0-90: Summary of costs and benefits of policy options in the 'low modal shift case' and base case, expressed as present value over 2028-2050 compared to the baseline (in million EUR, 2024 prices)

	PO1	PO2	PO3	PO4
Base case				
Total costs	234	317	306	469
Total benefits, of which:	12,711	26,118	37,597	28,930
Adjustment costs savings for MDMS platforms and transport operators	26	298	268	285
External costs savings	12,685	25,820	37,329	28,644
Net benefits	12,477	25,801	37,291	28,461
Benefits to costs ratio	54	82	123	62
Low modal shift case				
Total costs	234	317	306	469
Total benefits, of which:	8,405	16,553	22,966	18,234
Adjustment costs savings for MDMS platforms and transport operators	26	298	268	285
External costs savings	8,379	16,255	22,698	17,949
Net benefits	8,171	16,236	22,660	17,766
Benefits to costs ratio	36	52	75	39

Source: Own elaboration from CBA model

Sensitivity analysis on the thresholds to identify B2C MDMS platforms and RUs with SMP. A 'low SMP threshold' case has been assessed, assuming that the EU level SMP threshold is lowered from 10% to 5%. This would bring three additional OTAs into scope as indispensable MDMS (Etraveli group, Booking.com, Trip.com Group). The impacts on external costs savings and efficiency are further compared to the 'base case' presented in section 7.5.

The 'low SMP threshold' case results in three more platforms needing to submit information to national authorities (PM10), leading to some additional administrative costs (EUR 0.8 million one-off administrative costs in the 'low SMP threshold' case in all POs relative to EUR 0.5 million in the base case). It also requires more platforms to comply with commercial agreement rules for indispensable MDMS (PM11), leading to additional cost savings for MDMS platforms and transport operators relative to the base case (3% higher adjustment costs savings in PO1 and 6% higher adjustment costs savings in PO2, PO3 and PO4 relative to the base case, expressed as present value over 2028-2050) as shown in the table below.

Table 0-91: Administrative costs and adjustment costs savings for MDMS platforms and transport operators due to PM10 and PM11 in the 'low SMP threshold' case and base case in the POs relative to the baseline (EU27), expressed as present value over 2028-2050, in million EUR (2024 prices)

	PO1	PO2	PO3	PO4
Base case				
MDMS platforms				
Administrative costs for the designation of indispensable MDMS and Rus (PM10)	0.5	0.5	0.5	0.5
Adjustment cost savings for commercial agreement rules for indispensable MDMS (PM11)	12.0	136.1	122.3	130.4
Transport operators				
Adjustment cost savings for commercial agreement rules for indispensable MDMS (PM11)	12.0	136.1	122.3	130.4
Low SMP threshold case				
MDMS platforms				
Administrative costs for the designation of indispensable MDMS and Rus (PM10)	0.8	0.8	0.8	0.8
Adjustment cost savings for commercial agreement rules for indispensable MDMS (PM11)	12.4	144.2	129.8	138.3
Transport operators				
Adjustment cost savings for commercial agreement rules for indispensable MDMS (PM11)	12.4	144.2	129.8	138.3
% change 'low SMP threshold case' relative to the base case				
MDMS platforms				
Administrative costs for the designation of indispensable MDMS and Rus (PM10)	75%	75%	75%	75%
Adjustment cost savings for commercial agreement rules for indispensable MDMS (PM11)	3%	6%	6%	6%
Transport operators				
Adjustment cost savings for commercial agreement rules for indispensable MDMS (PM11)	3%	6%	6%	6%

Source: Own elaboration from CBA model

The table below shows the impacts on total benefits, total costs, net benefits and benefits to costs ratio by policy option in the base case and 'low SMP threshold' case. It shows that all policy options are still expected to result in net benefits in the 'low SMP threshold' case considered. It also shows that the ranking of the policy options is not expected to change in the 'low SMP threshold' case relative to the base case estimates.

Table 0-92: Summary of costs and benefits of policy options in the 'low SMP threshold' case and base case, expressed as present value over 2028-2050 compared to the baseline (in million EUR, 2024 prices)

	PO1	PO2	PO3	PO4
Base case				
Total costs	234.1	317.0	305.6	468.6
Total benefits	12,710.7	26,117.9	37,596.7	28,929.8
Net benefits	12,476.7	25,800.9	37,291.1	28,461.3
Benefits to costs ratio	54.3	82.4	123.0	61.7
Low SMP threshold case				
Total costs	234.4	317.3	306.0	468.9
Total benefits	12,711.5	26,134.2	37,611.9	28,945.6
Net benefits	12,477.0	25,816.9	37,305.9	28,476.6
Benefits to costs ratio	54.2	82.4	122.9	61.7

Source: Own elaboration from CBA model

ANNEX 2: MARKET RESEARCH

11.1 INTRODUCTION

MDMS are essential for fostering multimodality by promoting comparability, transparency and enabling the sale of products across different operators and modes. With rail being a crucial component of many multimodal offerings, the availability of MDMS that integrate rail trips across multiple operators is of the upmost importance.

The purpose of this market research is to present in a structured way evidence of the existence of the problems identified, their magnitude, as well as a thorough description and comparison of the MDMS markets, including achievements and obstacles to their developments in Member States and at an EU level. Furthermore, it should look at the situation from the perspectives of both MDMS providers and transport operators. Overall, the analysis should provide an assessment of any denoted systematic market failures and their root causes across different markets and sectors.

Given that the persistence of these problems may affect a wide range of stakeholder groups, including transport operators, transport users, and MDMS platforms, it is, therefore, essential to gather data at these different levels to further understand the potential problem drivers and level of impact. In this regard, this report aims to bring the necessary evidence to support the problem definition as developed in the relevant report section.

It does so by providing relevant content in the following sections:

- Section 2 encompasses an analysis of the current status of the market concerning multimodal and multi-operator mobility, covering both the demand and supply sides and aiming to identify possible market failures. This is done based on:
    - A targeted summary of the Eurobarometer survey assessing travel behaviours and preferences across the EU including current passenger use of multi-modal, multi-operator service options and relevant bottlenecks.
    - An analysis of purposely selected 100 Origin-Destination routes (OD pairs) and the availability of alternative travel options, intended to ensure geographical balance and OD pairs with different characteristics i.e. distance, node attractiveness.
    - The assessment of the current situation in ticket distribution systems in terms of MDMS platforms operating across the EU bringing together evidence of the current level of multimodal ticket distribution for long-distance and regional transport.
- Section 3 gathers market distribution data for rail, air, waterborne transport and bus and coach passenger data at each Member State (e.g. number of operators) and the characteristics of the ticket distribution system (e.g. market share and role of MDMS in the ticket distribution system).

The terms of reference for this study included requirement for several datapoints on the market situation across different modes. Throughout this annex, those required data are presented to the greatest extent possible. In some cases, neither publicly available sources nor stakeholders involved in the study were able to provide the required data. Whenever that was the case, the respective section within each mode indicates the data that was not possible to be collected.

11.2 MARKET ANALYSIS

11.2.1 Eurobarometer Findings

A European Commission Eurobarometer survey conducted between 28 August and 2 September 2024, assessed travel behaviours and preferences across the EU. The final report, Flash Eurobarometer 551[152], was published on 1 April 2025. The study surveyed a representative sample of 25,805 EU citizens aged 15 and over, residing in each of the 27 Member States of the EU. The participants were selected to meet quotas applied for age, gender and geographical region to ensure balanced representation. This means that its results can be extrapolated to the EU population and are representative of the EU citizens' views.

The survey focused on the use of MDMS and the potential of Single Digital Booking and Ticketing solutions to improve the travel experience within the EU. It gathered insights into the frequency of travel and modes used for leisure and work; factors influencing travel choices; methods and barriers to online travel booking; and challenges in combining different transport modes. Each area highlights trends and variations across Member States and demographic groups.

Key findings from the Eurobarometer survey are presented below, examining regional and long-distance travel choices.

11.2.1.1 Frequency of regional and long-distance journeys and modes used

The Eurobarometer survey highlights how often people travel regionally (50–300 km) and long-distance (300 km or more) for leisure and work[153]. The results show clear differences in travel habits based on purpose, age, gender, education, and country.

Regional and long-distance travel for leisure is relatively common. About 27% of respondents travel for leisure once a month or more often, 31% travel every two to three months, and 29% travel once or twice a year. In contrast, regional and long-distance work travel is less frequent, with a majority (56%) never travelling regionally or long-distance for work. Among those who do travel for work, 13% travel monthly, 10% every two to three months, and 12% once or twice a year.

There are notable differences between countries. For leisure travel, Cyprus (58%) and Slovenia (53%) have the highest share of people travelling monthly or more often, compared to France (17%) and Spain (19%), where far fewer people travel regionally and long-distance as often. For work travel, Bulgaria leads, with 26% travelling monthly and 22% travelling every two to three months. Cyprus and Greece also show higher rates of work travel (30% and 21% travelling once a month, respectively) compared to countries like France, Spain, and Luxembourg, where fewer than 10% of respondents travel monthly for work.

Travelling by car is the most commonly used mode of transport for regional and long-distance journeys, with 82% of respondents reporting they have used it for such journeys in the past two years. This preference is consistent across all Member States except Malta, where other modes play a larger role.

Among collective modes of transport, train ranks highest, used by 53% of respondents, followed by plane (37%), and by bus or coach (31%). Boats and ferries are less common overall, mentioned by 9%, but are more popular in countries like Greece (38%), Malta (37%), and Estonia (31%).

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[152] Multimodal Digital Mobility Service - April 2025 - - Eurobarometer survey

[153] These distance ranges were included in the survey to help respondents understand the types of travel being assessed. However, they do not represent strict definitions and should not be interpreted as fixed thresholds for regional and long-distance trips in this initiative.

11.2.1.2 Key factors influencing travel choices

Understanding the parameters that affect travel choices allows the better assessment of the possible contribution of potential policy measures in influencing travel choices, including inducing modal shift.

Cost is the most significant factor when planning regional or long-distance journeys, selected by 61% of respondents. Total travel duration follows at 47%, with departure or arrival time (36%) and comfort (29%) also ranking highly. Other considerations include the ease of finding travel options (17%), ease of booking tickets (16%), and the number of connections (14%). Environmental impact (10%), accessibility for passengers with reduced mobility (9%), and passenger rights (8%) are less frequently selected, albeit still represented as contributing factors.

While environmental impact is important to over three-quarters of respondents, only 21% indicated they would adapt their journeys accordingly, citing challenges such as habit changes (22%) and the lack of suitable alternatives (22%). Cost remains a barrier, with 12% stating they cannot afford more sustainable travel. However, when asked what factors would encourage them to book more environmentally friendly travel, 46% said they would do so if the cost were comparable, 29% if the journey was equally fast, 28% if departure or arrival times were as convenient as other options, and 22% indicated it would depend on the ease of finding an environmentally friendly alternative.

11.2.1.3 Travel booking channels and barriers to booking online

A significant majority of respondents (76%) reported booking their regional or long-distance journeys online. The most common method is booking directly through the website or app of the transport operator, used by 51% of all respondents (offline and online). Around a quarter (26%) compare options on travelling planning and price comparison tools before booking, while 24% use the website or app of a travel agent or ticket vendor. In contrast, just 23% of respondents rely on phone or in-person bookings through travel agents or directly at stations or airports.

Ease of booking and ease of finding travel options (mentioned by 16% and 17% of respondents respectively) are considered secondary considerations compared to other more important ones when planning travel. However, input around barriers to online booking, e.g., concerns/challenges regarding hidden costs (19%), reaching customer support (15%), incomplete information (14%), and fare availability (14%), show that many people struggle to book easily online. Some respondents also worry about data protection (14%) or find booking websites or apps difficult to use (11%).

Socio-demographic factors reveal additional insights. Younger respondents (15-24) and those aged 25-39 are more likely to book journeys online on the website or app of the transport operator(s). However, younger respondents also express greater concern over hidden costs (22%) and fare availability (19%). Older respondents (55+) are less likely to encounter barriers, with 41% reporting that none of the listed issues deter them from booking online. Similarly, individuals with higher education levels or who are still studying are more likely to embrace online booking, citing fewer challenges compared to those with lower education levels.

The identification of these barriers supports the design of potential policy measures to address them that could further increase the convenience of online booking tools. These results suggest that channels that allow increased comparability of travel options are particularly important to assist consumers in choosing the travel option that best serves their needs.

1.2.1.4 Challenges in combining transport modes

A significant number of respondents have experience combining different transport modes (e.g., a flight with a rail service, or a rail service with a coach service) or operators (e.g., international and local rail services, flights operated by different airlines) to complete their journeys, although they cited several key challenges in doing so.

Just over a quarter (27%) reported combining different collective transport modes to reach their destination about 'once or twice a year'. Train and bus/coach was the most frequently combined mode in 16 Member States, particularly in Slovakia (65%) and Hungary (60%). Airplane and train combinations were most common in Malta (56%), Cyprus (47%), and Germany (44%), while airplane and bus/coach was prevalent in Cyprus (61%), Malta (52%), and Ireland (49%). Ferry/boat combinations were more common in Greece (31%), Croatia (26%), and Estonia (22%). In contrast, countries like France and Belgium reported higher proportions of respondents who never combined modes (43% in each country). Despite the fairly high prevalence of multimodal travel, over a third found it difficult to book such journeys.

Respondents who never or rarely booked journeys combining different collective transport modes or different transport operators within one mode were asked why they did not. The most common reason cited was that it was not needed, as one transport service or operator brought them directly to their destination (selected by 29% of respondents). Excluding those who answered that it was not needed, the following key barriers were highlighted:

- *The journey would have taken too long (25%)*: Important reason mentioned in Luxembourg (33%), France (30%), Malta (30%) and Poland (29%), while only 10% selected this reason in Latvia.
- *The journey would have been more expensive (20%):* Cited as a significant barrier in France (27%), compared to about one in ten respondents in Bulgaria and Slovakia (both 11%).
- *Not being able to find a suitable combination (17%):* Most frequently selected among respondents in Cyprus, Finland and Luxembourg (all 26%), while this was not found to be a significant barrier in Belgium, Denmark, Germany, and the Netherlands (all 13%).
- *Not wanting to buy several separate tickets and risk being stranded if they miss a connection (13%):* A common barrier in Cyprus (23%) and Malta (22%), but considered less of a problem in the Netherlands (8%).

Other less common reasons included never having thought about combining different collective modes or operators, or not knowing that combining modes was possible (7%), not knowing where to search for such travel information (5%), and not being able to buy all tickets in one place (5%). A small proportion cited environmental concerns (3%) or other reasons (11%).

These findings indicate the willingness of passengers to potentially use multi-modal travel options should these options be shorter, cheaper and better linked together as a service.

11.2.2 100 Routes Analysis

To assess the presence and the extent to which EU passengers have access to genuine alternative options for their long-distance and regional travel, and whether these combinations of operators within transport modes or combinations between different transport modes are sufficient, an analysis of specific examples is required. Since it is not possible to analyse all trips across the EU simultaneously, the approach adopted is based on an analysis of 100 transport routes, also known as origin-destination (OD) pairs.

This section outlines how a shortlist of 100 origin-destination (OD) routes were selected for further analysis in this study. It starts by outlining how routes are grouped into 'clusters' (***Cluster definition***), with the intention of ensuring that routes are included within each cluster to capture the full range of impacts from the policy measures. This includes a summary presentation of data collected on the number of MDMS platforms available in each MS, disaggregated by MDMS level. It then explains how a route longlist was compiled, before noting the criteria used to refine the longlist into a shortlist of 100 routes (***Route identification and shortlisting***). These routes are then presented along with summary statistics to demonstrate the achieved balance between the

routes (***Presentation of the 100 routes***). Finally, the results of the analysis on the 100 routes is shown (***Conclusions from the OD pair analysis***).

This approach aims to satisfy three key selection criteria: (1) representativeness, allowing extrapolation of analysis to MS and EU level; (2) relevance of routes to MDMS, allowing differentiation of policy measure impacts; and (3) coherence of approach with the ASTRA model used for the quantification of the impacts.

11.2.2.1 Cluster definition

The analysis of the impact of policy measures on modal shift through the MFA is structured around clusters of routes to consider the fact that policy measures may have different impacts depending on the characteristics of routes where MDMS may be deployed. In particular, it is important to capture differences between routes with complex transport choices, including multiple multi-modal and multi-operator combinations, and those with simpler transport choices, as the latter would be expected to benefit less from improved MDMS.

In addition, some policy measures only affect specific transport modes (e.g. rail operators), and/or where there is a lack of competition between MDMS operators or mode operators. At the same time, the clustering approach needs to ensure that selected clusters are representative of the scope of routes within this study (i.e. regional, national long-distance and international) for the extrapolation of results at cluster level to Member State and EU level (see Interface model for more details on the extrapolation).

Based on analysis of the policy measures and expected impacts, **the following three criteria were used to define the clusters**:

- **Member State status in terms of MDMS advancement**: this criterion ensures that we capture differentiation in the impacts of the policy measures between MSs with different levels of MDMS market maturity. MDMS Platform coverage is deemed as relevant, but the presence of a platform does not necessarily speak to its quality or how many users engage with it. We therefore only considered platforms that offer relinking or direct booking functionality, and made use of Eurobarometer results on the percentage of consumers using digital channels to book travel as a proxy for usage[154], in the absence of other data. The market analysis of platforms in each MS is combined with the Eurobarometer survey outputs, with results shown in the table below. Analysis was then performed to understand which MS performed better than the EU average on both metrics. Seven MS stood out as simultaneously having greater than average platform availability and user base [DE, AT, DK, LU, FI, ES, NL]. Likewise, ten MS stood out as having both low platform availability and a low user base [HR, LT, HU, SE, CZ, IE, SL, LV, RO, SK]. The remaining MS had *either* many platforms *or* a large user base, but not both. MS were accordingly grouped into three categories representing differing levels of MDMS market maturity – Leaders, Planned Adopters, and Followers.

Table 0-1: Categorisation of EU Member States into levels of MDMS advancement

Member State	No. Platforms	Users (proxy)	Combined score
Germany	12	29%	Leader
Austria	9	29%	Leader

[154] In particularly, responses to question 6 were used "How do you (or would you) usually book your regional or long-distance journeys? Select all that apply. [MULTIPLE ANSWERS]".

Member State	No. Platforms	Users (proxy)	Combined score
Denmark	6	27%	Leader
Luxembourg	4	24%	Leader
Finland	5	40%	Leader
Spain	4	25%	Leader
Netherlands	10	22%	Leader
France	13	23%	Planned adopter
Poland	7	22%	Planned adopter
Italy	6	20%	Planned adopter
Belgium	6	18%	Planned adopter
Portugal	2	28%	Planned adopter
Malta	1	33%	Planned adopter
Cyprus	1	27%	Planned adopter
Greece	2	28%	Planned adopter
Bulgaria	0	27%	Planned adopter
Estonia	0	37%	Planned adopter
Croatia	1	30%	Follower
Lithuania	0	28%	Follower
Hungary	3	17%	Follower
Sweden	2	23%	Follower
Czech Republic	3	20%	Follower
Ireland	2	18%	Follower
Slovenia	0	21%	Follower
Latvia	0	18%	Follower
Romania	0	23%	Follower
Slovakia	1	18%	Follower

- **Journey type:** this criterion ensures that we capture differentiated impacts between national and international routes (including cross-border). Only inter-NUTS3 trips were considered.
- **Attractiveness of origin or destination nodes**: This criterion was selected as a proxy of the route's characteristics, availability of connections, competition between operators, and attitude of passengers, which can contribute to the differentiation of the policy measure impacts. A more attractive route (likely involving higher demand) is likely to have more transport options available and more complex choices, so there might be a higher added value of MDMS platforms. This aspect was assessed considering for each NUTS3 zone

the economic attractiveness (as indicated by GDP[155]), personal attractiveness (as indicated by bed places for tourism)[156], and its status as a capital city. Threshold criteria were then applied to designate certain NUTS3 as attractive. Either the zones needed to be a capital city, or comply with both of the conditions below.

- Zone attractive for **business** purposes:
  - All zones whose GDP in absolute term is > 18.75 billion euro/year[157], or
  - All zones whose GDP/inhabitant ratio is larger than the national ratio by 50% AND GDP in absolute term is larger than the average GDP per zone of the country (average GDP per zone of the country = national GDP / number of zones)
- Zone attractive for **personal** purposes:
  - All zones whose number of bed places in absolute term is > 31,250[158], or
  - All zones whose bed places/inhabitant ratio is 50% or more larger than the national ratio

The table below summarises the results of this analysis and the distribution of NUTS by attractiveness categories.

Table 0-2: Categorisation of NUTS3 zones by 'attractiveness'

Category	NUTS3 *(#)*	Population *(total inhabitants)*	GDP *(total, Mio Euro/year)*	Tourism *(total bed places)*	GDP per capita	Tourism per capita
Attractive	491	281,924,559	12,442,529	24,242,722	44,134	85.99
Less attractive	674	166,055,118	4,730,235	4,961,899	28,486	29.88
Total	1165	447,979,677	17,172,764	29,204,621	*38,334*	*65.19*

During the inception phase, it was noted that the impacts of the policy measures are likely to vary depending on the transport modes available on each route[159], and the level of competition between operators on each route[160]. We therefore considered replacing the 'Node attractiveness' criterion with another qualitative criterion capturing these nuances, maximising use of the additional data on mode and operator availability collected on the 100 O-D routes. However, following further analysis on a random sample of routes to better understand the level of competition on them, both between modes (e.g. rail vs air) and within modes (e.g. one operator versus another), we identified the following key insights:

[155] See https://ec.europa.eu/eurostat/databrowser/view/nama_10r_3gdp/default/table?lang=en

[156] Based on Eurostat per NUTS3

157 Average EU27 GDP per NUTS3 (€15 billion), plus a 25% uplift to avoid all NUT3 being classified as 'attractive' within some Member States

158 As with GDP, Average EU27 bed spaces per NUTS3 (25,000), plus a 25% uplift to avoid all NUT3 being classified as 'attractive' within some Member States

[159] Many policy measures would only affect non-airline operators where rules are being extended from CRS Code of conduct requirements (e.g. PM1-PM4) or specifically only apply to rail operators (e.g. PM14, PM15). It will therefore be important to account for transport mode prevalence when grouping routes and assessing impacts.

[160] Many policy measures would only affect routes where there are MDMS with "significant market power" (e.g. PM16, PM18) or rail operators with "significant market power" (e.g. PM14, PM17). It will therefore be important to account for the level of competition when grouping routes and assessing impacts.

- **Mode connectivity varies broadly by level of traffic.** Higher traffic routes tend to have air travel as an option, with rail connections also possible. Buses tend not to be listed on the API given that they take longer but are generally also available (checked via Omio). By contrast, bus/rail combinations tend to be relied upon to a greater extent in lower traffic routes, and a lack of nearby airports make air travel more challenging.
- **Operator competition is generally higher on higher traffic routes and vice versa**. Higher traffic routes tend to exhibit good competition between air operators on direct flights, and linking in high-speed rail for some legs tends to increase optionality in rail travel. By contrast, lower traffic routes to more remote locations tend to have a mandatory beginning or end leg by a local operator, and there generally tends to be an obvious choice for the intermediate legs.

Retaining then the three clustering criteria outlined above (MDMS advancement, Journey type, Node attractiveness) and assigning categories for combinations of OD nodes (e.g. if both origin and destination were attractive, the route would be labelled 'Both attractive'), there are 18 possible combinations of these criteria (see Table 0-3). The following assumptions were then introduced to merge some of these clusters into a more manageable set of 10 clusters. This was based on merging OD combinations of different characteristics that present similar attitudes and impacts toward MDMS deployment:

Planned adopter/follower groups present similar behaviour: Policy interventions promoting competition between platforms and/or operators are likely to affect leaders and planned adopters/followers in different ways

  - In leader Member States, promoting fair data practices and limiting the power of platforms/operators with SMP may have more of an impact as there are other national platforms with similar functionality that could step in to replace the market share.
  - In planned adopter/follower MS, impact may be limited, since there will be fewer alternative platforms to switch to (Malta, Cyprus), or a smaller user base to drive sufficient growth in a competitor platform (Belgium), or both (Hungary).

- **The impact on moderately attractive OD pairs would be similar regardless of the MDMS advancement level:** Attractiveness is our proxy for competition between operators and between modes. Low attractiveness routes will therefore be assumed to have more limited operator competition for the beginning and end of the route (think regional routes where one bus/train is the only option to reach the remote destination). Policies aiming to promote use and competition in MDMS platforms are likely to have a higher impact, regardless of the advancement of platforms present, since the passengers will still have to pick the same transport option for the beginning/end legs.

Applying this approach, a more limited number of 10 clusters was defined to simplify the analysis needed for the assessment of impacts (see Table 0-4). Thus, the 100 OD pairs each belong to one of the 10 shortlisted clusters below, where each cluster will then form the basis for the assessment of impacts in Task 5.

Table 0-3: C**luster longlist**

Cluster ID	OD journey type	MDMS advancement (MS)	OD node attractiveness
1	National	Leader	Both attractive

Cluster ID	OD journey type	MDMS advancement (MS)	OD node attractiveness
2	National	Planned adopter	Both attractive
3	National	Follower	Both attractive
4	International	At least one leader	Both attractive
5	International	No leaders, at least one Planned Adopter	Both attractive
6	International	Both followers	Both attractive
7	National	Leader	Hybrid[161]
8	National	Planned adopter	Hybrid
9	National	Follower	Hybrid
10	International	At least one leader	Hybrid
11	International	No leaders, at least one Planned Adopter	Hybrid
12	International	Both followers	Hybrid
13	National	Leader	Both moderately attractive
14	National	Planned adopter	Both moderately attractive
15	National	Follower	Both moderately attractive
16	International	At least one leader	Both moderately attractive
17	International	No leaders, at least one Planned Adopter	Both moderately attractive
18	International	Both followers	Both moderately attractive

Table 0-4: C**luster shortlist**

Cluster ID	OD journey type	MDMS advancement (MS)	OD node attractiveness	Shortlisting notes
A	National	Leader	Both attractive	A = 1
B	National	Other	Both attractive	B = 2+3
C	International	At least one leader	Both attractive	C = 4
D	International	Other	Both attractive	D = 5+6
E	National	Leader	Hybrid	E = 7
F	National	Other	Hybrid	F = 8+9
G	International	At least one leader	Hybrid	G = 10
H	International	Other	Hybrid	H = 11+12

[161] I.e. where one node is attractive, and one node is moderately attractive

I	National	Any	Both attractive	moderately	I = 13+14+15
J	International	Any	Both attractive	moderately	J = 16+17+18

1.2.2.2 Route identification and shortlisting

The table below describes how we selected the 100 transport routes. Given the huge variety of possible routes to consider between EU nodes[162], and the processing time that it would take to even list these possible route combinations, priority was given to identifying a balanced selection of high traffic routes that can be considered highly relevant for EU passenger transport (Step 2 below). To select a sample of lower traffic routes, a randomisation element has been used to remove bias from the route selection process and limit the time-consuming use of the Google Maps API (Step 3 below).

Table 0-5: Steps followed to identify the 100 transport routes

Step	Description
1. Define clustering criteria	As outlined in the previous section
2. Identify highly relevant routes	Multiple data sources were compiled into a list of the highest traffic (and therefore highly relevant) routes and nodes in the EU with a NUTS3-to-NUTS3 approach: • **Eurostat Air Transport of Passengers** provides passenger volumes on routes between specific airports • **Eurostat National Railway Passenger Transport:** Provides passenger volumes between NUTS2 regions, from which nodes can be extracted (being aware that the database contains several gaps) • **Eurostat Maritime Passenger Statistics:** provides passenger volumes by port. Popular routes in/out of these ports can be cross-referenced with other sources. This step of the analysis also considered the relevance of OD pairs between capital cities, i.e. about 700 international combinations. The most

[162] Considering EU27 countries, there are 1,165 NUTS3 zones in Europe resulting in about 1,350,000 origin-destination pairs. NUTS2 zones are 244 resulting in about 59,500 origin-destination pairs.

Step	Description
	relevant routes for each mode were compiled into a preliminary list. These highest traffic routes were then screened to ensure geographic diversity by removing any duplicate nodes and ensuring no two routes are part of the same NUTS2 – NUTS2 combination. The resulted in a list of 94 high-traffic OD routes.
3. Randomly identify remaining routes	First, all cities with a population above 50,000 people were listed along with their relevant NUTS3 zone and the output of the attractiveness analysis listed in the previous section (attractive or less attractive). Node pairings were then randomised within two groups up to the target number of routes: attractive-less attractive (moderate traffic, n=270) and less attractive-less attractive (low traffic, n=90).
4. Initial selection of routes	The outputs of Steps 2 and 3 were combined to produce a longlist of 544 routes, which necessarily contained routes spanning each of the node attractiveness categories identified in Step 1 and, given the large sample size, was also highly likely to contain good geographic and route distance balancing.
5. Route characterisation	The Google Maps API was used to extract characteristics for each route in the initial selection, including the distance of the node pairing, modal options for the quickest route, and the number of connections required. This API only covers connectivity by land and sea, excluding flight options. Therefore, IATA data[163] listing the location and size of airports globally was used to indicate whether a medium or large airport was within 50km of the origin or destination. If such an airport was present, it was assumed that the node was accessible by air. Combining the outputs of the Google Maps API and the airport analysis therefore provided a quick complete picture of each route to facilitate the final step below.

[163] https://ourairports.com/data/

Step	Description
6. Shortlisting	A balancing analysis was undertaken to ensure inclusion of routes with a diversity in the following factors. **Attractiveness (traffic):** a target ratio of routes was set between high, moderate and low traffic routes as proxied through 'attractiveness'. Taking population data and the attractiveness criterion for each NUTS3, analysis indicates that between 4-26% of the European population may be living and traveling between two 'less attractive' NUTS3 zones. Assuming each person travels the same amount, this suggests that keeping ~25% of routes for routes between 'less attractive' nodes may be representative of European journeys. However, given that the 'highly relevant' routes are specifically identified as carrying more passengers, we adopted a 40/45/15 target split between high/moderate/low traffic routes. **Geography (MDMS advancement):** a targeted distribution of routes between MS was set based on the proportion of total European passenger traffic passing through each Member State, as indicated by Eurostat data[164]. Such MS diversity also ensured sufficient balance across regions with different levels of MDMS advancement. **Distance:** a range of route distances was targeted, with a preference towards shorter routes (reflecting the most common routes performed by European travellers). **Modal use:** a target distribution transport mode availability was set based on modal splits currently experienced in EU passenger traffic, as indicated by Eurostat data.[165] **Removal of similar routes**: the route longlist was checked for duplicates, and for any similar routes that either began and ended in the same NUTS3 or shared large proportions of the routes, with any such duplicate/similar routes removed.

[164] National passenger road transport performance by type of vehicles registered in the reporting country [road_pa_mov]
[165] Modal split of air, sea and inland passenger transport [tran_hv_ms_psmod]

Step	Description
	The results of this balancing analysis is displayed along with the 100 shortlisted OD routes in the following section.

11.2.2.3 Presentation of the 100 routes

The figure and table below show the shortlisted 100 OD routes. The red lines on the figure each represent one OD route, and are illustrated in a straight line for simplicity, even though travel by land and water are likely to follow non-linear paths. Together, they demonstrate that there is good representation across all EU Member States and that there is good variety in the distances travelled between routes.

Figure 0-1: Map of the shortlisted 100 OD routes



Table 0-6: List of the shortlisted 100 OD routes

id	Origin city	Origin country	Destination city	Destination country	Direct distance[166] (km)
Cluster A					
1	Barcelona	Spain	Palma	Spain	205.8
2	Freising / Munich	Germany	Hamburg	Germany	585.5
3	Copenhagen	Denmark	Aalborg	Denmark	223.6
4	Ingolstadt	Germany	Munich	Germany	70.4
5	Barcelona	Spain	Girona	Spain	85.4
6	Helsinki	Finland	Oulu	Finland	539.2
7	Hoorn	Netherlands	Amsterdam	Netherlands	32.0
Cluster B					

[166] Calculated as the haversine distance between city centres.

id	Origin city	Origin country	Destination city	Destination country	Direct distance[166] (km)
8	Paris	France	Nice	France	686.2
9	Catania	Italy	Rome	Italy	536.6
10	Athens	Greece	Thessaloníki	Greece	303.1
11	Messina	Italy	Reggio Calabria	Italy	12.2
12	Piraeus	Greece	Ermoúpolis	Greece	126.7
13	Busto Arsizio	Italy	Milan	Italy	30.9
14	Gdańsk	Poland	Wejherowo	Poland	38.7
15	Khalándrion	Greece	Athens	Greece	7.3
16	Luleå	Sweden	Stockholm	Sweden	726.7
17	Dubrovnik	Croatia	Split	Croatia	166.5
18	Dublin	Ireland	Drogheda	Ireland	41.1
19	Riga	Latvia	Valmiera	Latvia	103.3
20	Vilnius	Lithuania	Kaunas	Lithuania	89.5
Cluster C					
21	Paris	France	Madrid	Spain	1052.9
22	Palma	Spain	Düsseldorf	Germany	1335.8
23	Rome	Italy	Barcelona	Spain	857.8
24	Budapest	Hungary	Madrid	Spain	1974.1
25	Tallinn	Estonia	Helsinki	Finland	82.3
26	Helsinki	Finland	Stockholm	Sweden	395.8
27	Busto Arsizio	Italy	Barcelona	Spain	714.4
28	Amsterdam	Netherlands	Rome	Italy	1297.3
29	Frankfurt am Main	Germany	Vienna	Austria	597.6
30	Sofia	Bulgaria	Vienna	Austria	817.3
31	Luxembourg	Luxembourg	Porto	Portugal	1482.4
32	Copenhagen	Denmark	Hamburg	Germany	288.6
33	Prague	Czech Republic	Vienna	Austria	252.7
Cluster D					
34	Trbovlje	Slovenia	Zagreb	Croatia	81.1
35	Bratislava	Slovakia	Prague	Czech Republic	291.6
36	Cluj-Napoca	Romania	Budapest	Hungary	351.0

id	Origin city	Origin country	Destination city	Destination country	Direct distance[166] (km)
37	Paris	France	Lisbon	Portugal	1251.1
38	Lyon	France	Turin	Italy	233.8
39	Paris	France	Porto	Portugal	1213.2
40	Dublin	Ireland	Paris	France	780.9
41	Lisbon	Portugal	Brussels	Belgium	1713.0
42	Bucharest	Romania	Vienna	Austria	856.4
43	Brussels	Belgium	Rome	Italy	1173.3
44	Vilnius	Lithuania	Warsaw	Poland	393.0
45	Trbovlje	Slovenia	Paris	France	998.8
Cluster E					
46	Gijón	Spain	Córdoba	Spain	632.5
47	Vejle	Denmark	Roskilde	Denmark	159.9
48	El Ejido	Spain	Moratalaz	Spain	411.3
49	Kraków	Poland	Wrocław	Poland	236.1
50	Pori	Finland	Rovaniemi	Finland	589.5
51	Lippstadt	Germany	Eschweiler	Germany	172.1
52	Zaandam	Netherlands	Oss	Netherlands	88.3
53	Zaanstad	Netherlands	Almelo	Netherlands	126.2
Cluster F					
54	Verviers	Belgium	Sint-Niklaas	Belgium	136.3
55	Rijeka	Croatia	Zagreb	Croatia	131.9
56	Split	Croatia	Pula	Croatia	256.2
57	Prievidza	Slovakia	Martin	Slovakia	39.1
58	Prešov	Slovakia	Bratislava	Slovakia	317.7
59	Limerick	Ireland	Galway	Ireland	73.1
60	Riga	Latvia	Jelgava	Latvia	40.9
61	Zalaegerszeg	Hungary	Szeged	Hungary	261.0
62	Galátsi	Greece	Irákleion	Greece	322.2
63	Brussels	Belgium	Roeselare	Belgium	86.9
64	Grudziądz	Poland	Płock	Poland	121.9
65	Liberec	Czech Republic	Opava	Czech Republic	222.1

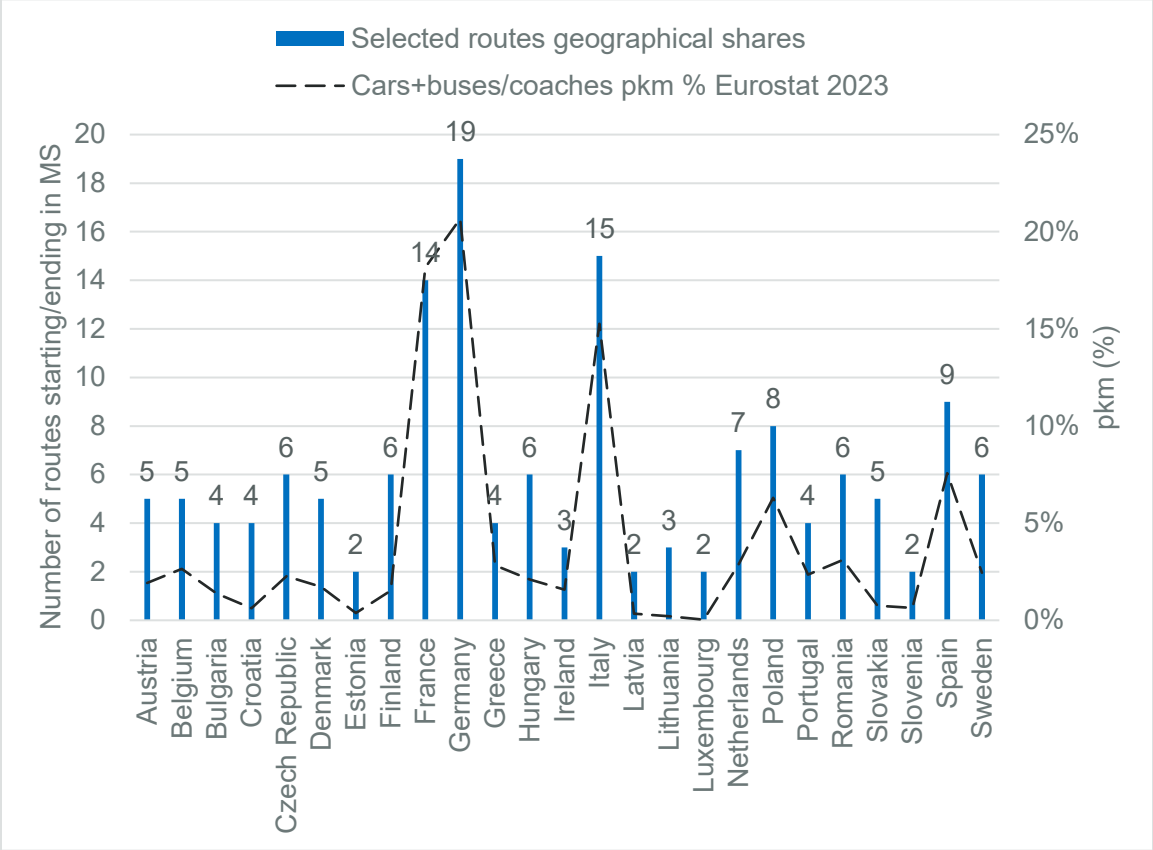
id	Origin city	Origin country	Destination city	Destination country	Direct distance[166] (km)
66	Bucharest	Romania	Turda	Romania	298.8
67	Halmstad	Sweden	Täby	Sweden	434.1
68	Klaipėda	Lithuania	Kaunas	Lithuania	198.8
Cluster G					
69	Tourcoing	France	Dordrecht	Netherlands	159.4
70	Bonn	Germany	Ostend	Belgium	297.7
71	Bergisch Gladbach	Germany	Žilina	Slovakia	849.3
72	Leiden	Netherlands	Tarbes	France	1045.7
73	Sundsvall	Sweden	Odense	Denmark	872.0
74	Saint-Malo	France	Kaiserslautern	Germany	718.8
75	Innsbruck	Austria	Grenoble	France	493.4
76	Livorno	Italy	Kempten (Allgäu)	Germany	465.2
77	San Severo	Italy	Lleida	Spain	1223.6
78	Luxembourg	Luxembourg	Orléans	France	363.5
Cluster H					
79	Haskovo	Bulgaria	Sassari	Italy	1423.1
80	Mérignac / Bordeaux	France	Matera	Italy	1479.2
81	Budapest	Hungary	Padova	Italy	595.7
82	Stalowa Wola	Poland	Varna	Bulgaria	932.2
83	Narva	Estonia	Como	Italy	1971.2
84	Olbia	Italy	Volos	Greece	1154.5
85	Slobozia	Romania	České Budějovice	Czech Republic	1095.6
Cluster I					
86	Gummersbach	Germany	Fulda	Germany	157.7
87	Cottbus	Germany	Bremerhaven	Germany	435.6
88	Bayreuth	Germany	Aalen	Germany	163.7
89	Sliven	Bulgaria	Shumen	Bulgaria	82.8
90	Szczecin	Poland	Białystok	Poland	573.3
91	Łódź	Poland	Tarnów	Poland	223.7
92	Botoşani	Romania	Buzău	Romania	289.0
Cluster J					

id	Origin city	Origin country	Destination city	Destination country	Direct distance[166] (km)
93	Schweinfurt	Germany	Vigevano	Italy	536.1
94	Seinäjoki	Finland	Mülheim	Germany	1579.8
95	Tübingen	Germany	Tulcea	Romania	1542.4
96	Albi	France	Flensburg	Germany	1315.7
97	Bad Salzuflen	Germany	Pardubice	Czech Republic	540.9
98	Crotone	Italy	Schwerte	Germany	1561.7
99	Lahti	Finland	Jönköping	Sweden	740.0
100	Pardubice	Czech Republic	Nyíregyháza	Hungary	491.3

The figure below shows that the selected routes are broadly proportional to European travel volumes, as proxied by available Eurostat data[167] (road transport assumed proportional to other modes). Note that the blue bars correspond to the left axis, which is the number of the 100 routes passing through the corresponding MS, while the dotted lines correspond to the right axis, which indicate the share of passenger travel occurring within each MS.

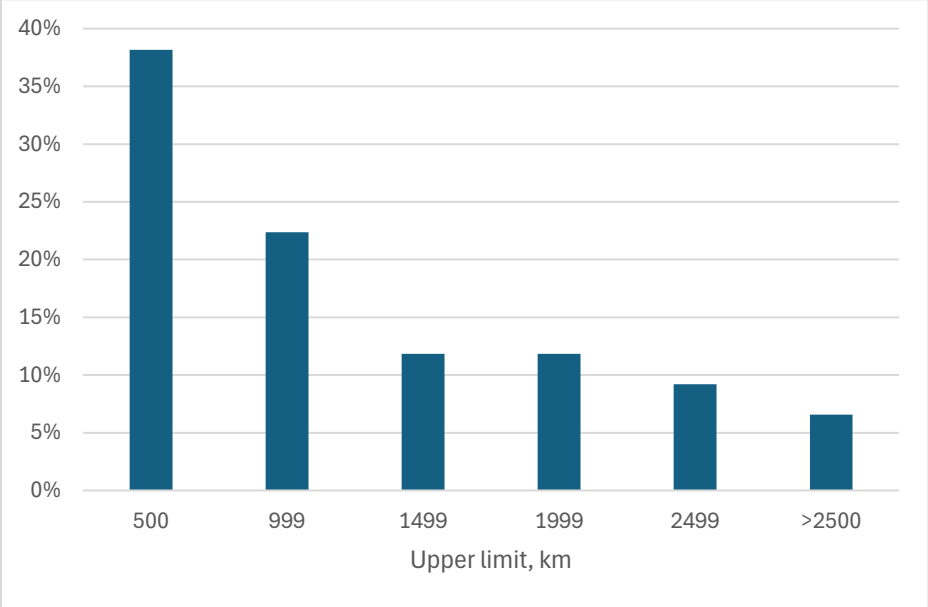
[167] National passenger road transport performance by type of vehicles registered in the reporting country [road_pa_mov]

Figure 0-2: Geographic balance of the 100 OD routes, relative to European passenger traffic



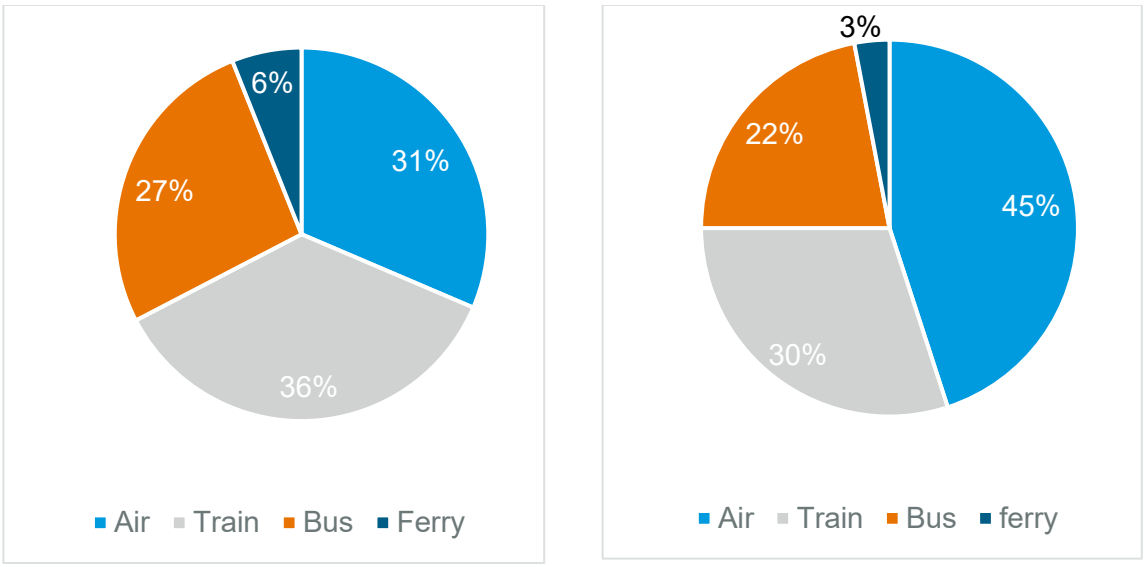
This next figure shows that the selected routes represent a wide range of travel distances, more heavily weighted towards shorter journeys to reflect greater frequency of passengers performing shorter (often regional) trips.

Figure 0-3: Distance balance of the 100 OD routes



The panels in the figure below demonstrate that modal split in selected routes (left panel) is broadly in line to the modal split in Europe as modelled in PRIMES-TREMOVE (right panel). Note that the left panel counts the number of times a mode is available on each route as identified through the Google Maps API and analysis on airport availability (see above) – where each route can have more than one mode available – and divides by the total instances of modal availability across all routes in the shortlist. This is slightly different to the PRIMES-TREMOVE data which is simply the share of total passenger kilometres performed by mode on inter-urban travel.

Figure 0-4: Modal split balance between the 100 OD routes (left panel), relative to European passenger traffic (right panel)



Source: consortium analysis of the 100 OD routes (left), PRIMES-TREMOVE baseline for total EU-27 passenger kilometres travelled by mode, for inter-urban travel only (right)

The table below highlights that there is a sample of at least 7 routes within each of the clusters shortlisted in the previous section.

Table 0-7: Cluster balance between the 100 OD routes

Cluster ID	OD journey type	MDMS advancement (MS)	OD node attractiveness	Routes in cluster
A	National	Leader	Both attractive	7
B	National	Planned adopter or follower	Both attractive	13
C	International	At least one leader	Both attractive	13
D	International	Planned adopters or follower	Both attractive	12
E	National	Leader	Hybrid	8
F	National	Planned adopter or follower	Hybrid	15
G	International	At least one leader	Hybrid	10

Cluster ID	OD journey type	MDMS advancement (MS)	OD node attractiveness	Routes in cluster
H	International	Planned adopters or follower	Hybrid	7
I	National	Any	Both less attractive	7
J	International	Any	Both less attractive	8

11.2.2.4 Analysis methods

The 100 OD Pairs were analysed more closely to understand what connectivity is possible to see via two distinct booking mechanisms, listed below. The comparison between these two channels helps to inform the definition of the current problems in the transport ticketing market.

3. **Booking via MDMS (proxy – Omio)**: to understand what is currently possible via MDMS platforms, Omio was selected as an advanced EU-wide MDMS platform that allows users to book tickets directly within the platform. Omio only provides options for within-mode travel (e.g. rail-rail connections or bus-bus connection, multi-modal connections not included). Other EU-wide platforms like Rome2Rio only provide re-linking functionality and do not allow tickets to be booked directly on the platform. Each MDMS platform therefore has some limitations compared to an 'optimal' ticketing solution, but Omio was selected to facilitate a comparison on the prices offered by operators on direct ticket sales channels and on MDMS platforms.
4. **Booking directly via operators (proxy – Google Maps and other direct research)**: to understand what is theoretically possible if an MDMS platform were to have access to tickets available from all transport operators, Google Maps was used to list all possible within-mode and multi-modal connections possible via land and sea and their associated journey times. Costs for these connections were collected by direct research on the websites of relevant operators. Advance tickets were researched to limit pricing volatility, since operators often employ different practices to raise ticket prices closer to the travel date[168]. This was supplemented by additional information from Google Flights on possible direct air connections and their associated journey times/costs.

This analysis is based on an **assumption of travel from city centre to city centre**. Rail and bus connections therefore start and end with an appropriate station within the city convenient for passenger travel, rather than a specific alternative location (for example the home of a passenger, which will vary for each individual). By contrast, flight connections require travel to/from the airport since these are often located outside the city centre. The analysis also considers **time in transit only, and only for major connections**. This includes time spent in the vehicle on the main intercity legs (>10 mins) and time spent waiting between connections at the transit terminal, but does not include short intra-city connections (<10 mins) for walks, trams, metros or similar. A summary of the underlying dataset used to inform these conclusions is shown in 'Appendix – Detailed 100 OD pairs analysis'.

11.2.2.5 Conclusions from the OD pair analysis

These conclusions focus on the **availability of service information** by mode in each channel (i.e. whether a train, bus, flight or multimodal connection is visible) and the **quality of the service**

[168] Research was undertaken in May/June 2025 for travel tickets dated Wednesday 17th September (3-4 months in advance), with journeys starting at 06:00am. Some operators do not allow tickets to be purchased this far in advance. Therefore, if September tickets could not be seen, as a lower priority tickets dated Wednesday 16th July were logged.

available to be booked (i.e. the duration and cost of the connections). Starting with the conclusions from an analysis of land- and sea-based travel:

- Multi-modal connections were possible in 76 out of the 100 assessed routes (76%) when booking directly through operators. The lack of multi-modal booking functionality in MDMS could therefore be argued to limit options for consumers in 76% of routes.
- Even within land-based travel, MDMS platforms missed rail or bus/coach connections in 32 out of 83 cases (39%) where such connections were possible through direct operator booking (in 17 cases no land-based routes were identified).
- Given that booking directly via operators provided faster connections than those available in an MDMS platform in 17% of the assessed routes, this is strong evidence supporting that travellers cannot see all options available to them on MDMS platforms, and that these missed options are sometimes faster, implying that travellers may be making suboptimal travel decisions (through no fault of their own).
- In 29 out of the 100 pairs assessed (29%), it was not possible to see a train connection in the MDMS platform where one was available on the website of the operator(s). This problem seems to be slightly more concentrated in domestic routes (17 of 29 instances). The problem also persists in bus travel, although to a lesser extent (7 out of 100, or 7%). This is indicative that platforms are not displaying all possible operators, which could be reflective of uneven access.
- Out of 100 OD pairs, direct bookings offered cheaper connections in 34 cases (34%). Among these, direct train bookings were cheaper in 19 pairs, while direct bus or coach bookings were cheaper in 12 pairs. Additionally, in 22 of the 34 cases, a multi-modal option was cheaper through direct booking (note that various modes can be cheaper within the same OD pair, so these numbers will not total to 34). However, it must be stressed that the cost data collected directly via operator websites was for a point *further* in the future (Wednesday 17th September 2025) than the costs extracted from Omio (Wednesday 16th July 2025). This limits the comparability of the results, since tickets booked further in advance are typically priced cheaper by operators to encourage smoothing of expected demand. It is therefore likely that the indicated proportion of routes where MDMS are not showing the cheapest connections is overestimated. Moreover, comparisons in cost were only directly available in 56/100 of the OD pairs, bringing into question the representativeness of the sample in an already targeted selection of 100 OD pairs. Given the lack of robustness of these comparisons, it was conservatively assumed in future modal shift modelling that no cost savings could be realised.

A separate set of broad conclusions is presented for flights given several important limitations. Firstly, in order to create comparability with land- and sea-based forms of travel, it is necessary to account for the considerable time spent at airports checking in and going through security. We therefore assume a standard two hours of additional time to account for this, applied to both the direct booking and MDMS channels, although this will vary in reality based on passenger attitudes towards risk of delays and recommendations from each airport and service carrier. Secondly, it must be considered that Omio only considers the time spent in flight and waiting in between connections for their estimated time duration. Consistent with our city-to-city approach noted above, it was therefore necessary to assume some additional time needed to travel to/from the airport for the Omio results only. We assumed an average of two hours in each case, additional to the two-hour check-in time noted above; one hour to get to the origin airport, and another hour to reach the city centre from the destination airport. No additional costs were assumed for these legs. Finally, it should be noted that Omio is more focussed on land-based travel while other platforms that focus more on air travel might have found improved air offerings (e.g. Edreams or Etraveli), limiting the extension of these results to all MDMS platforms

- In 16 out of 100 OD pairs (16%), land-based transport modes remained competitive with air travel, offering journey durations that were within ±20% of flight travel time.
- In 33 out of the 100 of the OD pairs (33%), MDMS failed to identify bookings that were available directly via operators. However, as mentioned above, this is based only on availability through Omio, while other MSE's are more likely to contain a more complete offering.
- In 32 out of the 100 OD pairs (32%), direct booking flights were found to be faster than the options listed on Omio. This suggests that direct operator bookings can also offer significant time savings compared to MDMS.
- A comparison on cost-effectiveness was not performed.

In summary, this analysis points to significant gaps in the services currently displayed in MDMS platforms (as proxied by Omio), both in completeness of service offerings and the quality (time/cost) of services displayed when compared to direct operator bookings. The extension of this review to more MDMS would likely reduce this gap, since different MDMS focus on different niches (e.g. Trainline's primary focus on rail travel), but the lack of a single platform offering the entire menu of travel options still indicates a clear market failure that policy intervention could help to address.

We therefore assume that some time savings are likely in each cluster as a result of the policy measures, because they aim to improve the completeness and accuracy of service information on MDMS and improve the ability of passengers to book relevant tickets. These assumptions are stated in the main report. However, as stated above, we conservatively assume no cost savings are possible given the low number of OD pairs with comparable data and the discrepancy in collection dates for the cost data between the two channels.

11.3 MARKET DISTRIBUTION DATA

This section focuses on providing an assessment of the market data gathered in the provision of passenger transport services and online ticket distribution per mode, covering rail (11.3.1), aviation (11.3.2) bus and coach (11.3.3) and waterborne transport (11.3.4). The parameters and indicators covered by mode were largely similar, with some variations in specific modes.

A systematic process was followed to deliver this extensive data collection, which was gathered at the Member State level (EU27 and Norway for aviation). This involved utilising publicly available data sources, information and data collected as part of dedicated studies/reports and data and other information gathered via relevant stakeholders (as a part of Task 8 – Evidence collection). However, since it was not expected that all data would be readily available, the steps below were prepared:

1. Gathered datasets directly at EU27 and national levels from past studies in which the team had taken part and from publicly available sources (e.g. Eurostat).
2. Used stakeholder consultation to gather relevant data to address data gaps and/or validate some of the values gathered in the first step. This involved the results from the data questionnaire and the signing of NDAs that were needed with relevant stakeholders.
3. Where data sources on a specific parameter were not available or complete, data on quantitative variables were gathered and used as proxy variables that allowed us through extrapolation methods (e.g. correlation and regression analysis) to cover the ones needed for this study.

The steps outlined above were conducted for each of the mode-related parameters on a case-by-case basis, with some being conducted in parallel in certain cases. At the date of this report, the

team has conducted the desk research, which involved compiling data from internal datasets and publicly available data sources to assess what data was readily available. Then, the data collection questionnaire was circulated among relevant stakeholders to fill any remaining data gaps.

The following sub-sections outline and assess the data and associated sources found through these steps, as well as describe the data extrapolation methods used where the parameters for which data does not exist.

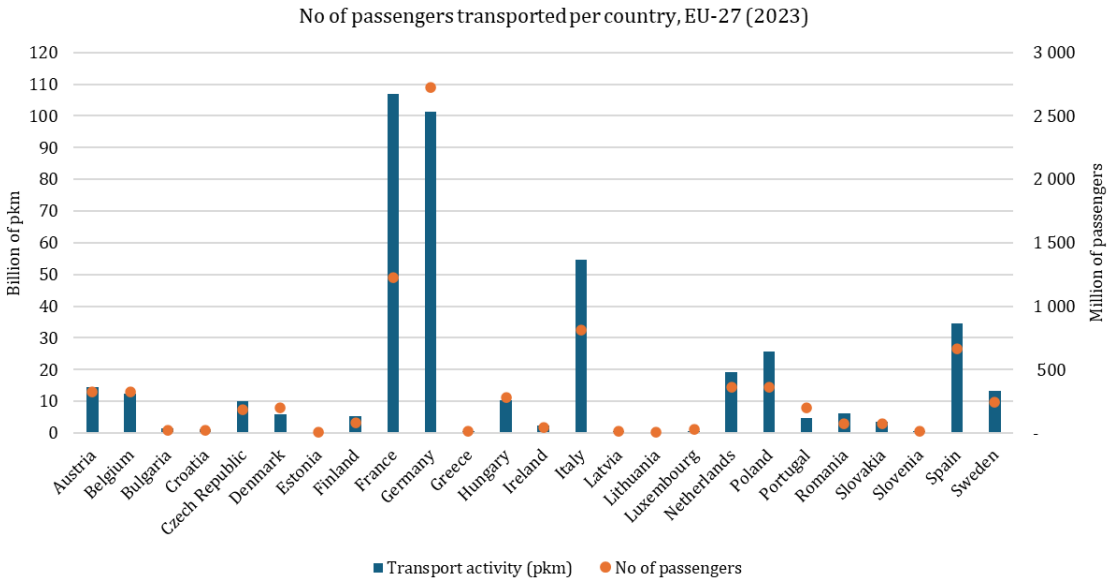
11.3.1 Rail Sector

11.3.1.1 Rail transport activity and passengers per country

Transport activity (in pkm) and number of passengers data is available per each EU27 country. The source of such data is the Eurostat *Railway Passenger Measurement – passengers (rail_pa)*[169] dataset for the numbers of passenger transported[170] and the *EU Transport in Figures – Statistical Pocketbook 2025*[171]. The latest figures available refer to the year 2023.

Figure 0-5 illustrates that France and Germany clearly stand out in terms of passenger km, with more than 100 billion pkm each (although the number of passengers is about the double in Germany compared to France). Italy positions itself as the third country, with approximately 55 billion passenger km. Overall, in 2023, the EU27 Member States accounted for a total of around 437 billion passenger km and more than 8.3 billion of passengers transported.

Figure 0-5: Number of passenger kilometres and passengers in rail transport in the EU27 Member States in 2023



[169] https://ec.europa.eu/eurostat/web/transport/information-data/railway-transport

170 The missing values of four countries have been estimated based on the passenger km information from the Statistical Pocketbook

[171] https://transport.ec.europa.eu/facts-funding/studies-data/eu-transport-figures-statistical-pocketbook/statistical-pocketbook-2024_en?prefLang=huhttps://transport.ec.europa.eu/facts-funding/studies-data/eu-transport-figures-statistical-pocketbook/statistical-pocketbook-2025_en

Source: Eurostat, Statistical Pocketbook

**Belgium and Hungary: estimated data on number of passengers transported in 2023*

11.3.1.2 Share of national and international rail traffic per country

The 2025 *IRG Rail Marketing Monitoring Report* [172] provides information on the share of national and international rail passenger traffic, based on the passenger km. Data refers to year 2023 and is illustrated in Figure 8.

On average, in the EU27 Member States, the largest share of rail traffic is within the national borders (93%). The countries with the largest share of international traffic are Luxembourg (36%), Slovenia (29%), and Austria (23%). No international traffic was recorded in Estonia, Finland, Greece, Latvia, and Portugal.

[172] https://irg-rail.eu/irg/documents/market-monitoring/404,2024.html

Figure 0-6: Share of international / national passenger traffic in the EU27 Member States in 2023



Source: IRG

11.3.1.3 Share of PSO and non-PSO services rail traffic per country

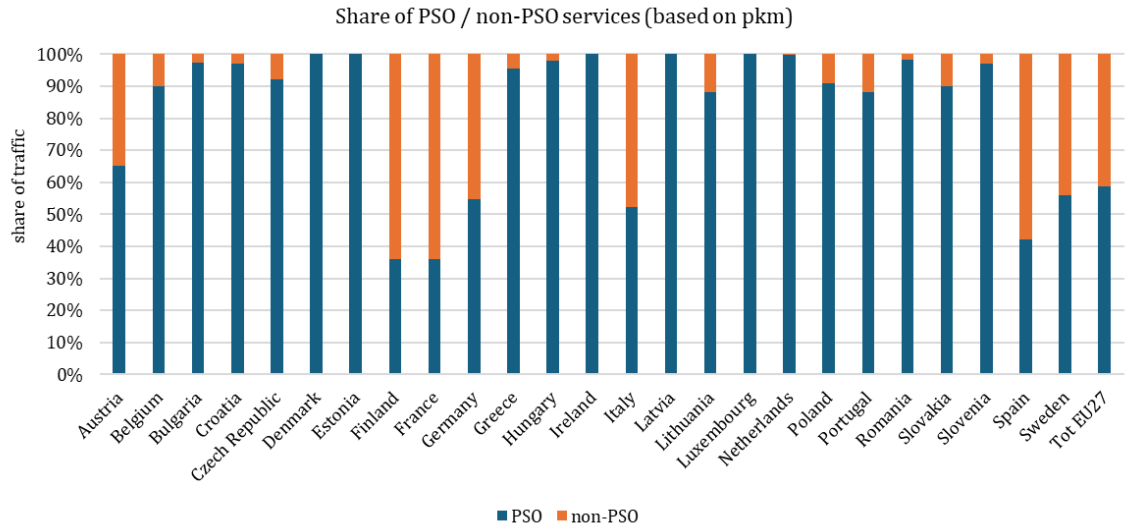
The IRG also provides information about the share of rail traffic by PSO and non-PSO services. The information is once again based on the passenger km and refers to year 2023.

From Figure 9 it is possible to see the higher variance of this data across the EU27 Member States. The highest share of rail traffic by non-PSO services are reported in Finland, France (both at 64%) and Spain (58%). On the other hand, the whole totality of rail traffic in Denmark, Estonia, Ireland, Latvia, Luxembourg, and the Netherlands is associated with PSO services. On average, in the EU27, 59% of the traffic is carried by PSO services, and 41% by non-PSO services[173].

In terms of number of PSO contracts in the largest EU rail markets, as of 2025, Germany[174] has 294 active services, which cover 55% of the country's passenger km. Looking at other important markets, in Italy[175] there are 45 active contracts (which cover 52% of the passenger km), 5 in the Netherlands[176] (100% of pkm), whereas in France[177] there are approximately 10 ongoing PSO contracts (36% of pkm).

[173] Data for Denmark and Luxembourg is from the 2022 edition of RMMS, covering year 2020.
[174] https://www.wettbewerb.spnv-deutschland.de/2025.htm
[175] https://www.autorita-trasporti.it/monitoraggio-contratti-di-servizio-ferro/
[176] https://www.crow.nl/kennisproducten/concessieposter-2025/
[177] https://www.autorite-transports.fr/observatoire-et-numerique/marche-du-transport-ferroviaire/

Figure 0-7: Share of PSO / non-PSO services in the EU27 Member States in 2023



Source: IRG

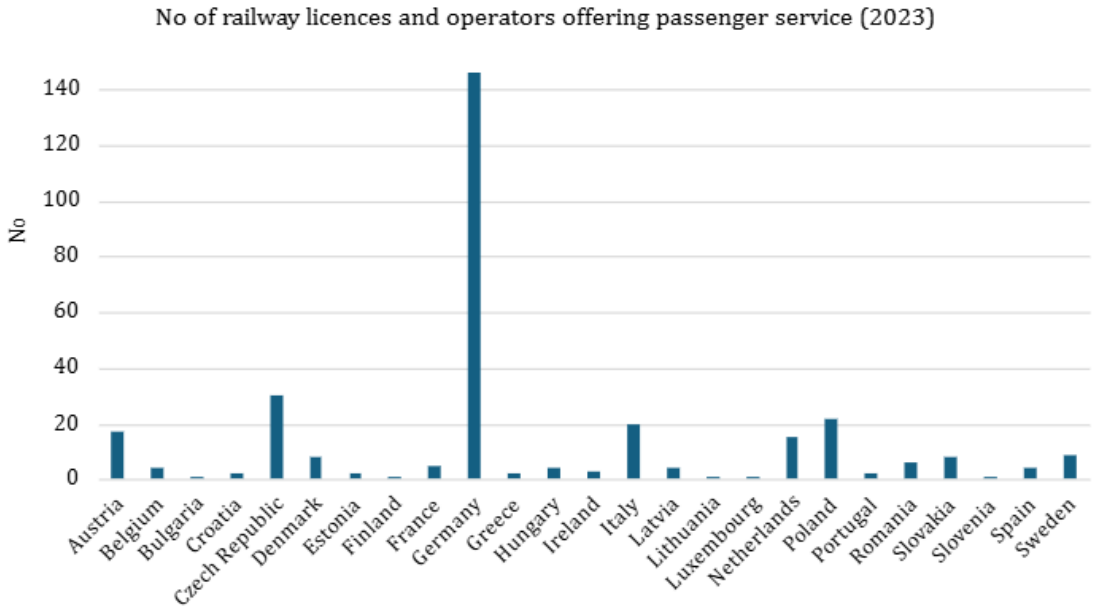
11.3.1.4 Number of railway undertakings offering passenger service

The number of railway licences and operators offering passenger service is available from *IRG – Rail Market Monitoring Report* [178]. The 2023 values for each Member State are illustrated in Figure **0-8**

Overall, in the EU27 countries there are 318 railway licences and operators offering passenger service, with almost half of them being concentrated in Germany alone. Czechia (30) and Poland (22) follow. Italy, Austria, and the Netherlands also have 15 or more passenger railway undertakings.

[178] https://irg-rail.eu/irg/documents/market-monitoring/536,2025.html

Figure 0-8. Number of railway licences and operators in the EU27 Member States



Source: IRG

11.3.1.5 Cross-border rail operators (non-incumbent, non-PSO)

The number of cross-border rail operators that are neither incumbent nor operating under a PSO is very limited in EU27. The only examples found through a desk research are listed below:

- *Leo Express* (CZ) – A Czech open-access operator with services in CZ, SK, PL and cross-border routes (e.g., Prague–Kraków).
- *RegioJet* (CZ)– A Czech private operator with international passenger services linking e.g., Prague ↔ Vienna ↔ Budapest and to Poland.
- *WESTbahn* (AT) – An Austrian open-access operator, increasingly running cross-border services into Germany.
- *Railroad Development Corporation - RDC* (DE) – A German operator which offers the Alpen-Sylt Night Express, a seasonal overnight train connecting Westerland (Sylt) in northern Germany to Salzburg, Austria, via Hamburg and Munich.
- *European Sleeper* (BE/NL) – A private night-train operator connecting the Netherlands, Germany, Belgium, and other countries.
- *Optima Express / Tours* (DE) – A German travel company operating a motorail (car + passenger) service across Austria, Slovenia, Croatia, Serbia, Bulgaria, and Turkey

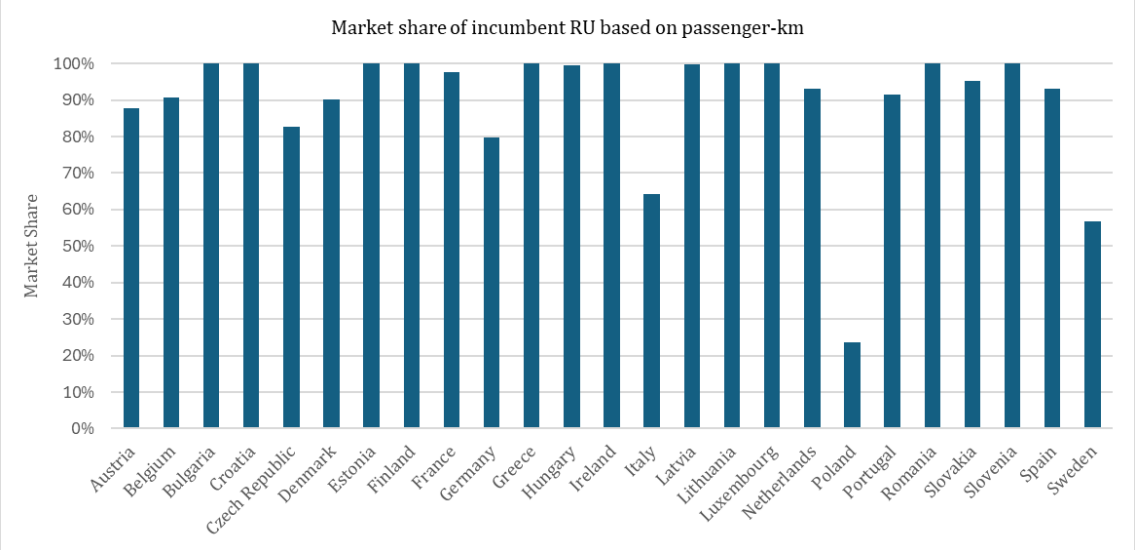
- *Snälltåget* (SE) - A Swedish private operator running night and seasonal passenger trains across Sweden, Denmark, and Germany (Berlin/Hamburg), with some seasonal services to Austria

11.3.1.6 Market share of incumbent railway undertakings

The market share of railway undertakings can be obtained by considering data from the RMMS report. This source provides the passenger-km of incumbent railway undertakings from each EU27 country. By dividing such number by the country's total passenger-km, the market share of railway undertakings in 2022 is obtained.

The figure below illustrates the market share of all incumbent railway undertakings. The lowest market share is seen in Poland, where PKP's share is 24% and in Sweden, where Statens Järnvägar accounts for 57% of the country's passenger-km. Also, in 21 out of 25 countries the incumbent railway undertaking accounts for more than 80% of the passenger-km market share, and the average EU27 value is around 82%.

Figure 0-9: Market share of incumbent railway undertakings in 2022



7

Source: Consortium analysis based on data from the RMMS report (year 2022)

11.3.1.7 Rail tickets sold annually (online and offline) and their monetary value

Information on the number of rail tickets has been requested as part of the stakeholder consultation process, which involved both railway operators as well as national statistical offices.

From the first category, one railway undertaking reported 353 million of tickets sold in 2024 (206 million in 2019). The majority (72%) of these tickets were sold by travel agents, followed by online (8%), station counters (8%), vending machines (7%), and other (5%). Also, 52% of such tickets referred to PSO services, whereas 48% to open access. The monetary value of the tickets sold by this railway undertaking accounted to 11 billion € in 2024 (8.3 billion € in 2019). In this case, the value associated to PSO services was 72% (28% to open access).

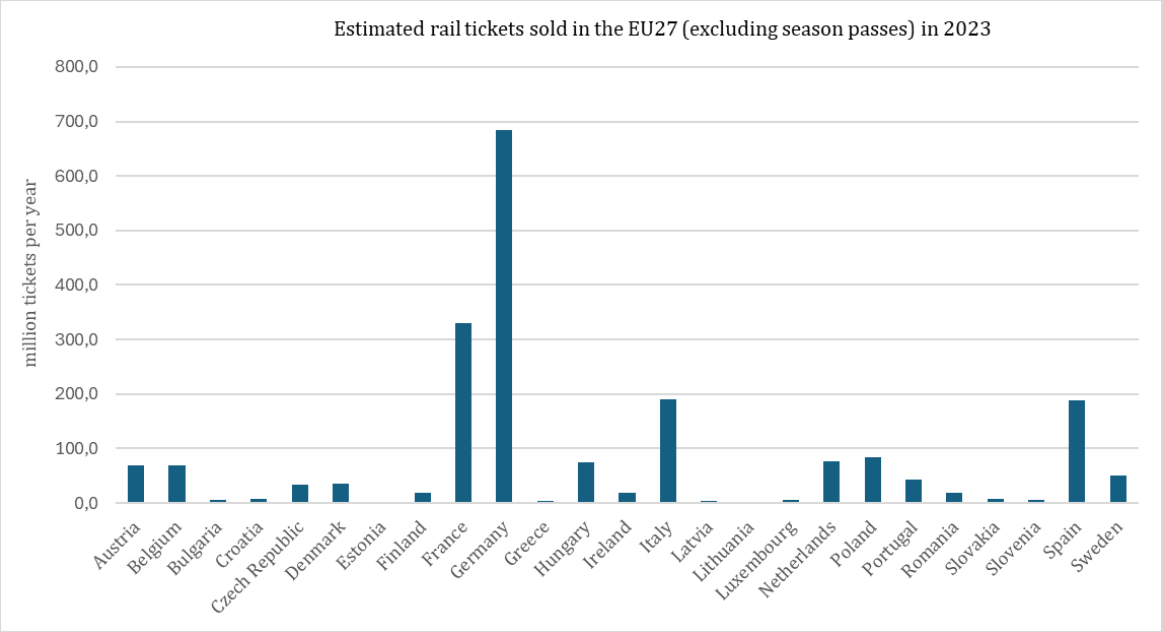
Another railway undertaking also shared information on the number of tickets sold annually: 5 million in 2024 (3 million in 2023, 2 million in 2019). Of these tickets, more than 90% have been sold through online channels. The monetary value of their tickets sold in 2024 accounted for 90 million € (70 million in 2023, 30 million € in 2019). All tickets sold referred to the open access market. The share of tickets sold by this railway undertaking could be estimated to be approximately 0.9% of the total rail tickets sold[179] in the country they operate.

Information on the rail tickets sold was also provided by three national statistical offices. One country reported 5.1 million of tickets sold in 2024, for a monetary value of €17.7 million. 60% of the tickets have been sold at station counters, while approximately 10% online. Also, of all tickets, in 2024, 61% were sold as through tickets, 23% as season tickets, and 16% as part of a combined journey. In a second country, the rail tickets sold in 2024 were approximately 19 million, for a total monetary value of about €25.7 million. 48% of these tickets were sold online, whereas 35% at station counters. Also, 100% of rail tickets sold in the country related to PSO services. Finally, a third country reported that the monetary value of rail tickets sold annually was approximately 70 million € in 2024 (64 million € in 2019).

The information on rail tickets sold gathered through the stakeholder consultation was quite fragmented and, although it provides some interesting insights, it does not furnish a full picture of the whole EU27 context. Also, this data likely included seasonal passes, which are out of the scope of this analysis. With that said, the number of tickets sold (excluding seasonal passes) in the different Member States could be estimated by considering the number of railway passenger transported (from Eurostat) and by applying some assumptions on the share of seasonal passes sold compared to the total number of tickets sold. To make these assumptions, we started from the share of seasonal passes that was provided by one country (through the stakeholder consultation). Combining such information with the data on the "*main transport mode used for the most frequent trip by country"* included in the 2018 JRC's study *EU Survey on issues related to transport and mobility* we could assume the share of seasonal passes in each Member States. With the additional assumption that, each passenger with a seasonal pass makes 100 trips per year, it is possible to derive the estimated number of tickets sold in each Member State, which are illustrated in Figure 11. Looking at the picture, Germany leads the way with almost 700 million of rail tickets sold annually, followed by France (more than 300 million) and Italy / Spain (around 190 million). Based on this estimation, the rail tickets sold (excluding seasonal passes) in EU27 in 2022 are about 2 billion.

[179] See paragraphs below for the assumption on rail tickets sold in the EU27 Member States

Figure 11: Estimated number of rail tickets sold in the EU27 in 2023



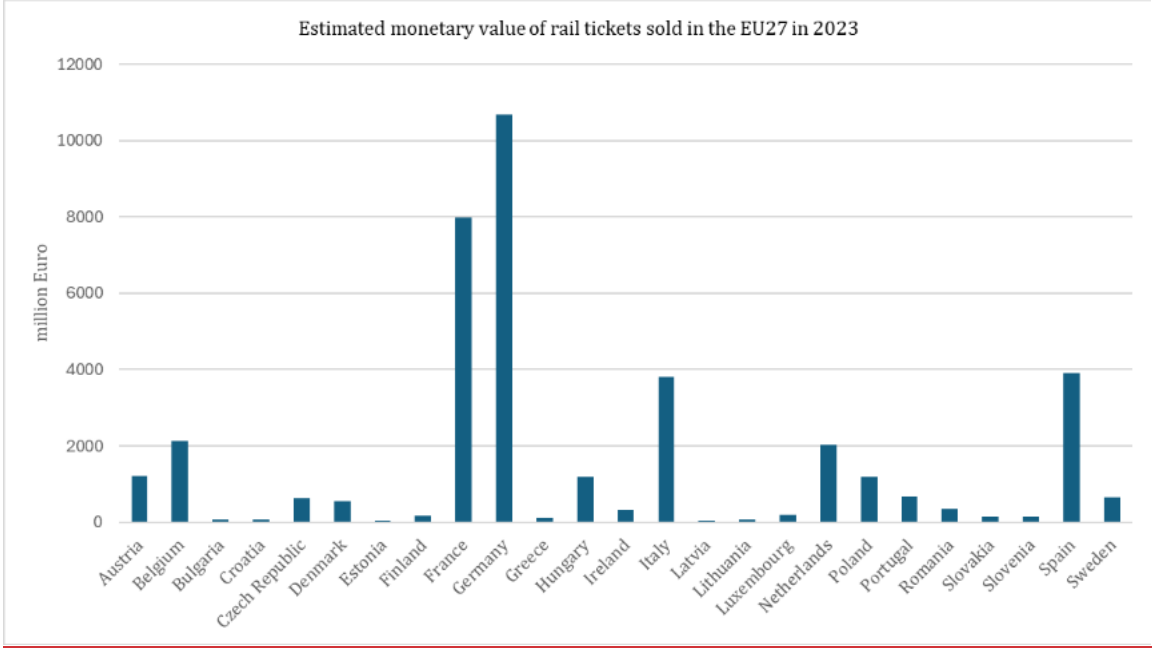
Source: Consortium analysis based on data from Eurostat (2023), Stakeholder consultation, and JRC (2018)

Also, the monetary value of rail tickets sold annually was estimated with a homogeneous approach for all Member States, as the information received through the stakeholder consultation was very fragmented. To do so, the average passenger ticket price (€/ticket) related to regional and long-distance services has been estimated based on RU's revenues (from IRG-Rail(2024), the number of passengers (from EUROSTAT) and the estimated length of regional, long-distance and international trips[180]. Multiplying these values by the estimated amount of ticket sold in each Member States, the total monetary value has been estimated and illustrated in figure below.

Germany has the highest monetary value (approximately €10.7 billion), followed by France (€7.9 billion). Also, Italy and Spain both account for almost €4 billion of rail tickets monetary value, while the Netherlands and Belgium both account for about.€2 billion. Overall, the total estimate for all EU27 Member States is around €38.3 billion. Comparing these estimations with the (few) numbers on monetary values provided by the stakeholders, the figures are quite aligned.

[180] Estimation based on IRG-Rail (2024), 13th Market Monitoring Report, considering RU revenues for 2023. The average ticket price has been estimated for regional, long-distance and international rail services by first estimating the average length of such services in each Member State and then multiplying this distance by the estimated ticket price per passenger-kilometer in that Member State. The latter is obtained by dividing total passenger revenues by the total number of passenger-kilometers of the relevant incumbent railway undertaking. As no disaggregated data on revenue per passenger-kilometer by service type are available, the same estimated price per passenger-kilometer is applied to all services (regional, long-distance and international) within each Member State.

Figure 11: Estimated monetary values of rail tickets sold in the EU27 in 2023



Source: Consortium analysis based on data from Eurostat (2023) Stakeholder consultation, JRC (2018) and IRG-Rail (2024)

11.3.1.8 EU27 and Member State rail market thresholds

Market significance thresholds were applied to identify platforms or operators with potential structural relevance in providing rail passenger services. Two screening thresholds were defined:

- EU27-level threshold: 10% of the total EU27 market
- Member State-level threshold: 30% of the respective national market

Both thresholds are assessed using:

- Annual number of rail single tickets sold
- Monetary value of ticket sales

Based on the estimated 2023 market volumes presented above in paragraph **Error! Reference source not found.**, the calculated thresholds are shown below.

Table 0-8. EU27-level rail market thresholds, 2023

Indicator	Threshold
Tickets sold (millions)	203.1
Monetary value (millions of EUR)	3 832

Source: Consortium analysis based on data from Eurostat (2023), Stakeholder consultation, IA Rail Passenger Rights Regulation (2024) and JRC (2018).

This threshold represents the minimum scale at which an entity may be considered to have EU-wide market significance in the rail sector.

Member State-level thresholds reflect national market structures and demand levels. Considerable variation is observed across Member States.

Table 0-9. Member State-level rail thresholds, 2023

Country	Single Tickets sold threshold (millions)	Monetary value threshold (in millions of EUR)
AT	21.0	360.4
BE	20.5	636.4
DK	10.9	165.1
ES	56.5	1174.7
FI	5.4	52.5
FR	98.8	2392.1
DE	205.2	3201.1
EL	1.3	38.3
IE	5.8	95.6
IT	57.1	1142.8
NL	23.1	609.4
PT	13.1	205.6
SE	15.3	193.9
BG	1.7	22.5
CY	0.0	0.0
CZ	10.2	188.0
EE	0.8	12.4
HU	22.5	359.4
LV	1.4	9.4
LT	0.5	17.4
MT	0.0	0.0
PL	25.4	352.9
RO	5.5	101.8

Country	Single Tickets sold threshold (millions)	Monetary value threshold (in millions of EUR)
SI	1.4	42.8
SK	2.3	40.8
LU	1.5	58.2
HR	2.2	21.8

Source: Consortium analysis based on data from Eurostat (2023), Stakeholder consultation, IA Rail Passenger Rights Regulation (2024) JRC (2018) and New Mobility Patterns project (2018

11.3.1.9 Ticketing options of incumbent railway undertakings

Additional analysis on ticketing can be made by qualitatively assessing the selling options offered by the incumbent railway undertakings websites. More specifically, the analysis investigated a series of elements, including the possibility to buy alternative modes in combination with rail or also independently, as well as the option to purchase either international tickets or national competitors' tickets from the RU's website. The availability (or non-availability) of such options allows to draw preliminary conclusions on whether a railway undertaking's website can be considered as a platform or not.

The table below summarises the available options offered by the incumber railway undertakings websites. Additional details and specifications are included in the excel annex. Overall, five railway undertakings' websites (OBB - Austria, ČD – Czech Republic, DB - Germany, CFL – Luxembourg, and SJ – Sweden) can be considered multimodal and multi operator platforms, as they offer both the opportunity to purchase alternative modes as well as other operators (mostly international) from their website. Also, nine railway undertakings websites can be considered either multimodal (six) or multi operator (three) platforms.

Table 0-10: Available ticketing options from incumbent railway undertakings websites

Country	RU	Alternative mode offered in combination with rail	Alternative mode offered also independently	International tickets sold on website	National competitors tickets sold on website	Can be considered a platform?
Austria	ÖBB	Yes	Yes	Yes	No	Yes – multimodal & multi operator
Belgium	SNCB	No	No	Yes	No	Yes – multi operator
Bulgaria	BDZ	No	No	No	No	No
Croatia	HŽPP	Yes[31]	Yes[181]	No	No	No
Czech Republic	ČD	Yes	Yes	Yes	No	Yes – multimodal & multi operator
Denmark	DSB	Yes	Yes	No	Yes	Yes – multimodal

[181] Trips by bus owned by rail operator

Country	RU	Alternative mode offered in combination with rail	Alternative mode offered also independently	International tickets sold on website	National competitors tickets sold on website	Can be considered a platform?
Estonia	Elron	No	No	No	No	No
Finland	VR	No	No	No	No	No
France	SNCF	No	Yes	Yes	No	Yes – multimodal
Germany	DB	Yes	Yes	Yes	No	Yes – multimodal & multi operator
Greece	Hellenic train	Yes	Yes	No	No	Yes – multimodal
Hungary	MÁV-START	Yes	Yes	Yes	No	Yes – multimodal
Ireland	Iarnród Éireann	Yes	Yes	Yes	No	Yes – multimodal
Italy	FS	Yes	No	Yes	No	Yes – multimodal
Latvia	Pasažieru vilciens	No	No	No	No	No
Lithuania	LTG Link	No	No	Yes	No	No
Luxembourg	CFL	Yes	Yes	Yes	No	Yes – multimodal & multi operator
Netherlands	NS	No	No	Yes	No	Yes – multi operator
Poland	PKP	No	No	Yes	No	No
Portugal	CP	No	No	Yes	No	No
Romania	CFR Călători	No	No	Yes	No	No
Slovakia	ZSSK	No	No	Yes	No	Yes – multi operator
Slovenia	Slovenske železnice	No	No	No	No	No
Spain	Renfe	No	No	Yes	No	No
Sweden	SJ	Yes	Yes	Yes	Yes	Yes – multimodal & multi operator

Source: Consortium analysis based on data from the railway undertakings websites.

11.3.1.10 Overview of MDMS selling rail tickets and their market share

Estimating the number of MDMS platforms actively selling rail transport tickets and their respective market shares is challenging. However, some relevant information was collected through the stakeholder consultation activities, in which a large number of MDMS providers have been reached out to[182].

Four MDMS platforms provided information on the number of tickets sold annually. The largest of these respondents, reported approximately 23 million rail tickets sold in 2024 across their EU operations (although in 2019 such number was over 40 million). Considering the totality of rail tickets sold annually in EU27 (estimated as 1 850 million in 2022, see 0), the market share of this largest MDMS platform is approximately 1.24% (and about 1.8% in 2019).

Three other MDMS platforms provided information on the number of tickets sold and their monetary value: an Italian MDMS reported more than 230,000 tickets sold in 2024, for a total value of €13.2 million. The full totality of their tickets are sold by travel management companies. A Spanish MDMS declared approximately 48,000 tickets sold in 2024 (they were only 1,000 in 2019) for approximately €2 million in monetary value. More than 99% of such tickets are sold online. Finally, another Italian MDMS reported a little bit more of 2,000 tickets sold per year for a monetary value of about €164,000. The majority (87%) of their tickets are also sold by travel management companies.

In addition, the largest independent app to buy train tickets provided an estimate of the monetary value of their ticket sales (financial year 2024), which amounted to approximately 1.2 billion €. The same platform, in 2023, commissioned a study estimating the Net Ticket Sales (NTS) of the entire EU passenger rail market to be around 55 billion €. Therefore, their approximate market share is around 2.2%.

Taking into account the limited availability of data, it is estimated that the share of rail tickets sold via independent MDMS platforms in EU27 was about 3% in 2019 and 3.2% in 2022.

In terms of commission fees applied by MDMS to the railway undertakings, the values collected in the stakeholder consultation for this study ranged between 0.5% and 5%.

11.3.1.11 Data gaps and challenges

The table below provides an outline of the variables collected or estimated, due to lack of data and low response rates from the stakeholder consultation.

Table 0-11. Data gaps for the rail sector

Indicator	Final status
Total number of railway undertakings offering passenger rail services	Data collected and reported
Total number of rail passengers and passenger kilometres, broken down by PSO and open access services, plotted against domestic and cross-border services	Data collected and reported
Number of competent authorities for PSO subsidised railway services, including a	Not available

[182] In total, 19 MDMS providers participated in the targeted survey and 15 MDMS providers in the targeted interviews (some stakeholders participated in both). Furthermore, seven MDMS providers provided data to the study team via a separate data collection exercise. For more details see the annex with the Stakeholder Consultation Report.

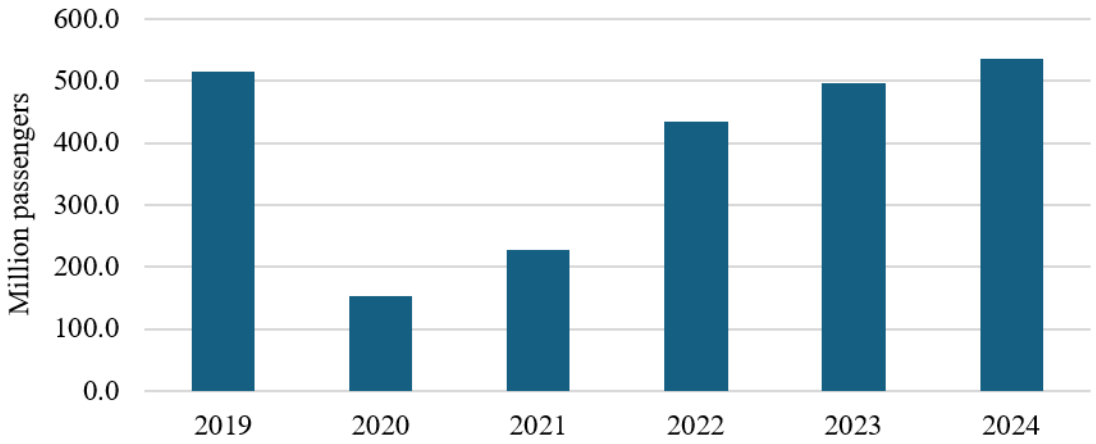
Indicator	Final status
breakdown of the number of public services contracts awarded by each.	
Typology of individual products (ticket and associated fare) available on the market per railway undertaking	Gaps from stakeholder consultation (only few responses received). Information on typology of tickets integrated with desk research (alternative mode offered in combination with rail/independently, international tickets sold, competitors tickets sold)
Number of tickets sold annually (domestic, cross-border) and monetary value	Gaps from stakeholder consultation (only few responses received). - Estimation of total tickets based on data on passenger carried (not distinguished by domestic, cross-border) - Estimation of monetary value based on data on passenger-km
Share of tickets sold online at station counters, at vending machines, in travel agents, and other.	Gaps from stakeholder consultation (only few responses received). Information on ticket sold online integrated with desk research.
Percentage of tickets sold as part of a combined journey	Gaps from stakeholder consultation (only few responses received).
Percentage of through tickets and season tickets versus the total tickets sold	Gaps from stakeholder consultation (only few responses received).
Percentage of yielded fares (number, value) of total rail tickets sold	Gaps from stakeholder consultation (only few responses received).
Number of MDMS selling rail tickets, including their market share and ownership	Gaps from stakeholder consultation (only few responses received). This data has been complemented analysing incumbent railway undertakings, their market share and ticketing options.
Per MDMS: number of users per month and turnover	No data received from stakeholder consultation
Per MDMS: number of individual products (tickets and associated fare) available per railway undertaking and ticket sales broken down per railway undertaking	No data received from stakeholder consultation
Per MDMS: ticket sales (number and value) broken down by PSO services and by open access service and by operator	Very few data received from stakeholder consultation.
Commission fees applied by MDMS	Gaps from stakeholder consultation (only few responses received).
Evidence on other commercial distribution practice (e.g., look-to-book ratios), per MDMS	Not available
Account separation between distribution/operation division, per MDMS	Not available
Data sources used to collect ticket and fare data, per MDMS	Very few data received from stakeholder consultation.

11.3.2 Aviation Sector

Overall, there are reliable sources for data on air passenger transport, with most of them pointing towards a positive evolution of the market on the demand side. Nevertheless, more data was required to accurately characterise the supply side since the information collected in the desk research stage, including past reports, Eurostat and reports from organisations in the sector (e.g. EASA), was provided in different periods, which did not allow for well-backed conclusions. Therefore, additional data was gathered directly from NSOs, operators and MDMS platforms to supplement the desk research and get a more robust view of the aviation sector from which conclusions could be drawn upon.

11.3.2.1 Total air transport activity and passengers

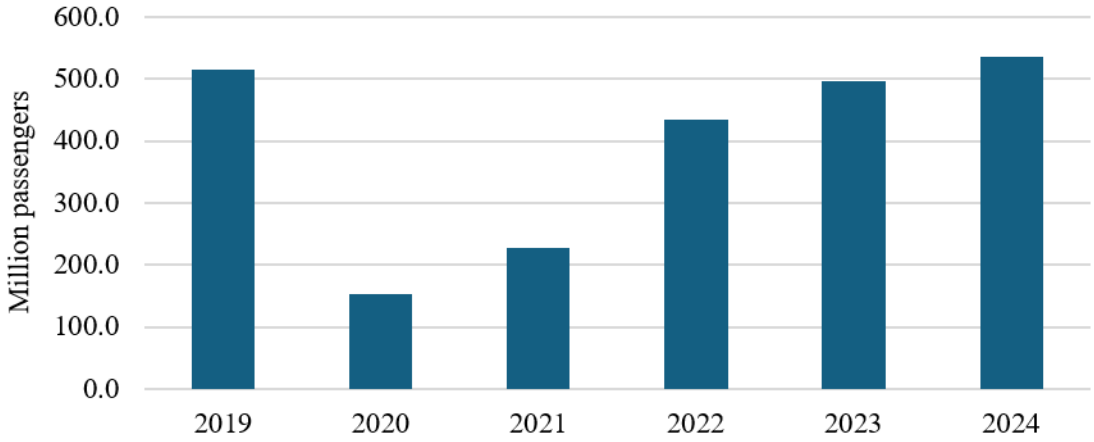
Figure 10. Total number of national and intra-EU27 air passengers between 2019 and 2024



Source: Consortium analysis based on data from Eurostat (https://doi.org/10.2908/AVIA_PAOC) and update of PWC, TIS and Steer (2023), Impact assessment support study

outlines the values for air passengers transported within the intra-EU27 region, including national and intra-EU27 passengers, between 2019 and 2024. As anticipated, the COVID-19 pandemic has led to a substantial decline in air passenger activity in 2020, with the number of passengers travelling using air transport suffering a 70% decline from 2019 values. Nevertheless, in 2024, these values increased by 3.6% from 2019 numbers, not only indicating the full recovery or the sector, but also a surpass of the pre-pandemic levels.

Figure 10. Total number of national and intra-EU27 air passengers between 2019 and 2024



Source: Consortium analysis based on data from Eurostat (https://doi.org/10.2908/AVIA_PAOC) and update of PWC, TIS and Steer (2023), Impact assessment support study

11.3.2.2 PSO passengers, passenger activity and load factor

From the desk research stage, only data for 2024 air PSO passengers and average load factors were readily available from the European Commission's database[183]. The list indicates 11 Member States having public service obligations in the air transport sector, with France, Spain and Italy being among the ones with more airlines operating these routes, with 9, 6, and 6, respectively. Table provides an overview of the PSOs updated in 2024, with an average load factor of among all routes of 57% and a total number of around 12 million passengers transported.

Table 0-12: PSOs listed in air passenger transport in 2024, including average load factors, number of operating airlines and total number of passengers transported[184]

PSOs	Average load factor (%)	No operating airlines	Total PSO passengers (million)
Croatia	41.7	2.0	0.4
Cyprus	43.0	1.0	0.0
Estonia	59.6	2.0	0.1
Finland	41.6	3.0	0.7
France	72.0	9.0	2.7
Greece	58.9	2.0	1.0
Ireland	51.4	2.0	0.1
Italy	66.4	6.0	2.7

[183] European Commission. Mobility and Transport: Public Service Obligations (PSOs). https://transport.ec.europa.eu/transport-modes/air/internal-market/public-service-obligations-psos_en

[184] Ibid.

Portugal	70.5	4.0	0.9
Spain	70.1	6.0	3.3
Sweden	48.4	1.0	0.0
Total	56.7%	38.0%	11.9%

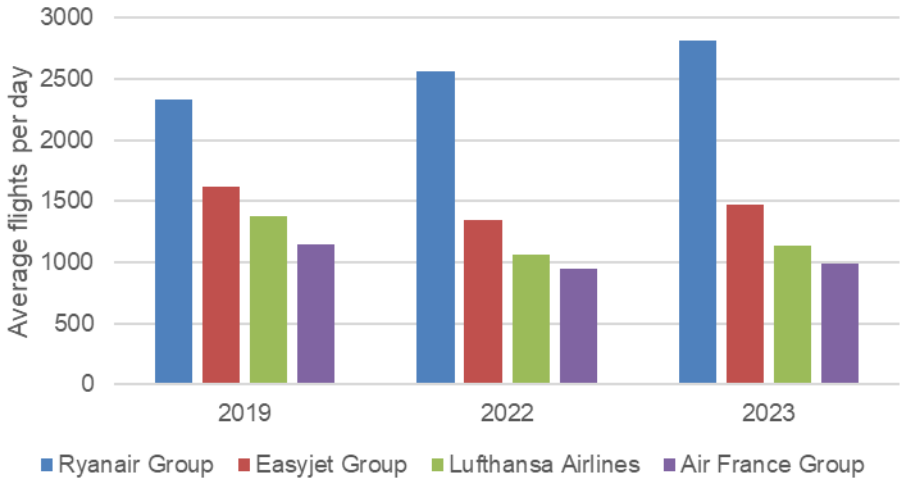
Source: Consortium analysis based on PSO data from the European Commission

The total number of PSO passengers represents 2.2% of the total number of air passengers for 2024 (Table). Using the total air transport activity (GPkm) for domestic and intra-EU flights[185], and assuming that (1) this share remains unchanged in 2025, and (2) the majority of air passenger activity in PSO services remains within a distance equal to or below 500 km, the total PSO activity was estimated to be around 0.67 GPkm in 2024. However, this approach may lead to a number of PSO passengers that might be higher than the actual numbers, since PSO routes are focused on mitigating routes the market cannot serve on a commercial basis. Therefore, the number of passengers in these routes will not be exactly proportional to the total demand.

11.3.2.3 Busiest EU air carriers

Data from Eurocontrol's Comprehensive Assessment Reports[186] provides an indication of the busiest airlines for 2019, 2022 and 2023, based on the average number of flights per day (Figure 0-11).

Figure 0-11. Busiest airlines based on average flights per day



Source: Consortium analysis based on data from Eurocontrol

[185] Gathered from the Statistical Pocketbook 2025 – EU Transport in figures, https://transport.ec.europa.eu/facts-funding/studies-data/eu-transport-figures-statistical-pocketbook/statistical-pocketbook-2025_en. However, it should be noted that PSOs are intended for routes which are necessary and which would not otherwise be served on a commercial basis. Assuming equivalent growth in PSO passengers as for overall demand is an upper bound.

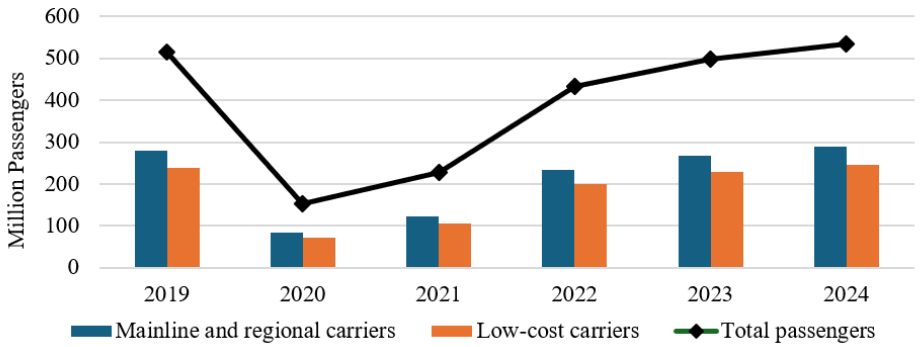
[186] Eurocontrol (2023) Aviation Overview (https://www.eurocontrol.int/publication/eurocontrol-european-aviation-overview-archive-2023) and Eurocontrol (2022) Aviation Overview (https://www.eurocontrol.int/publication/eurocontrol-comprehensive-aviation-assessment-archive-2022)

11.3.2.4 Air tickets sold annually by carrier type and average fares

Data from previous assessments, obtained through desk research, were used to quantitatively characterise annual air ticket sales[187,188]. This involved processing existing data together with air transport passenger and activity information gathered from Eurostat, AERO-MS and a past study[189].

Assuming that each passenger corresponds to a single air ticket sold, the values in Figure 0-12 shows the evolution in the percentage of passengers transported by mainline and regional carriers between 2019 to 2024. As expected, 2020 and 2021 correspond to the periods in which the lowest number of passengers was transported by both regional and low-cost carriers. However, after 2021 the numbers increased considerably, surpassing pre-pandemic values in 2024. Throughout this period, regional and mainline carriers have maintained their dominance over low-cost.

Figure 0-12: Evolution of the number of Intra-EU27 air passengers travelling through mainline and regional carriers or low-cost carriers[190]



Source: Consortium analysis based on Eurostat data (avia_paoc) and update of PWC, TIS and Steer (2023), Impact assessment support study

The average ticket fares[191] were obtained based on the average one-way fares of three major airline groups, a regional carrier and a large low-cost carrier, and include intra-EU flights in the EU27[192]. All values are expressed in 2023 prices and exclude taxes and surcharges.

[187] The monetary value of tickets was requested to stakeholders in the data collection templated. However, as it was only provided by one stakeholder, readily available data was used instead.

[188] European Commission: Directorate-General for Mobility and Transport, PwC, Steer and TIS, *Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof – Final report*, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2832/13002

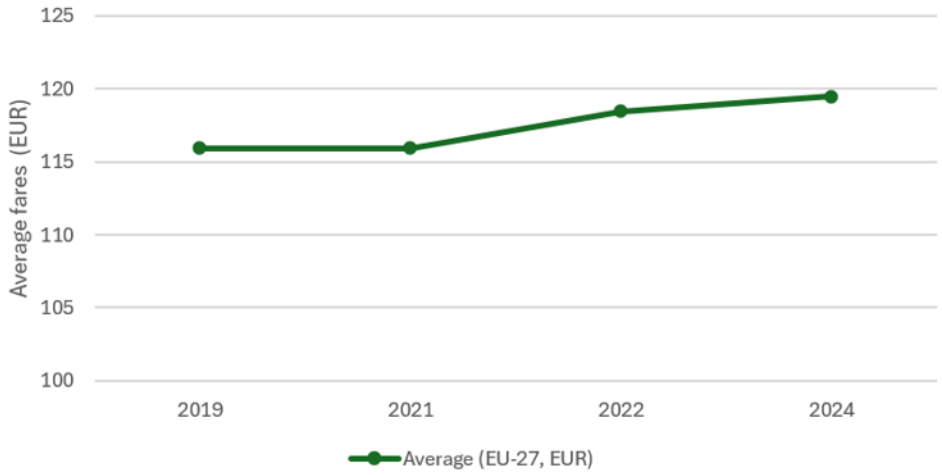
[189] *Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof – Final report*, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2832/13002

[190] Historical data for 2015-2019 and trend for the split between mainline and low-cost carriers has remained unchanged relative to 2023 baseline, but the total values (and percentages) have been updated relative to the baseline scenario. *Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof – Final report*, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2832/13002

[191] Ticket fares exclude taxes and surcharges.

[192] Data for 2022 (in 2019 prices) was obtained under NDA from a past Commission study, based on the average one-way fares of the selected carriers. The sample of airlines was retained as it was considered more representative of the market. For the MDMS support study, this methodology was applied and updated to 2023 prices.

Figure 0-13: Average air ticket fares for intra-EU flights in the EU27, 2019-2024 (2023 prices)



Source: Consortium analysis based on data gathered from a sample of airlines for a past study

Figure above shows a sharp rise in average fares from 2021 to 2024, representing a market dislocation driven by COVID and post-COVID supply constraints, elevated fuel costs and high load factors. The average fare stayed the same from 2019 to 2021 at EUR 115.92 but rose to EUR 118.46 in 2022 and EUR 119.44 in 2024. It is important to note that these fares are represented in terms of constant prices. Inflation in the wider economy from 2022 onwards means that passengers' experience may be of more significant price increases, even though in real terms it is only 3-4 percentage points.

Based on the total passenger numbers presented in section 3.2.1 and the average fares presented in this section, it is estimated that the total monetary value of the EU27 aviation ticket market evolved from EUR 59.7 billion in 2019 to EUR 63.9 billion in 2024.

11.3.2.5 EU27 and Member State aviation market thresholds

Market significance thresholds were applied to identify platforms or operators with potential structural relevance within the intra-EU27 aviation market. Two screening thresholds were defined:

- EU27-level threshold: 10% of the total intra-EU27 market
- Member State-level threshold: 30% of the respective national market

Both thresholds are assessed using:

- Annual number of airtickets sold
- Corresponding monetary value of ticket sales

Based on the estimated 2024 market volumes presented above, the calculated thresholds are shown below.

Table 0-13. EU27-level aviation thresholds, 2024

Indicator	Threshold
Tickets sold (millions)	53.5
Monetary value (millions of EUR)	6 386.47

Source: Consortium analysis based on data from past studies and Eurostat data (avia_paoc).

This threshold reflects the scale at which an entity may be considered to have EU-wide market significance in aviation passenger transport.

Member State-level thresholds vary significantly across Member States, reflecting differences in population size, aviation network density, and tourism, among other factors.

Table 0-14. Member State-level aviation thresholds, 2024

Country	Tickets sold threshold (millions)	Monetary value threshold (in millions of EUR)
AT	3.51	419.09
BE	3.31	395.16
DK	3.65	436.05
ES	31.76	3793.07
FI	2.00	239.10
FR	20.58	2458.53
DE	23.01	2747.83
EL	7.96	951.29
IE	4.32	516.44
IT	22.09	2638.22
NL	8.22	981.28
PT	7.08	845.82
SE	3.42	408.15
BG	1.04	123.80
CY	1.28	152.91
CZ	1.86	222.62
EE	0.29	34.17
HU	1.77	211.66
LV	0.65	77.43
LT	0.65	77.52
MT	0.76	91.03
PL	5.93	708.01

Country	Tickets sold threshold (millions)	Monetary value threshold (in millions of EUR)
RO	2.31	276.39
SI	0.16	18.77
SK	0.29	35.19
LU	0.36	42.69
HR	1.19	141.63

Source: Consortium analysis based on update of PWC, TIS and Steer (2023), Impact assessment support study

11.3.2.6 MDMS platform-level aviation market thresholds

In addition to the total EU27 aviation market thresholds presented above, a platform-specific threshold was also defined:

- B2C MDMS (OTA) threshold: 10% of the EU27 OTA market

No MS-level threshold was defined for OTAs, as this market is inherently cross-border and multi-country in scope.

The EU27 thresholds were calculated by applying the 10% screening criterion to the estimated 2024 transaction volumes within each relevant distribution segment. A ticket-based threshold was derived from the total number of air tickets attributed to OTA-mediated sales. The monetary value threshold was estimated by multiplying the corresponding ticket volumes by the average ticket price established in Section 3.2.4[193].

Table 15. B2C MDMS (OTA) EU27-level aviation threshold (2024)

Indicator	Threshold
Tickets sold (millions)	9.6
Monetary value (millions of EUR)	1 149.57

Source: Consortium analysis based on data gathered during the stakeholder consultation stage and update of PWC, TIS and Steer (2023), Impact assessment support study

Table 16

[193] Full calculations are available in the accompanying excel file.

11.3.2.7 Overview of ticket distribution per MDMS channel

Looking at **long distance trips**, the "online" [194, 195] penetration of **air trips** in 2019 was estimated to be about 55% of the total market value[196] in Europe[197], making the air sector the most mature online travel market in Europe (Phocuswright, 2019). The "on-line" penetration of air trips is generally lower for full-service carriers (FSCs) (estimated at 40% in 2017) and higher for low-cost carriers (LCC) (estimated at 89% in 2017) (Phocuswright, 2016).

Pure LCCs (e.g. UK's easyJet and Ireland's Ryanair) account for a significant share of transactions, which occur via their websites' channels.

Given LCCs' effectiveness in attracting online direct bookings, and the fact that some large players have shifted part of the ticket sales to their direct channels (e.g., Lufthansa, Air France, KLM, British Airways, SAS), an increasing share of **airline tickets are sold via direct supplier and not by B2C intermediaries** (i.e. online independent platforms including Online Travel Agencies (OTAs) and tour operators, including their respective mobile channels).

Data gathered through the stakeholder consultation stages of this study enabled the collection of new information on air transport operators' ticket-selling and distribution practices, specifically, the proportion of tickets sold through different channels. This data was collected from a sample of three major airline groups, two regional airlines, a large low-cost carrier and a leisure airline, which together accounted for approximately 41% of all Intra-EU and EU27national air tickets sold in 2024[198].

Error! Reference source not found. presents an overview of air ticket distribution per channel in 2019 and 2024 based on the sample described above and extrapolated to the EU27. From this data, three main trends emerge. The first is that the share of direct sales increased from approximately 242 million tickets (46.9%) in 2019 to 272 million tickets (50.9%) in 2024. Second, sales via CRS decreased from approximately 155 million (30.1%) to 118 million (22.0%). The third trend is the increase in NCA (non-CRS) sales from 26 million (5.0%) to 49 million (9.1%). B2C MDMS[199], split into direct distribution agreements (DDA) (13%) and webscraping (5%)[200], remained

[194] To cope with the already mentioned data issues, the analysis of long-distance transport was approached by considering industry data on the penetration of 'on-line' tickets.

[195] 'Online' refers to trips sold on-line via supplier websites, OTAs and tour operators (including their respective mobile channels). Trips sold via corporate online booking systems such as KDS and Amadeus e-Travel are excluded from the 'online' figures.

[196] Projections from Phocuswright's 'Europe Online Travel Overview 2019': €120 billion in gross bookings (total transaction value of the products sold via suppliers both online and offline) in 2019 in 14 EU Member States (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden) plus U.K., Switzerland and Norway. Online gross bookings include sales that are transacted via supplier websites, OTAs and tour operators (including their respective mobile channels). Corporate online booking systems such as KDS and Amadeus e-Travel are excluded from the online figures.

[197] Although not all EU Member States are covered, the share of on-line penetration can be considered representative for the whole EU27 as it takes into account the most relevant markets.

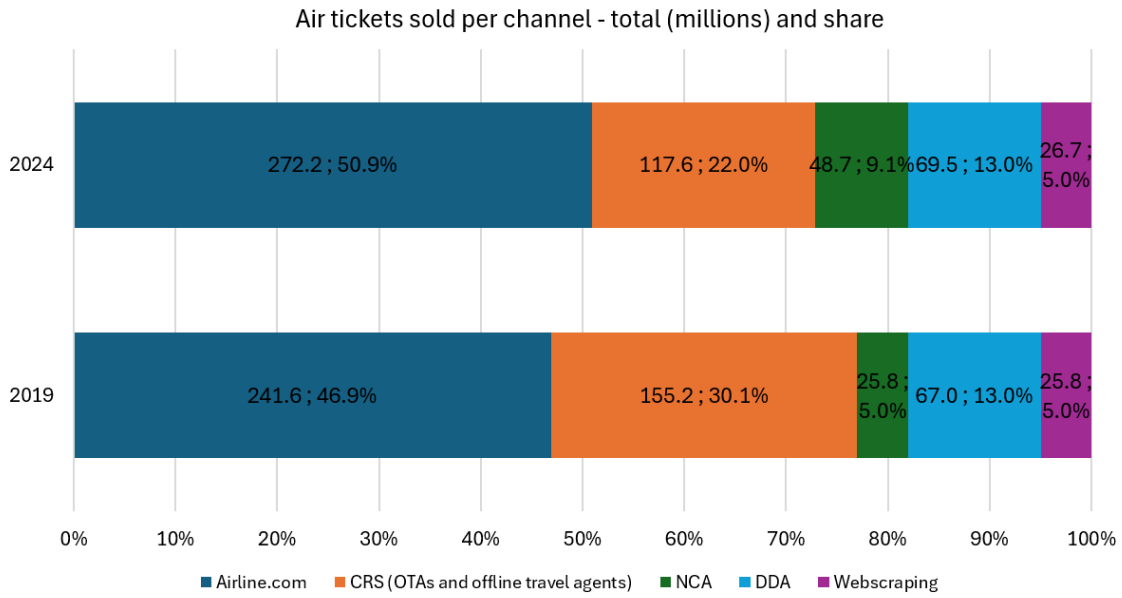
[198] The sample comprises three major airline groups, each operating a low-cost carrier, in addition to one independent large low-cost carrier. Group-affiliated low-cost carriers are included in the sample but typically employ different distribution models from those of independent low-cost carriers.

[199] 18% total B2C MDMS (including both DDA and webscraping) is based on the approved figure from the previous MDMS IA.

[200] This estimate was based on the 2024 A4E *Study on the impact of online intermediaries on consumers and carriers*. Syntesia.

steady, though this equates to small increase in overall sales – from 67 to nearly 70 million DDA sales and 26 to 27 million webscraping sales – due the growth in the market[201,202].

Figure 14: Air tickets sold per channel – total in millions and as a percentage share



Source: Consortium analysis based on data gathered during the stakeholder consultation stage and update of PWC, TIS and Steer (2023), Impact assessment support study

While the dataset distinguishes channels on the basis of CRS versus NCA/non-CRS, rather than online versus offline, the resulting trends point in the same direction as broader market evidence. These findings are consistent with broader shifts observed across the European travel market. A recent industry report prepared for a global OTA leader indicates a general decline in offline channel reliance and a projected growth in online travel penetration in Europe[203]. However, the reliance on offline channels, including traditional travel agencies, varies significantly by country within Europe. For instance, in 2021, offline bookings still represented 52% of total gross bookings in France. Similarly, traditional travel agencies remain important in Germany, Spain and France where brick-and-mortar retail agencies are common outside major cities. Italy, on the other hand, saw its offline gross bookings fall below half of total bookings for the first time in 2021. Taken together, this suggests that although the sample used in this report is structured differently, the patterns observed in CRS and non-CRS sales are aligned with the broader market shift towards

[201] Note: stakeholders were not asked to distinguish between online and offline sales. The categories were based on either CRS or non-CRS sales and include both OTAs and offline travel agents.

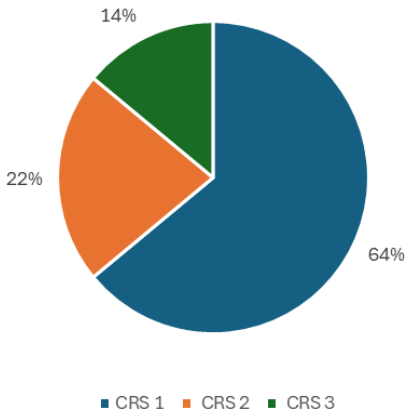
[202] Direct sales are based on data reported by the airline sample and extrapolated to the EU27. However, the airlines' booking systems do not always distinguish between pure direct sales and those originating via OTA clickthroughs, which may lead to a slight overestimatation.

[203] The external industry report covers the entire European travel market, encompassing various segments such as air, accommodation, car hire and rail. While the specific data points refer to the aggregated market, it is reasonable to assume that the general trends in online vs. offline distribution would largely parallel those observed specifically in the air sector.

online channels, while country-specific purchasing habits and market structures continue to shape the relative importance of offline sales.

Despite the overall decline of tickets booked via CRS from 2019 to 2024, the market in the EU27 remains highly concentrated among three major global providers. In 2024, CRS 1 accounted for approximately 64% of all CRS-based air ticket sales in the region (see **Error! Reference source not found.**)[204]. CRS 2, while globally the second-largest provider with approximately 25-30% global market share, has a smaller footprint in Europe[205]. Financial reporting indicating that only about 16–17% of its global bookings originate from the Europe, the Middle East and Africa (EMEA) region[206]. Based on this and its overall global position, CRS 2 is estimated to hold around 20–22% of the EU27 market. The remaining 12–16% is attributed to CRS 3, the smallest of the three globally, which also has the most limited presence in the European market. This estimated breakdown is consistent with available market data and historical patterns in CRS usage across the region[207].

Figure 15: Approximate CRS market share in Europe in 2024



Source: Consortium analysis based on data gathered during the stakeholder consultation stage

Further data gathered from a small sample of OTAs provide insight into how their ticket sales revenues are distributed between CRSs and other channels for EU27 flights (**Error! Reference source not found.**). The values presented indicated are an average of the revenues between the periods of 2019 to 2024.

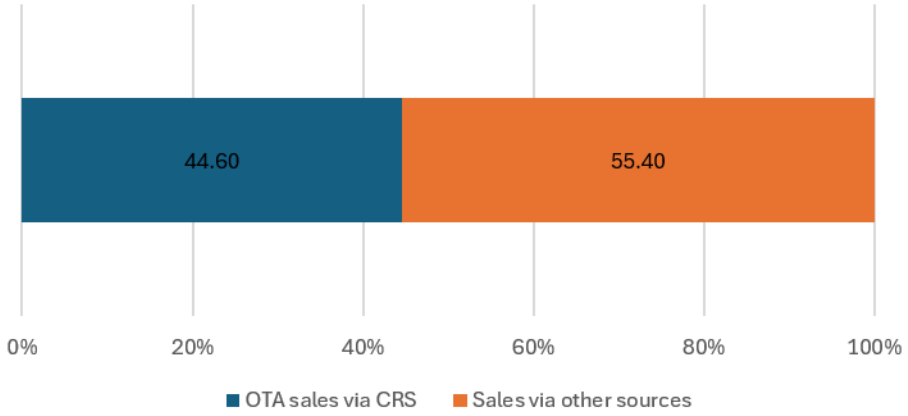
[204] From stakeholder data.

[205] Future Market Insights. GDS Market Outlook Report, 2024. https://www.futuremarketinsights.com/reports/gds-technology-sector-outlook.

[206] "CRS 2" 2023 Annual Report.

[207] Other, smaller CRS providers do exist in the European market; however, they have been excluded from this analysis due to their limited market presence and the unavailability of reliable, disaggregated data on their ticket volumes or market shares.

Figure 0-16: Average OTA percentage of the total revenue per air ticket distributing channel between 2019 and 2024[208,209].



Source: Consortium analysis based on data gathered during the stakeholder consultation stage

The data in **Error! Reference source not found.** outlines the tickets sold by OTAs via CRS account for an estimated 45% of sales revenue, while sales via non-CRS TMCs account for approximately 1.5% of total OTA revenues.

The values presented in **Error! Reference source not found.** represent average revenue shares across the period 2019 to 2024. Although the relative importance of individual distribution channels varied over time, the data indicate a broader trend towards the growing importance of ticket sales via sources other than CRSs. Conversely, the contribution of CRS-based sales to OTA revenues appears to have declined over the same period but to still account for almost half of the market showing their continuous relevance in the market. Taken together, these findings suggest a gradual shift in OTA business models towards greater reliance on alternative sourcing and distribution arrangements outside traditional CRS-based agreements.

11.3.2.8 New Distribution Capability and emerging B2B distribution models

An important structural development associated with the observed shift away from CRS-based ticket distribution is the increasing adoption of New Distribution Capability (NDC). NDC is a digital data exchange standard based on application programming interfaces (APIs), developed by the International Air Transport Association (IATA), which allows airline offers to be distributed using a common technical framework. Compared with the legacy EDIFACT standards traditionally used by global distribution systems (GDS), NDC is better suited to supporting more granular and dynamic airline content. Through NDC, booking platforms and other B2B distributors can connect directly to

[208] Data gathered through stakeholder consultation (data collection questionnaires) and assessed from a small sample of OTA platforms.

[209] Note: In accordance with the data request template, the information reflects a 5-year average for 2019-2024, rather than year-over-year figures or trends.

an airline's inventory systems and access content in near real time, without necessarily relying on traditional CRS infrastructure.

The development of NDC has been accompanied by the emergence of a growing number of B2B content aggregators and consolidators, which collect airline content and distribute it to travel agencies using NDC-based or API-driven connections. A recent study suggests that the number of such aggregators has expanded significantly in recent years to over 75[210]. Some airlines, notably low-cost carriers, also use proprietary APIs outside the NDC standard to connect directly with aggregators and distributors.

CRSs remain important actors in the B2B distribution landscape and continue to play a central role for many travel agencies and corporate travel buyers. In response to the broader adoption of NDC, several CRSs have expanded their activities to include NDC content aggregation alongside traditional EDIFACT-based services. At the same time, the continued reliance of airline back-end passenger service systems on legacy technologies remains widespread, which can limit the extent to which NDC functionalities are fully implemented in practice. Overall, NDC is a relevant factor in the expansion of non-CRS distribution channels observed in the EU27 market, alongside other technological and commercial developments in airline distribution.

11.3.2.9 Overview of the MSE market

While the preceding analysis and figures provide a comprehensive breakdown of air ticket sales through direct, OTA and TMC channels, as well as offline/online and CRS/non-CRS, it is important to acknowledge a key player not directly captured by these categories: metasearch engines (MSEs). MSEs do not process bookings themselves or handle payments. Instead, they act as aggregators that display flight prices and availability across multiple suppliers, then redirect users to an airline's or OTA's website to complete the booking. Because of this redirect-based model, MSEs are not considered a distinct sales channel in traditional accounting, but they do play a significant role in shaping consumer purchase paths and generating traffic to both direct and third-party booking platforms.

However, tracking MSE influence is complex. Airlines report that, due to evolving cookie consent policies and browser privacy settings, an estimated 40% of MSE referral traffic is now untraceable, making it difficult to quantify the exact share of final bookings driven by MSEs. Additionally, visibility varies depending on an airline's internal analytics tools and reliance on intermediaries.

Despite these challenges, traffic-based estimates were received through the stakeholder consultation process. A sample of airline operators[211] indicated that a substantial share of their direct website bookings originates from MSE referrals (clickthroughs). Based on these inputs, Figure 0-17 presents a rough estimate of the portion of total airline ticket sales in the EU27 that are driven by MSE traffic. The sample of airlines estimated that MSEs drove a constant 15% of total ticket sales from 2019–2024. Within this 15%[212], however, the destination of the MSE-driven traffic shifted. The share of tickets where the MSE redirected the user to the airline's own website grew from 10% to 11.3% of total sales over the period. In other words, MSEs' overall contribution to ticket

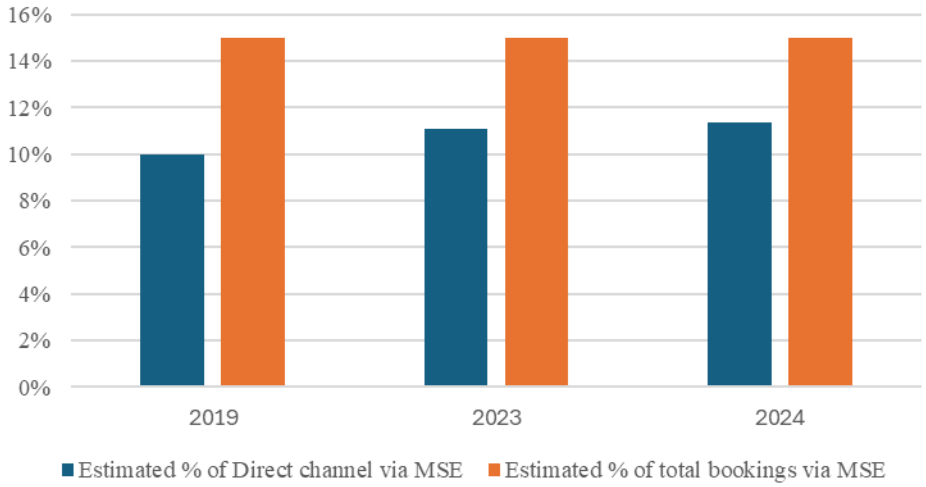
[210] *A4E Study on the impact of online intermediaries on consumers and carriers, Final Report*. September 2024. Prepared by Synthesia Policy & Economics. https://a4e.eu/wp-content/uploads/A4E-intermediaries-study_FINAL-02.pdf

[211] Note: Data provided by a sample of airlines from one airline group with a mix of legacy, regional and a low-cost carrier. Figures are subject to tracking limitations and should be interpreted as indicative only.

[212] This 15% figure is an estimation by the airline group and is not directly supported by traceable booking data due to the aforementioned tracking limitations.

sales held steady, but an increasing proportion of that traffic was captured by airlines' direct channels rather than by OTAs.

Figure 0-17: Estimated share of airline ticket sales originating via MSE referral (EU27, 2024)



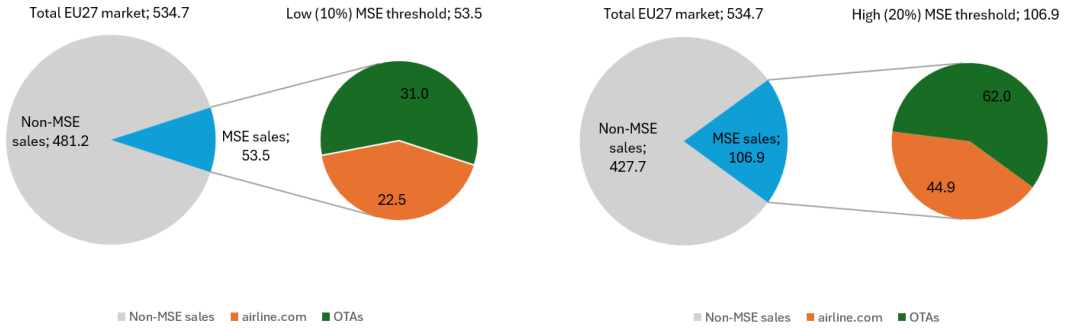
Source: Consortium analysis based on data gathered during the stakeholder consultation stage

While Figure 0-17 reflects the specific experience of an airline group regarding finalised bookings, **Error! Reference source not found.** provides a broader market view based on MSE redirection traffic.

Building on these inputs, it is possible to estimate the scale of air ticket sales originating from an MSE. In 2024, an estimated 534.7 million air tickets were sold in the EU27. To account for data scarcity and the inherent tracking limitations of clickthroughs, a sensitivity range is utilised. Based on an industry benchmark[213], and validated by the specific carrier estimate of 15% seen in the figure above, it is estimated that between 10% (low threshold) and 20% (high threshold) of total sales originate from an MSE.

[213] High and low threshold percentages come from A4E Study on the impact of online intermediaries on consumers and carriers. This was confirmed by a large carrier group that estimated that 15% of total bookings were via on MSE in 2024.

Figure 18. Estimated air tickets sold via MSE redirects in the EU in 2024 (in millions)



Source: Consortium analysis based on data gathered during the stakeholder consultation stage and update of PWC, TIS and Steer (2023), Impact assessment support study

This corresponds to between 53.5 million (10% scenario) and 106.9 million (20% scenario) air tickets in 2024 (**Error! Reference source not found.**). Applying the stakeholder-reported central estimate of 15%, approximately 80.2 million air tickets in 2024 can be considered as originating from MSE referrals.

Of these, an estimated 42% were redirected to airline.com channels and 58% to OTA channels[214]. Under the 15% central estimate, this equates to approximately 33.7 million tickets redirected to airline.com channels and 46.5 million tickets redirected to OTA channels.

For comparison, in the low threshold scenario this equates to approximately 22.5 million tickets sold via direct channels (airline.com) redirected from MSEs and 31.0 million tickets being sold via OTAs redirected from MSEs. In the high threshold scenario, they are 44.9 million and 62.0 million, respectively.

While the carrier data (Figure 0-17) may show a higher share of direct conversions from MSEs, aggregate data from major MSEs indicates that 42% of total redirects are to airline.com channels, compared to 58% to OTA channels. This variance suggests a distinction between initial consumer redirection (clickthroughs) and the final point of purchase, as well as the specific profile of the airline group sampled. Given these differences in reporting perspectives and the limited availability of primary data, these estimates should be viewed as indicative of market scale rather than absolute values.

Further, the values in Figure 18 that they rely on traffic-derived scaling assumptions and not on verifiable sales records. It is also important to note that the number of ticket sales attributed to MSE referrals likely understates their true scale, as many consumers use MSEs primarily for initial price discovery before completing their purchase through airline websites or other channels, meaning that MSE influence on consumer decision-making extends well beyond the bookings that can be directly traced back to them.

Looking at individual MSEs, website domain traffic estimates suggest that the MSE landscape in Europe is fragmented. Using traffic data across six major EU markets (Germany, France, Italy, Spain, the Netherlands and Poland), two large players emerge alongside three additional MSEs with smaller but still material visibility.

[214] Based on large MSE whitepaper that estimate of 42% of clickthrough traffic going to airline.com and 58% going to OTA.com.

Based on the domain traffic presented, three MSEs account for 10% or more of EU traffic. However, traffic does not necessarily equate to ticket sales, as mentioned above, so caution should be taken if applying a threshold based on tickets sold. Additionally, these percentages per MSE come from a single source[215] and were given in graphic format. Only a limited number of domains are labelled with traffic shares, while others - including some with sizeable market shares - are left unnamed. For instance, the graphic shows domains with approximately 15% and 13.5% traffic shares, as well as more than five domains each representing 5–10% of traffic, none of which are identified. This means that potentially larger players are not represented.

Additional considerations highlight the complexity of MSE-driven traffic. Travellers commonly consult several MSEs, OTAs and airline sites before booking, reflecting "multi-homing" behaviour[216]. Moreover, technological shifts are rapidly influencing the distribution landscape. AI-powered platforms now allow consumers to query flight information and prices directly, potentially bypassing traditional MSEs[217]. While no data currently quantify this impact, it is important to note that AI is emerging as an additional intermediary in air ticket distribution.

11.3.2.10 Overview of the OTA market

Further insights were obtained directly from one MSE, which shared its Q1 2025 redirect traffic distribution for air travel searches in the EMEA region (see **Error! Reference source not found.**). Of this traffic, 42% of users were redirected to an airline's direct booking websites (i.e. Airline.com). The remaining 58% of the traffic was redirected to almost 300 different OTAs. Among these, two OTAs alone received 14% and 11% of the total redirect volume. Ten OTAs in total received at least 1% of redirect volume. The remaining OTA traffic, approximately 8%, was spread across nearly 290 different OTAs.

Table 17: Distribution of OTA redirect traffic from one metasearch engine (Q1 2025, EMEA Region)[218]

Redirect traffic distribution	Percentage share EU27 market
Airline.com	42%
OTAs	58%
of which	
OTA1	*14%*
OTA2	*11%*
OTA3	*9%*
OTA4	*5%*
OTA5	*4%*

[215] Large MSE whitepaper

[216] Multi-homing is when travellers frequently consult multiple MSEs, OTAs, and airline sites before booking, preventing any single platform from fully capturing traffic or sales.

[217] New AI services allow users to query flight information and prices directly, potentially bypassing MSEs and altering traditional distribution patterns; no verifiable data yet exists for market share.

[218] Data supplied by an MSE under an NDA.

Redirect traffic distribution	Percentage share EU27 market
OTA6	*3%*
OTA7	*2%*
OTA8	*1%*
OTA9	*1%*
OTA10	*1%*
Other OTAs	*8%*

Source: Consortium analysis based on data gathered during the stakeholder consultation stage

It is important to stress that a redirect from an MSE to a supplier website does not guarantee a completed booking, but it is widely accepted within the industry that this form of referral traffic strongly correlates with sales outcomes.

Additionally, a MSE provided trend data on search engine optimisation (SEO) share of market for six key EU27 markets (Germany, France, Italy, Spain, the Netherlands, and Poland) from January 2024 to March 2025. During this period, there was a shift in organic traffic share. Airlines' direct, organic traffic grew, while the organic traffic share for both MSEs and OTAs experienced a decline. This suggests a potential trend towards consumers increasingly seeking out and booking directly with airlines.

These observed trends are further supported by broader industry evidence. A report prepared for a global OTA, while covering the wider travel market beyond air transport, indicates a continued increase in online penetration across the European travel sector, projected to reach 64% by 2025, up from 55% in 2021. This points to the sustained importance of online channels, including both direct supplier websites and intermediaries.

While the report notes that direct bookings constitute the largest portion of the online market, their analysis also reveals a nuanced role of OTAs depending on the country specific market. The report highlights that the share of bookings captured by OTAs can vary significantly by country. In France, where one major domestic supplier dominates each travel segment, the share of gross OTA bookings was estimated at only 25% in 2021. This suggests a stronger preference or established presence for direct bookings within the French market. Conversely, in Spain, OTAs represented a projected 44% of online gross bookings in 2021, despite a general shift towards suppliers during the pandemic. While 2021 may not be fully representative of the current market, as air traffic had not yet recovered to pre-pandemic levels, these examples underscore the competitive landscape and the non-uniform market structures and consumer behaviours across the EU27.

Although OTAs collectively accounted for a larger share of MSE redirects than airline websites, no single OTA dominated the space. The top five OTAs together received 43% of redirect traffic, highlighting that the OTA landscape in air travel remains highly fragmented[219]. Airlines' growing share of SEO-driven traffic further reflects a trend toward disintermediation, with more users choosing to book directly rather than via third-party sellers.

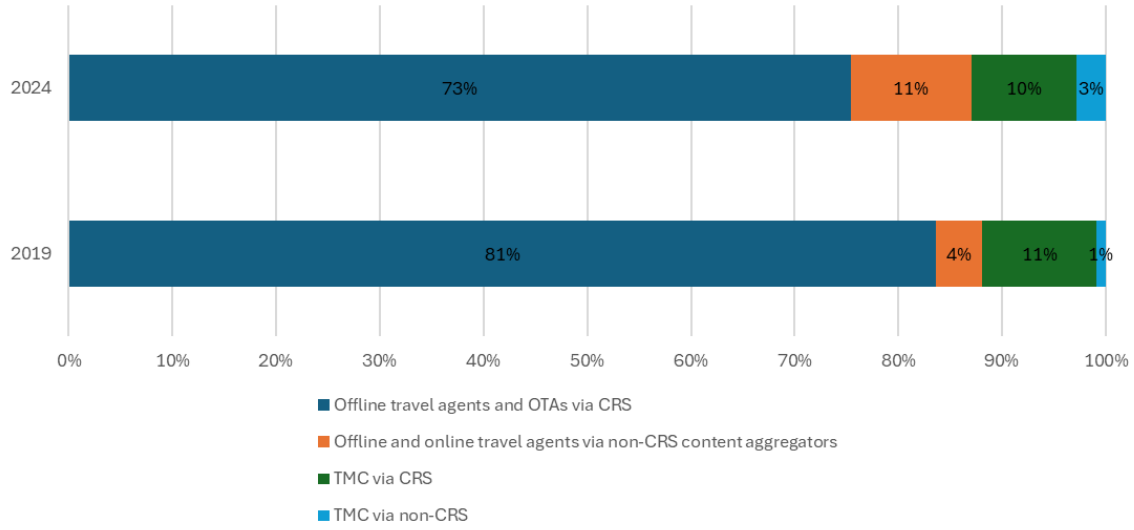
[219] Additionally, broader industry data on gross bookings shows that a significant share of OTA revenue is derived from non-air segments such as accommodation and car hire. As such, their market position within the air ticketing domain is likely more limited than topline booking figures might suggest.

While the redirect data alone does not provide a definitive picture of total market share in terms of ticket sales, it can be used to provide a reasonable estimation. Based on the assumption that a redirect strongly correlates with sales outcomes, and utilising additional verifiable data, it is possible to project whether any individual OTA might approach or exceed a significant market share threshold of 10%. During the stakeholder consultation, one of the OTAs (OTA4) provided its total ticket sales, which allowed us to create a scaling factor to estimate the sales of other OTAs. This data suggests the OTA1 and OTA2, and possibly OTA3, could potentially be captured by a 10% threshold of OTA market share. However, if the threshold was set at 10% of the total EU27 air tickets sold, no OTA is expected to be captured. It is important to note that these are estimates based on traffic data and a scaling assumption and are not directly verifiable sales figures.

Beyond the analysis of sales volumes, market shares and MSEs, it is also useful to examine the strategic choices airlines make in their distribution. This involves understanding the breadth of different types of ticket selling channels they employ, which reflects their commercial strategies and degree of intermediary reliance. **Error! Reference source not found.** presents the average percentage of ticket selling channels used by a sample of air carriers in 2019 and 2024, based on data collected during the stakeholder consultation.

The data show a continued heavy reliance on CRS-connected channels, which made up nearly 81% of all ticket selling channels in 2019, falling modestly to 73% in 2024. Notably, the diversification towards non-CRS content aggregators (including both offline and online OTAs) more than doubled over the same period, growing from 4% to 11% of total distribution channels used. This expansion into non-CRS channels often signifies airlines' efforts to gain greater control over content distribution, potentially reduce CRS fees for certain fare types, and adapt to evolving online booking behaviours.

Figure 19: Distribution of ticket selling channels used by sampled airlines (2019 vs. 2024)



Source: Consortium analysis based on data gathered during the stakeholder consultation stage

It is important to underline that this analysis does not represent the share of ticket sales, but rather the number of individual channels employed within each distribution category. A channel type that is widely used (e.g. many agencies of a certain kind) may still contribute relatively little to total

bookings if each individual channel yields low volume. **Error! Reference source not found.** therefore highlights distribution breadth and strategic channel diversification, rather than sales dominance.

This channel diversification is likely a symptom of a competitive market, where airlines are now able to more easily choose and execute their commercial strategies. Despite this growing ability to diversify, stakeholders confirmed that CRSs remain important for both airlines and MDMS platforms, including OTAs and MSEs, who continue to rely on them for their content. Therefore, the expansion into new channels represents a positive development, allowing airlines greater flexibility while coexisting with the ongoing importance of CRSs in the broader distribution landscape.

11.3.2.11 Number of subscribers/users and turnover per MDMS platform

Research conducted for this Market Report, encompassing both expert interviews and responses to data template requests, consistently highlighted the absence of a standardised definition for an "MDMS user". Such ambiguity renders exact measurement of this metric nearly impracticable. In fact, no operator or MDMS platform was able to provide an estimate for this data parameter. The complexity arises from several factors:

- Diverse user interactions: A single user's engagement with an MDMS platform can involve multiple "search call-ups" and intricate backend interactions before a booking is finalised. It is unclear whether a user is defined by simply visiting the site, performing a search, or completing a ticket purchase.
- Varying data acquisition methods: MDMS platforms acquire data through a variety of channels, including New Distribution Capability (NDC) connections, CRS, CRS systems augmented with NDC capabilities, other data aggregation services or even web-scraping. The nature of these data flows further complicates the identification and counting of unique users.

Due to the lack of a clear, industry-wide definition of an MDMS user, it has not been possible to deliver a reliable estimate of the number of subscribers/users and corresponding turnover per month for individual MDMS platforms. This limitation precludes a full quantitative assessment of this indicator in this report.

While the report notes that direct bookings constitute the largest portion of the online market, their analysis also reveals a nuanced role of OTAs depending on the country specific market. The report highlights that the share of bookings captured by OTAs can vary significantly by country. In France, where one major domestic supplier dominates each travel segment, the share of gross OTA bookings was estimated at only 25% in 2021. This suggests a stronger preference or established presence for direct bookings within the French market. Conversely, in Spain, OTAs represented a projected 44% of online gross bookings in 2021, despite a general shift towards suppliers during the pandemic. While 2021 may not be fully representative of the current market, as air traffic had not yet recovered to pre-pandemic levels, these examples underscore the competitive landscape and the non-uniform market structures and consumer behaviours across the EU27.

11.3.2.12 Incentives provided by CRS to travel agents

Analysis of the limited data obtained from a small sample of MDMS platforms within this market exercise provides preliminary insights into the incentive structures offered by CRS to travel agents.

Based on this sample, it is estimated that CRS providers offer incentives ranging from EUR 2 to EUR 3 per segment, with the potential to reach up to EUR 4 per segment. These variations are primarily contingent on factors such as the size, market potential, and strategic importance of the individual travel agency.

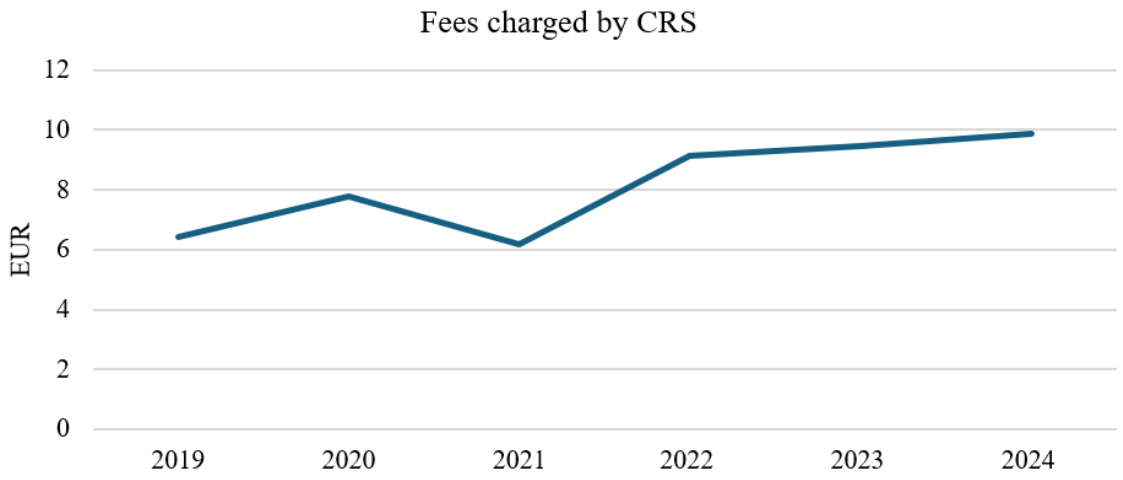
While these figures offer an initial quantitative understanding of the incentive landscape, it is important to note the small sample size from the data request process. Consequently, these estimates should be considered directional, highlighting the general range of incentives rather than providing a definitive, universally applicable analysis.

11.3.2.13 MDMS fees and their impact on final ticket prices

The various fees imposed across the air ticket distribution chain play a crucial role in the economics of the air transport and mobility sectors. These fees are often tied to the use of integrated technological platforms and data aggregation services provided by MDMS, including both CRS and OTAs, among many others. As the industry continues to evolve, understanding the structure and impact of these fees is crucial for navigating the competitive landscape within these sectors.

Beyond the revenue distribution insights from OTAs and the incentives provided by CRSs to travel agents, it is essential to examine the direct fees charged by CRSs to air transport operators. It was also possible to gather information from a small sample of transport operators on the average fees charged by CRSs to air transport operators over the period of 2019 to 2024 (Figure 26). Overall, the average fees levied by CRSs across the sample were around EUR 8 per flight segment between 2019 and 2024, with the fees charged increasing over this period.

Figure 26: Average fees charged by CRS to transport operators, per flight segment[220]



Source: Consortium analysis based on data gathered during the stakeholder consultation stage

[220] 2023 prices

The trend in average CRS fees charged to air transport operators reflects dynamic market conditions, including potential effects of the COVID-19 pandemic between 2019 and 2021, which introduced some instability with both rises and reductions. Nevertheless, a growth trend can be observed with the average fees charged increasing from EUR 6.44 in 2019 to EUR 9.87 in 2024, which represents a 53% increase.

Assessing the precise quantitative impact of various fees on the final ticket price presents a significant challenge, as neither operators nor MDMS platforms (B2B or B2C) provided exact figures in terms of absolute change in values in Euro or percentage impact.

However, the qualitative information gathered through data templates offers valuable insights. Operators consistently cited CRS and OTA fees as a factor contributing to increased final ticket prices. They stated that the operational framework of MDMS inherently incorporates a cost layer that ultimately impacts the final ticket price. This is because, to maintain their services and achieve profitability, these entities necessarily include a margin that contributes to the overall pricing structure. This perception is a key driver behind operators' ongoing efforts to expand their NDC capabilities, aiming for more direct and cost-efficient distribution channels. Concurrently, MDMS platforms noted that costs associated with obtaining and managing data also lead to an increase in final ticket prices. Regardless of the specific source, both parties identified various fees as a contributing factor to elevated ticket prices.

It is also important to consider the indirect impact MFN (most-favoured-nation) clauses often found in airline-CRS contracts. These clauses can indirectly push up ticket prices in non-CRS channels like direct airline websites or NDC connections by requiring airlines to offer fares via CRSs that are no higher than those offered through other channels. This can limit an airline's flexibility to offer lower prices through its direct channels, thereby maintaining a higher price floor across the market.

Furthermore, many airlines apply CRS distribution surcharges to tickets booked through traditional CRS channels. These surcharges are specifically designed to recoup the booking fees charged by CRSs to the airlines themselves. The result is that consumers see a higher ticket price for bookings via CRS-intermediated channels, rather than the cost of CRS booking fees being spread across all air tickets which was the case previously.

Regarding fees charged by OTAs to travel agents, the data indicates a nuanced market structure. Some respondents reported that no direct fees are charged, beyond a "search cost" model (where costs are incurred per query rather than per booking). Conversely, a specific travel agency reported monthly fees ranging from EUR 2 to EUR 45, suggesting the presence of multiple fee structures in the market. This includes models where OTAs levy predetermined fees on travel agents, as well as those where travel agents bear the cost of individual searches.

11.3.2.14 Data gaps and challenges

The table below summarises the variables covered in the study, indicating where data were collected directly, estimated or assessed using qualitative evidence.

Table 0-18. Data gaps for the aviation sector

Indicator	Final status
Total number of air passengers at EU27	Data gathered and reported
Total number of air passengers, broken down by PSO and commercial services	Data gathered and reported

Indicator	Final status
Total number of air passengers by long-distance and short-distance services	Data gathered and reported for intra-EU flights, as requested
Total seat-kilometres at EU27	Data gathered and reported
Total seat-kilometres, broken down by PSO and commercial services	Data gathered and reported
Total number of air carriers offering passenger air services	Data gathered and reported
Market share of air carriers in the passenger air services market	Data gathered for the largest air carriers and presented
Number of air tickets sold/distributed annually	Data gathered and reported
Monetary value of air tickets sold/distributed annually	Data gathered and reported
Percentage of tickets sold/distributed online vs offline	No direct online/offline split; analysis based on channel typology with limited qualitative evidence.
Percentage of tickets sold/distributed via CRS	Data gathered and reported
Percentage of tickets sold/distributed via new content aggregators	Limited quantitative data; assessment is mainly qualitative.
Percentage of tickets sold/distributed via direct connect systems	Very limited quantitative data
Percentage of tickets sold/distributed via Meta Search Engines	Data gathered and reported
Percentage of tickets sold/distributed via Travel Management Companies	Data gathered and reported
Percentage of tickets sold/distributed via Online Travel Agents	Data gathered and reported
Estimation of tickets sold through direct (proprietary) channels	Data gathered and reported
Number of MDMS selling air tickets	Data gathered and presented in the main report
Market share of each MDMS in the air ticket distribution market	Data on the largest MDMS platforms selling air tickets has been gathered and reported
Number of transport operators whose tickets are sold by each MDMS	No data received from stakeholder consultation
Identification of all relevant market actors (CRS, aggregators, direct connect systems, Meta Search Engines, TMCs, OTAs)	Data gathered and reported
Number of air trips booked via MDMS (B2B and B2C, including Meta Search Engines)	Data gathered and reported
Per MDMS: number of subscribers/users per month	No data received from stakeholder consultation
Per MDMS: turnover	No data received from stakeholder consultation
Fees applied by MDMS for intermediary and distribution services	Limited data from stakeholder consultation; all received data reported.
Fees applied by CRS to transport operators (e.g. booking fees)	Limited data from stakeholder consultation; all received data reported.
Fees applied by CRS to travel agents (service fees)	Limited data from stakeholder consultation; all received data reported.
Incentives provided by CRS to travel agents	Limited data from stakeholder consultation; all received data reported.

Indicator	Final status
Impact of MDMS and CRS fees on final ticket prices	Limited data from stakeholder consultation; all received data reported.
Evidence on other commercial distribution practices (e.g. look-to-book ratios)	Limited data from stakeholder consultation; all received data reported.

11.3.3 Bus and Coach Sector

The desk research into the necessary parameters for the bus and coach sector revealed a notable gap in the readily available information. The data compiled for this sector primarily originates from Eurostat and analyses conducted in previous studies[221,222, 223], as well as the information obtained from the data collection questionnaire. This study itself points out the limited data concerning bus and coach transport and passenger numbers, thus requiring a number of assumptions and proxy variables, which are discussed in the text.

11.3.3.1 Total bus and coach passengers discriminated by PSO and open access services

Data to quantify this parameter was obtained from the 2025 Statistical Pocketbook in Transport[224] and assessments conducted as part of a published Impact Assessment Support Study on Passenger Rights and the Fact-finding study on passenger rights in bus and coach transport. The dataset used for passenger activity at the EU-level is included in the dedicated excel file provided as an Annex.

Figure 0-20 shows modest growth in the number of passengers from 2015 to 2019, ranging from 3 302 million passengers transported to 3 345 million. Passenger volumes suffered sharp decline in 2020 due to the impact of the COVID-19 pandemic, reaching 2 390 million passengers. Although passenger numbers in 2023 and 2024 have grown, they still remained below pre-COVID figures, respectively representing 2 956 and 2 996 million passengers transported.

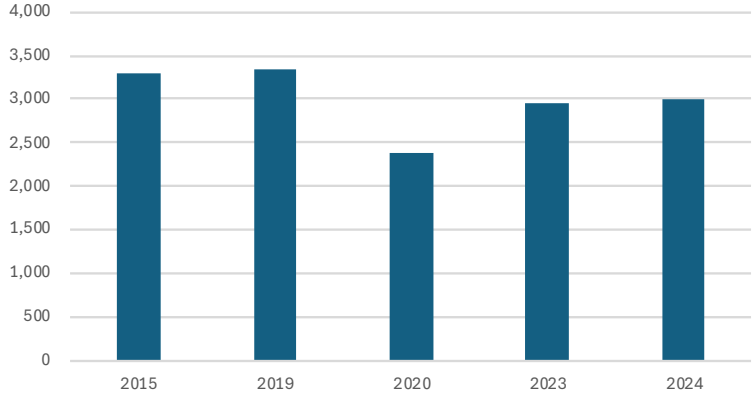
[221] European Commission: Directorate-General for Mobility and Transport, PwC, Steer and TIS, Fact-finding study on passenger rights in bus and coach transport – *Final report*, Publications Office of the European Union, 2025, https://data.europa.eu/doi/10.2832/6932147

[222] European Commission: Directorate-General for Mobility and Transport, PwC, Steer and TIS, *Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof – Final report*, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2832/13002

[223] European Commission: Directorate-General for Mobility and Transport, Oxford Research, Panteia, Tetra Tech and TIS, *Support study for an impact assessment for a possible revision of Regulation (EC) No 561/2006 on driving times, breaks and rest periods of road transport workers – Final report*, Publications Office of the European Union, 2023, https://data.europa.eu/doi/10.2832/69032

[224] Statistical Pocketbook 2025 – EU Transport in figures, https://transport.ec.europa.eu/facts-funding/studies-data/eu-transport-figures-statistical-pocketbook/statistical-pocketbook-2025_en

Figure 0-20: Total number of bus and coach passengers in the EU27 (2015-2024)



Source: Consortium analysis[225] based on data from the Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof, 2025 Statistical Pocketbook[226] and Eurostat [road_pa_mov]

Obtaining comprehensive and harmonised data at the EU level on total bus and coach passengers broken down by PSO status is not readily available. According to the Fact-Finding Study on Passenger Rights in Bus and Coach Transport[227], a significant challenge exists in identifying and quantifying bus and coach services operating under PSO arrangements.

This lack of disaggregated data stems from several interconnected issues. Firstly, there is no consistent mechanism across Member States for passengers to easily determine whether a bus or coach service operates under a PSO contract or on a purely commercial basis. While Article 7(1) of Regulation (EU) No 1370/2007 mandates Member States to publish a list of bus lines operated under PSO, a centralised EU-level platform linking these national lists is absent, and not all Member States appear to fully comply with this obligation. Furthermore, while Regulation (EC) No 1370/2007 requires competent authorities to publish an annual aggregated report on their public service obligations, this information is generally not detailed enough to provide a breakdown of passenger numbers and kilometres at the service level.

[225] 2015-2020 data retrieved from the Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof – Final report, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2832/13002 ; 2024 data updated based on growth rate in pkm of total passenger road transport retrieved from the 2025 European Statistical Pocketbook in Transport. Total bus and coach transport and passengers travelling in journeys above 250km assumed to grow at the same rate.

[226] 2025 Statistical Pocketbook in Transport (section 2.3.5), 2024 data retrieved from Eurostat [road_pa_mov], estimates for 2024 drawn considering the average CAGR of countries with existing data.

[227] European Commission: Directorate-General for Mobility and Transport, PwC, Steer and TIS, *Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof – Final report*, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2832/13002

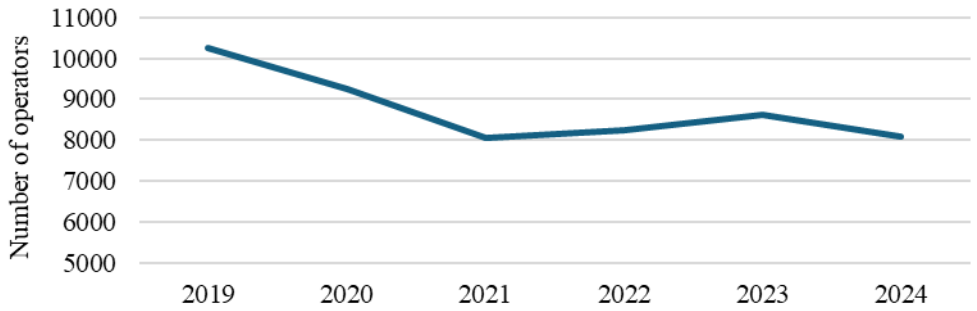
11.3.3.2 Number of enterprises offering bus and coach passenger service

No statistics on total number of bus and coach operators are available at the EU level, but a previous study[228] estimated the total number of bus and coach operators in the EU27 in 2019 to be 3,778. The methodology employed for these estimations utilised the number of Community licenses, which are a prerequisite for road passenger operators to operate freely within the intra-EU transport market. In 2019, it was recorded that 34,324 carriers held these Community licenses across the EU27, and it was estimated that 11% of bus and coach passengers undertake journeys equal to or exceeding 250km[229,230]. Furthermore, it is estimated that approximately 165 of these 3,778 operators are multimodal. The same study[231] found that approximately 85%, or 3,211 of 3,778 operators, were considered SMEs.

11.3.3.3 Market share of bus and coach operators

Information on the number of operators, and the associated frequency of services within the market are useful indicators to understand the potential market share dynamics of bus and coach operators. The data gathered from a small sample of National Statistics Offices shows the evolution in the number of bus and coach operators in the EU between 2019 and 2024 (Figure 0-21).

Figure 0-21: Number of bus and coach operators in the EU27 from 2019 to 2024



Source: Consortium analysis based on data gathered during the stakeholder consultation stage

The data in Figure 0-21 indicates some variability when it comes to the number of operators entering the bus and coach market. Despite the significant drop between 2019 and 2021, most likely due to the COVID-19 pandemic associated with the reduction in use of these services, the numbers show an increase of 7% in 2023 from 2021 values. Furthermore, this could be the result

[228] European Commission: Directorate-General for Mobility and Transport, PwC, Steer and TIS, *Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof – Final report*, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2832/13002

[229] The threshold of 250km is defined in Regulation (EU) No 2818/2011 on the Rights of Passengers Travelling by bus and coach as defining long-distance bus and coach services. The Regulation applies in its entirety only to regular services when the scheduled travel distance is 250 km or more and only limited rights apply to regular services where the scheduled distance of the service is shorter than 250 km (later referred to as '250 km threshold'). The Commission's proposal (https://www.europarl.europa.eu/RegData/docs_autres_institutions/commission_europeenne/com/2008/0817/COM_COM(2008)0817_EN.pdf) did not provide for the 250 km threshold which was introduced by other co-legislators, Council and European Parliament.

[230] Given the lack of precise data, it was assumed that the proportion of bus and coach operators providing long-distance services aligns with this passenger share. Consequently, by applying this 11% share to the total number of Community license holders, the estimated number of operators offering long-distance bus and coach services was calculated.

[231] European Commission: Directorate-General for Mobility and Transport, PwC, Steer and TIS, Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof – Final report, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2832/13002

of the increased competition not only within the sector but also among other modes of transport, which may result in some variability in these values.

11.3.3.4 Bus and coach tickets sold annually (online and offline) and their monetary value

Information on the annual volume of bus and coach tickets sold was primarily drawn from previous studies and updated to 2024[232,233]. Additional estimations and more recent data for this section were developed considering data available from the 2025 Statistical Pocketbook in Transport, Eurostat and the similarities observed between different markets and geographic areas[234].

Assuming that each passenger corresponds to a bus and coach ticket sold, the values in Figure 0-22 indicate the total number of passengers and the number of passengers travelling greater than or equal to 250km and excluding urban and suburban trips. On average, the number of passengers travelling long-distance bus and coach journeys (i.e. above 250km) have remained approximately stable in 2015-2024. In 2015, 372 million passengers travelled in journeys above 250km, having slightly reduced to 369 million in 2019 and sharply reducing to 259 million as a result of the COVID-19 pandemic. In 2023, passengers in long-distance bus and coach journeys rose to 326 million, having almost reached pre-pandemic levels in 2024, with a total of 331 million passengers.

Figure 0-22: Total number of passengers and passengers travelling greater than 250km in bus and coach transport in the EU27 (2015-2024)



Source: Consortium analysis based on data gathered for a past study and updated with recent data from the 2025 Statistical Pocketbook and Eurostat [road_pa_mov][235]

[232] European Commission: Directorate-General for Mobility and Transport and Steer, *Study on the EU Regulatory Framework for Passenger Rights. Part B, Evaluation of Regulation (EU) No 181/2011 on the rights of passengers travelling by bus and coach – Final report*, Publications Office of the European Union, 2021, https://data.europa.eu/doi/10.2832/486038

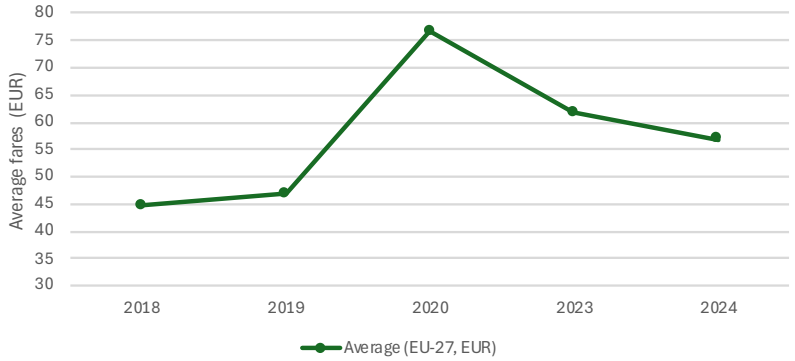
[233] European Commission: Directorate-General for Mobility and Transport, PwC, Steer and TIS, *Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof – Final report*, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2832/13002

[234] Eurostat, "Passenger transport performance of buses and coaches registered in the reporting country by transport coverage", *Online data code: road_pa_buscoa*, DOI: 10.2908/road_pa_buscoa, last updated: 06/03/2025.

[235] 2025 Statistical Pocketbook in Transport (section 2.3.5), 2024 data retrieved from Eurostat [road_pa_mov], estimates for 2024 drawn considering the average CAGR of countries with existing data. Total bus and coach transport and passengers travelling in journeys above 250km assumed to grow at the same rate.

The average bus and coach ticket fare for the EU27 for trips greater than or equal to 250 kilometres was EUR 46.77 in 2019 and EUR 56.81 in 2024, following a decrease from EUR 76.69 in 2020 (Figure 0-23).

Figure 0-23. Average bus and coach fares in the EU27 for trips >250km, 2018-2024[236]

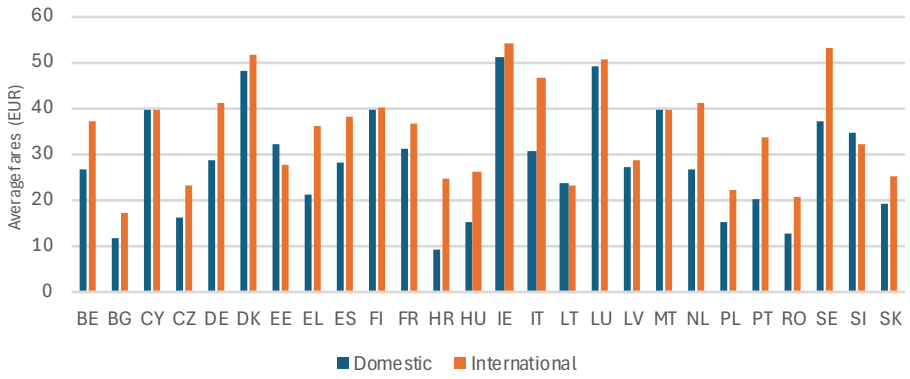


Source: Consortium analysis based on data estimated as part of the Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof, and updated with data from E3 modelling on the cost per pkm of passenger transport.

However, fares vary greatly depending on the country. The values shown in Figure 0-24 indicate that the 2024 bus and coach fares by country reveal significant variations in both domestic and international travel costs across the EU27. For domestic journeys, fares range considerably, with some countries like Bulgaria, Croatia and Romania having notably low average fares, while others like Denmark, Ireland and Luxembourg exhibit much higher prices. A similar disparity is observed for international journeys, with a generally higher price point compared to domestic travel within the same country.

[236] 2023 prices. 2018-2020 data based on data from the Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof, 2023 and 2024 estimated considering projections on cost of passenger transport for 2015, 2020 and 2025.

Figure 0-24. Average domestic and international bus and coach fares per EU Member State in 2024[237]



Source: Consortium analysis based on data gathered for a past study and updated based on recent data

11.3.3.5 EU27 and Member State bus and coach market thresholds for trips >250km

Market significance thresholds were applied to identify platforms or operators with potential structural relevance within the long-distance segment (trips >250km). Two screening thresholds were defined:

- EU27-level threshold: 10% of the total EU27 market for trips >250km
- Member State-level threshold: 30% of the respective national market for trips >250km

Both thresholds are assessed using:

- Annual number of bus and coach tickets sold
- Corresponding monetary value of ticket sales

Based on the estimated 2024 market volumes presented above, the calculated thresholds are shown below.

Table 0-19. EU27-level bus and coach thresholds for trips >250km, 2024

Indicator	Threshold
Tickets sold (millions)	35.09
Monetary value (millions of EUR)	1 993.68

[237] 2023 prices

Source: Consortium analysis based on data gathered for a past study and updated with recent data from the 2025 Statistical Pocketbook and Eurostat [road_pa_mov] and fare data estimated as part of the Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof[238].

This threshold represents the minimum scale at which an entity may be considered to have EU-wide market significance in the long distance sector.

MS-level thresholds reflect national market structures and demand levels. Considerable variation is observed across Member States.

Table 0-20. Member State-level bus and coach thresholds for trips >250km, 2024

Country	**Tickets sold** threshold (millions)	**Monetary value** threshold (in millions of EUR)
AT	0.78	44.19
BE	0.20	11.28
DK	1.54	87.75
ES	14.96	849.91
FI	1.26	71.77
FR	8.37	475.41
DE	19.11	1085.58
EL	3.78	214.98
IE	1.11	63.30
IT	14.17	805.10
NL	0.93	52.96
PT	2.85	161.71
SE	1.75	99.34
BG	1.25	71.14
CY	0.30	16.92
CZ	3.83	217.81
EE	0.52	29.46
HU	5.35	303.99
LV	0.45	25.38
LT	1.07	60.80
MT	0.23	13.16
PL	14.05	798.52
RO	4.95	281.42
SI	0.77	43.56
SK	0.78	44.50
LU	0.09	5.33

[238] Note: Data reflects the market for trips exceeding 250km.

HR	0.84	47.64

Source: Consortium analysis based on data gathered for a past study and updated with recent data from the 2025 Statistical Pocketbook and Eurostat [road_pa_mov] and fare data estimated as part of the Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof.

The thresholds provide an analytical benchmark for interpreting the scale and market positioning of MDMS platforms discussed in the following section.

11.3.3.6 Number of MDMS selling bus and coach tickets and market share

Estimating the number of MDMS platforms actively selling bus and coach transport tickets and their respective market shares is challenging. However, some relevant information was collected through the stakeholder consultation activities.

Two prominent MDMS platforms provided information on the number of tickets sold annually. The largest of these respondents reported approximately 52 million tickets sold in 2023 across their EU operations. Considering the totality of bus and coach tickets over 250km sold in the EU27 (approximated with the number of annual passengers transported), their market share is approximately 13%[239]. This entity is consistently identified as a leading operator in the European market and is particularly prominent in Germany, France, Italy, Spain, Portugal, Netherlands, Austria, Poland and the Baltic states, with newly growing presence in Romania as of mid-2025. It is the main long-distance coach provider in Germany and several neighbouring countries, operating the largest intercity coach network in Europe. Its business model combines direct operation in selected countries, as well as relying on a network of subcontracted local carriers under a unified brand and centralised online platform.

Prominent MDMS 2 reported approximately 26 million journeys sold in the EU27 in 2024, representing around 7% of the EU27 market in terms of long-distance passenger volume. The platform hosts 140 bus and coach operators, with particularly strong coverage in Western and Central Europe—including Spain, Italy, France, Germany, Portugal, Austria and the Czech Republic—where it partners with leading domestic and multinational carriers. While the platform lists services from over 40 countries overall, its coach offerings remain limited or absent in parts of Eastern and Southeastern Europe, such as the Baltics, Romania, Croatia and Bulgaria.

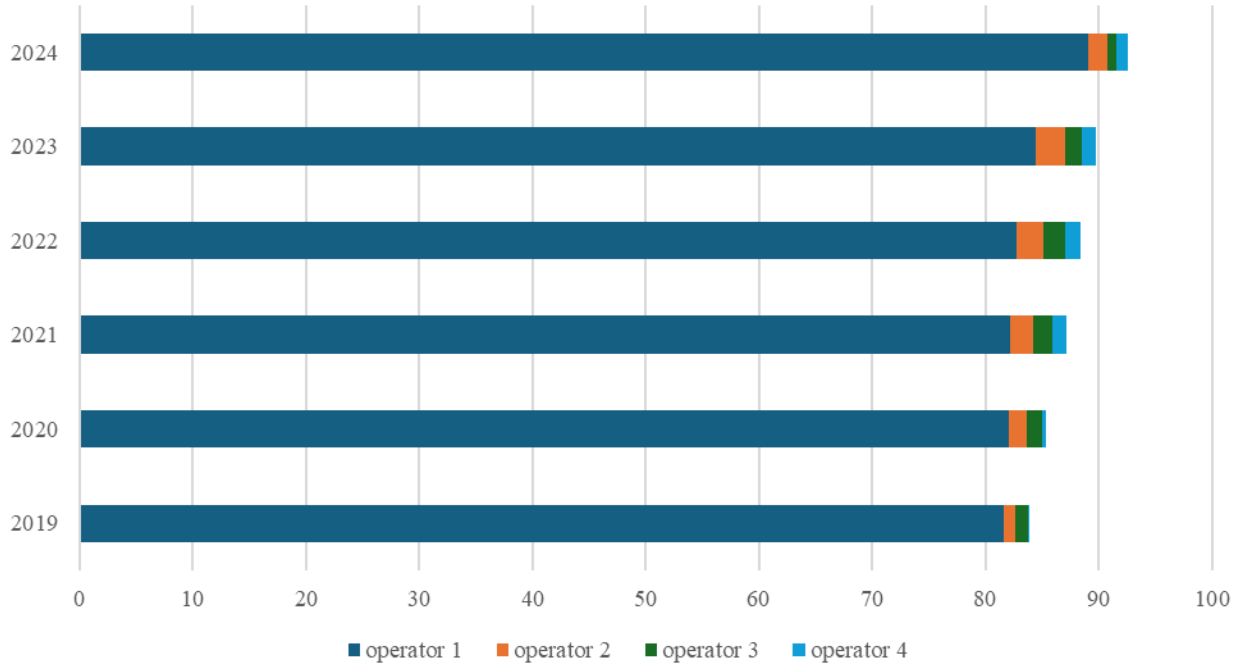
11.3.3.7 National market structure models

The provided data from a sample of countries' National Statistics Offices illustrates varying degrees of market concentration among bus and coach operators at the national level. These examples highlight different market structures.

The data from Hungary shows a classic example of a highly concentrated market dominated by a single incumbent. As seen in Figure 0-25 below, despite over 200 operators being present in the country, one operator consistently commands the vast majority of the market share. Its dominance grew from approximately 81% in 2019 to 89% in 2024. During the sampled years, no other operator even reached a 3% market share, further highlighting the severe market concentration. This demonstrates a clear "gatekeeper" at the national level, leaving very little room for competitors.

[239] This platform operates under a hybrid model. Their main business model involves partner operators running services under their brand. However, they also sell tickets operated by external companies that do not fall under their brand. These tickets are available on the prominent MDMS' platform as well as on the partner's own website.

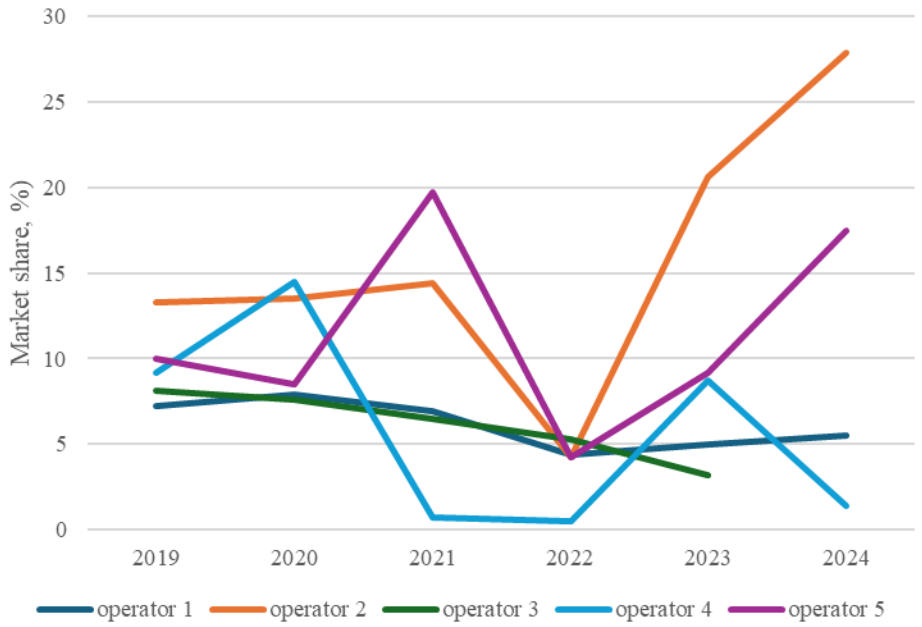
Figure 0-25. Bus and coach operators with largest market share in Hungary



Source: Consortium analysis based on data gathered during the stakeholder consultation stage

Croatia, despite fewer operators present than Hungary, represents a much more dynamic and competitive landscape. The market shares of the top operators are highly volatile, with no single player establishing long-term dominance. This suggests a fragmented market where there is strong competition.

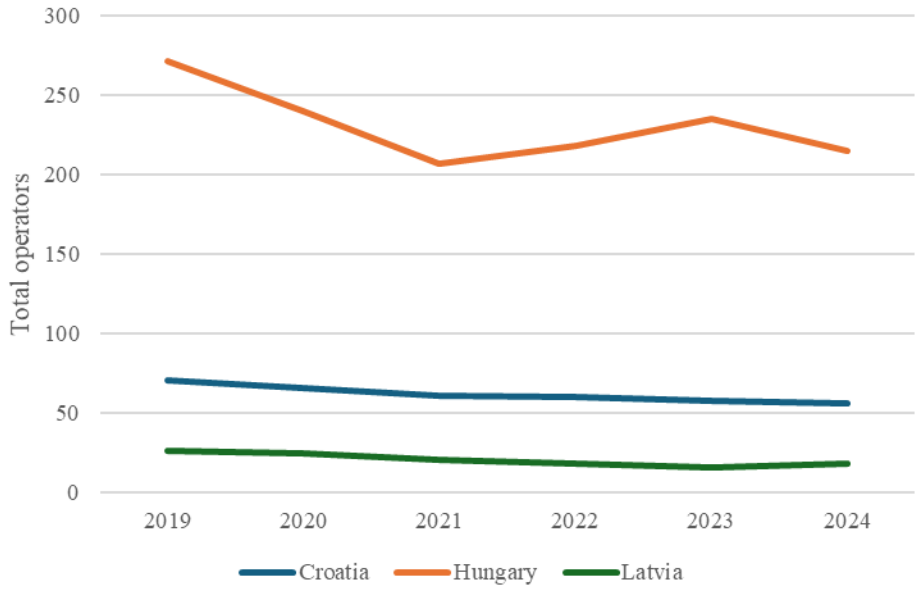
Figure 0-26: Bus and coach operators with largest market share in Croatia



Source: Consortium analysis based on data gathered during the stakeholder consultation stage

Regardless of the national market structure, there has been a tendency towards consolidation, or fewer operators, between 2019 and 2024. Between 2019 and 2024, there was a 21% decrease in the number of operators in both Croatia and Hungary, falling from 71 to 56 operators and 271 to 215 operators respectively. In Latvia there was a 31% decrease with the number of operators falling from 26 to 18 in the same time period. See Figure 0-27 below.

Figure 0-27: Bus and coach operators in selected EU-27 countries from 2019 to 2024



Source: Consortium analysis based on data gathered during the stakeholder consultation stage

11.3.3.8 Data gaps and challenges

The table below summarises the variables covered in the study, indicating where data were collected directly, estimated or assessed using qualitative evidence.

Table 0-21. Data gaps for the bus and coach sector

Indicator	Final status
Total number of bus and coach passengers	Data gathered and reported
Total passenger kilometres for bus and coach services	Data gathered and reported
Passenger volumes broken down by PSO and open access services	Data gathered and reported
Passenger volumes by long-distance and regional services	Data gathered and reported
Total number of bus and coach operators offering passenger services	Data gathered and reported
Market share of bus and coach operators in the passenger market	Data gathered and presented for the largest operators
Number of bus and coach tickets sold annually	Data gathered and reported
Monetary value of bus and coach tickets sold annually	Data gathered and reported
Percentage of bus and coach tickets sold online	No direct online/offline split; analysis based on channel typology with limited qualitative evidence.
Number of MDMS selling bus and coach tickets	Data gathered and presented in the main report

Indicator	Final status
Market share of each MDMS in the bus and coach ticket distribution market	Data gathered and presented for the largest MDMS
Number of operators whose tickets are sold via each MDMS	Limited quantitative data received and reported from the largest operators
Number of bus and coach trips booked via MDMS	Limited quantitative data received and reported from the largest operators
Per MDMS: number of users per month	No data received from stakeholder consultation
Per MDMS: turnover	No data received from stakeholder consultation

11.3.4 Waterborne Transport Sector

The desk research conducted on the parameters required for the waterborne transport sector, which includes both Inland Waterway Transport (IWT) and maritime transport, highlighted a substantial gap when it comes to information that is readily available. The data that was collected comes mostly from Eurostat and previous studies[240,241]. These past studies further state that there is a lack of data on waterborne transport and the number of waterborne passengers.

As such, for this specific sector the study relies heavily on the data gathered from the data collection questionnaire and the assumptions and proxy variables indicated.

11.3.4.1 Total waterborne transport passengers

The data used to quantify this parameter was obtained as part of previous studies[242] and updated in line with recent Eurostat data. The dataset used for passenger activity at the EU level is included in the supporting Excel file.

Figure 0-28 outlines the values gathered for the transport activity and number of passengers in the EU27 waterborne transport, including both inland waterways and maritime services[243,244] between 2015 and 2024. As anticipated, the COVID-19 pandemic led to a substantial decline in waterborne passenger activity in 2020, suffering a 45% decline from 2019 values, from 418 million in 2019 to only 230 million passengers in 2020. In 2023, passenger numbers rose to 394 million and to 418 million in 2024, reaching pre-pandemic levels.

[240] European Commission: Directorate-General for Mobility and Transport, PwC, Steer and TIS, *Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof – Final report*, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2832/13002

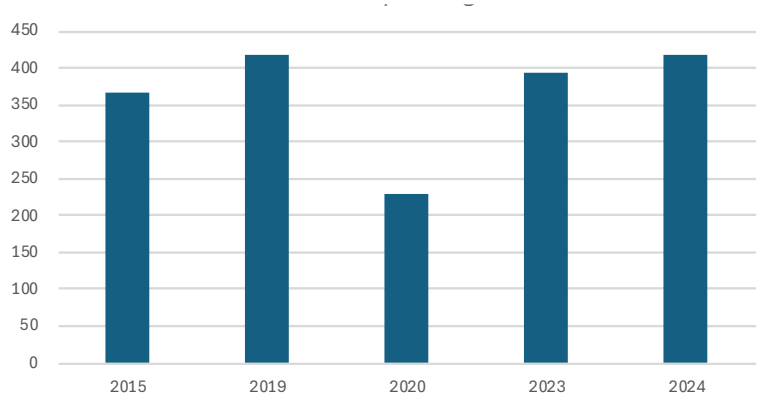
[241] European Commission: Directorate-General for Mobility and Transport and Steer, *Study on the EU Regulatory Framework for Passenger Rights. Part C, Evaluation of Regulation (EU) No 1177/2010 on the rights of passengers travelling by sea and inland waterways– Final report*, Publications Office of the European Union, 2021, https://data.europa.eu/doi/10.2832/06459

[242] Ibid.

[243] Eurostat. (2024). Country level - passengers embarked and disembarked in all ports [mar_mp_aa_cph]. https://doi.org/10.2908/MAR_MP_AA_CPH

[244] This data includes vessels carrying goods and passengers between inland ports on voyages which are partly or wholly undertaken at sea. Thus, maritime transport and some IWT are included. Only vessels which navigate exclusively in inland waters are excluded from the scope of this data. No information on vessels traveling exclusively in inland waters is currently available.

Figure 0-28.Total number of passengers in waterborne transport in the EU27 from 2015 to 2024



Source: Consortium analysis based on data from Eurostat [MAR_PA_AA]

11.3.4.2 Number of enterprises offering waterborne transport passenger service

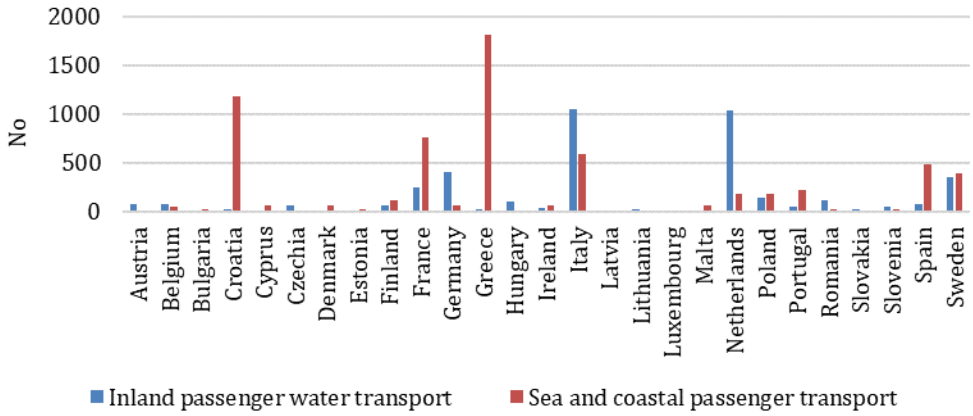
The data used to quantitatively characterise this parameter was obtained through the figures from Eurostat[245] and assessments conducted as part of previous studies[246,247]. Nevertheless, the data provided is only estimated for 2019. For waterborne transport, data in Figure 0-29 encompasses the number of active waterborne passenger enterprises in the EU27, including both inland and sea and coastal passenger transport. There are around 10 637 companies in the EU dealing with waterborne passenger transport (both in inland waterways passenger transport and sea and coastal passenger transport).

[245] Employment in passenger transport modes from Eurostat [nama_10_a64] and the total employment from Eurostat [nama_10_a64].

[246] European Commission: Directorate-General for Mobility and Transport, PwC, Steer and TIS, *Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof – Final report*, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2832/13002

[247] European Commission: Directorate-General for Mobility and Transport and Steer, *Study on the EU Regulatory Framework for Passenger Rights. Part C, Evaluation of Regulation (EU) No 1177/2010 on the rights of passengers travelling by sea and inland waterways– Final report*, Publications Office of the European Union, 2021, https://data.europa.eu/doi/10.2832/06459

Figure 0-29. Number of enterprises in waterborne transport in 2019



Source: Consortium analysis based on data from past studies

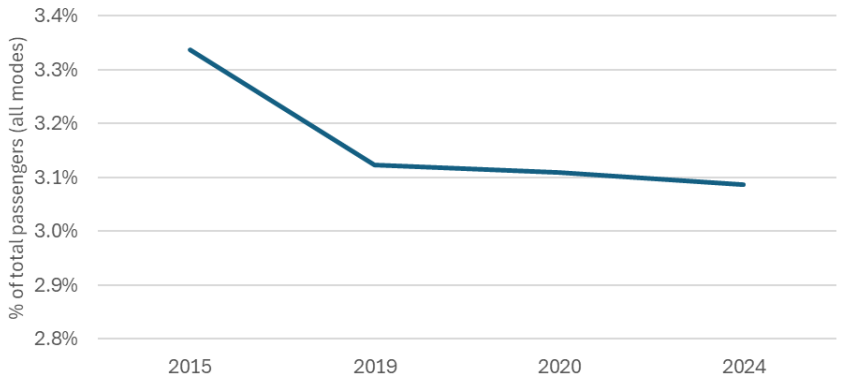
According to the data gathered from the same report, which was estimated based on figures from Eurostat and aligned with data from the European Community Shipowners' Associations (ECSA), of these more than 10,000 companies, there are approximately 523 operators providing passenger services in the EU27 in 2019. Of the 523 operators, 518 are considered SMEs (approximately 99%)[248].

11.3.4.3 Market share of waterborne operators

To quantify the market share of the existing waterborne operators, referring primarily to their collective share of passengers within the overall passenger transport market, while also considering their individual presence within the waterborne sector, information on the share of passengers travelling by waterborne transport, the number of operators and the associated number of trips in the market can be useful to use as proxies. The desk research conducted, with the addition to data gathered from NSOs, enabled the collection of data on the share of passengers travelling by waterborne transport (see Figure 0-30).

[248] Figures from Eurostat and reported in European Commission: Directorate-General for Mobility and Transport, PwC, Steer and TIS, Support study for an impact assessment on new rules for making the passenger rights framework resilient and future proof – Final report, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2832/13002

Figure 0-30. Percentage of all passenger journeys made by waterborne transport in the EU27, 2015-2024



Source: Consortium analysis based on data gathered during the stakeholder consultation stage

11.3.4.4 Waterborne tickets sold (online vs offline) and monetary value

The exact breakdown of waterborne tickets sold online versus offline, along with their precise monetary value, remains difficult to ascertain. This segment of the market is considerably smaller and often operates with different distribution dynamics compared to air, rail or bus and coach. It is presumed that a larger proportion of tickets, particularly for local services or shorter routes, are sold offline, either directly by operators or through local agencies. This makes comprehensive data aggregation challenging. Furthermore, the largest OTAs typically do not feature waterborne transport tickets, with sales instead concentrated among more specialised OTAs or direct operator channels.

Despite the lack of granular sales data, an understanding of market presence can be inferred from the number of operators and persons employed in these sectors. For inland waterway passenger transport enterprises, Italy and the Netherlands exhibit the largest markets. In the sea and coastal passenger transport sector, Greece and Croatia stand out with the highest number of enterprises, closely followed by France and Italy (as depicted in Figure 0-29). The case of Croatia, which possesses the second-highest volume of sea and coastal transport, reveals that approximately 92% of offerings in 2024 were PSOs. This prevalence of PSOs strongly suggests that a significant majority of services are geared towards local travellers who are more likely to purchase tickets in person or possess sufficient familiarity with the service to book directly from the operator, as opposed to on an MDMS platform. 2024 data further indicate a highly concentrated market in Croatia, with one operator holding over 80% market share, which could imply established direct booking channels dominating the segment.

Furthermore, the monetary value of waterborne tickets sold annually was estimated using the average passenger transport price (EUR/passenger.km) from the New Mobility Patterns[249] study and updated from 2018 to 2023 prices. Multiplying this by the data on waterborne passenger kilometres, the total monetary value is estimated at EUR 7.9 billion.

[249] https://op.europa.eu/en/publication-detail/-/publication/fcf47d76-81ad-11ed-9887-01aa75ed71a1

11.3.4.5 EU27 and Member State waterborne market thresholds

Market significance thresholds were applied to identify platforms or operators with potential structural relevance. Two screening thresholds were defined:

- EU27-level threshold: 10% of the total EU27 market
- Member State-level threshold: 30% of the respective national market

Both thresholds are assessed using:

- Annual number of waterborne tickets sold
- Corresponding monetary value of ticket sales

Based on the estimated 2024 market volumes presented above, the calculated thresholds are shown below.

Table 0-22. EU27-level waterborne thresholds, 2024

Indicator	Threshold
Tickets sold (millions)	45.55
Monetary value (millions of EUR)	792.09

Source: Consortium analysis based on data from Eurostat [MAR_PA_AA] and fare data estimated as part of the New Mobility Patterns project (2022).

This threshold reflects the scale at which an entity may be considered to have EU-wide market significance within waterborne passenger transport.

MS-level thresholds vary substantially across Member States, reflecting differences in maritime and inland waterway networks across Member States.

Table 0-23. Member State-level waterborne thresholds, 2024[250]

Country	**Tickets sold** threshold (millions)	**Monetary value** threshold (**in millions** of **EUR**)
AT	0.00	0.00
BE	0.30	5.22
DK	13.20	229.50
ES	10.95	190.38
FI	5.20	90.41

[250] Member State data refers to maritime only (domestic and international), as no data is available on passengers by inland waterways.

FR	6.50	113.01
DE	9.80	170.39
EL	22.70	394.67
IE	0.90	15.65
IT	30.85	536.37
NL	0.85	14.78
PT	0.55	9.56
SE	13.05	226.89
BG	0.00	0.00
CY	0.00	0.00
CZ	0.00	0.00
EE	4.25	73.89
HU	0.00	0.00
LV	0.30	5.22
LT	0.00	0.00
MT	4.95	86.06
PL	1.15	19.99
RO	0.00	0.00
SI	0.00	0.00
SK	0.00	0.00
LU	0.00	0.00
HR	11.20	194.73

Source: Consortium analysis based on data from Eurostat [MAR_PA_AA] and fare data estimated as part of the New Mobility Patterns project (2022)

The thresholds provide a quantitative benchmark for assessing the relative scale of MDMS platforms active in the waterborne sector, as discussed below.

11.3.4.6 Number of MDMS selling waterborne tickets and their market share

Estimating the number of MDMS platforms actively selling waterborne transport tickets and their respective market shares is exceptionally challenging. As noted, most major OTAs do not include waterborne transport in their offerings. This limits the conventional data points for identifying and analysing MDMS platforms in this specific niche. Additionally, the data request process yielded no responses from either maritime or IWT operators, further hindering the ability to map the digital distribution landscape for this sector. The fragmented and specialised nature of the waterborne market means that any MDMS involvement is likely dispersed across numerous smaller or more specialised platforms.

Nonetheless, a few prominent digital platforms have emerged that focus specifically on ferry transport, particularly within Europe. One such platform offers services across more than 3,500 ferry routes across 33 countries (18 EU27 countries[251]) and partnering with over 160 operators in Europe and North Africa. As of 2024, this platform reports over 10 million tickets sold and more

[251] Croatia, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Poland, Portugal, Slovenia, Spain, Sweden

than 600,000 app downloads, although they do not provide the number of tickets sold per year[252]. Similarly, another platform aggregates services from 265 ferry operators across more than 4,000 routes and over 800 ports worldwide, making it one of the largest global ferry booking platforms[253]. However, no information is available on tickets sold in the EU27 or number of tickets sold per year.

Other platforms also offer regional or cross-modal ferry access, but market share information is scarce. Despite the existence of these platforms, the lack of transparent usage statistics from ferry operators and aggregators alike makes it difficult to quantify MDMS penetration or dominance within waterborne transport.

Due to the highly fragmented nature of the market and the absence of clear data on ticket sales per platform, we do not expect any single MDMS platform to sell 10% or more of the total EU27 tickets per year.

11.3.4.7 Number of maritime trips booked via MDMS selling maritime tickets

Consistent with the challenges outlined above, precise data on the number of maritime and IWT trips booked specifically via MDMS platforms is not widely available. The difficulties in identifying and quantifying MDMS presence in the waterborne sector, coupled with the lack of operator data, mean that a quantitative assessment of MDMS booking volumes is currently infeasible. The prevailing market characteristics, including the probable dominance of offline sales, direct operator bookings and high percentage of PSO offerings, suggest that MDMS channels currently account for a smaller, and largely unquantified, portion of overall waterborne ticket sales.

11.3.4.8 Data gaps and challenges

The table below summarises the variables covered in the study, indicating where data were collected directly, estimated or assessed using qualitative evidence.

Table 0-24. Data gaps for the waterborne sector

Indicator	Final status
Total number of maritime passengers	Data gathered and reported
Total passenger kilometres for maritime services	Data gathered and reported
Passenger volumes broken down by PSO and open access services	Not available
Total number of maritime operators offering passenger services	Data gathered and reported
Market share of maritime operators in the passenger market	Limited data gathered and reported for the largest Greek operators
Number of maritime tickets sold annually	Data gathered and reported
Monetary value of maritime tickets sold annually	Data gathered and reported
Percentage of maritime tickets sold online	No direct online/offline split; analysis based on channel typology with limited qualitative evidence.

[252] https://www.ferryhopper.com/en/about

[253] https://ca.directferries.com/about.htm

Number of MDMS selling maritime tickets	Data gathered and presented in the main report
Market share of each MDMS in the maritime ticket distribution market	No data received from stakeholder consultation
Number of operators whose tickets are sold via each MDMS	Limited quantitative data received and reported from the largest MDMS
Number of maritime trips booked via MDMS	No data received from stakeholder consultation
Per MDMS: number of users per month	No data received from stakeholder consultation
Per MDMS: turnover	No data received from stakeholder consultation

11.4 SUMMARY & KEY TAKEAWAYS

This section consolidates the findings from the market distribution data gathered across the aviation, rail, bus and coach, and waterborne transport sectors (as detailed in Section 3), highlighting overarching market trends, common and sector-specific data gaps, and the implications for the development and adoption of MDMS. The analysis directly supports the study's aim to provide evidence for potential regulatory proposals facilitating access to distribution channels and enhancing the attractiveness of sustainable transport options through improved data and ticket accessibility.

11.4.1 Overall market trends

The passenger transport landscape across the EU27 is exhibiting varying recovery trajectories following the significant disruption caused by the COVID-19 pandemic across all modes.

The **rail sector** is demonstrating strong signs of recovery. Geographically, passenger rail activity is concentrated in larger Member States like France and Germany, though passenger volumes can vary significantly even with similar levels of transport activity. Key characteristics of the rail market is the fragmented operator landscape and the dominance of national traffic within most countries, highlighting the primarily domestic nature of rail travel. However, exceptions exist in smaller, centrally located nations where international rail travel constitutes a more significant share. The provision of rail services is also split between Public Service Obligation (PSO) contracts, ensuring essential connectivity, and non-PSO commercial services, with the balance between these varying considerably across Member States.

The **aviation sector**, benefiting from relatively robust data sources and stakeholder consultations, underwent a significant and detailed assessment within this study. The market experienced a dramatic downturn in passenger activity in 2020 due to the COVID-19 pandemic, with a 78% decline from 2019 levels. Nevertheless, in 2024, these values increased by 3.6% from 2019 numbers, surpassing pre-pandemic levels. Public Service Obligations (PSOs) play a very limited role, accounting for approximately 1% of total air passengers, underscoring the dominance of open access services. The carrier landscape is characterised by the enduring dominance of a core group of scheduled airlines, with a notable long-term shift towards low-cost carriers (LCCs).

The sector exhibits a high prevalence of direct ticket sales, with the air carriers' own channels representing 46.9% of all sales in 2019 and 50.9% of all sale by 2024.

The study further revealed the complex intermediary landscape of the aviation sector, with individual airlines engaging with a vast number of selling channels, estimated to be around 3,000 per airline. The distribution market is characterised by a high degree of concentration among key intermediaries, particularly with CRS and to a much lesser degree OTAs. The CRS market, which primarily serves travel agents and OTAs, has seen its overall share of the EU27 market decline from 30.1% of all tickets sold in 2019 to 22.0% by 2024. Despite this decline, the market remains highly concentrated, dominated by three major global players. One of these is particularly prominent, accounting for approximately 64% of all CRS sales in the EU27 in 2024.

In a similar vein, the OTA market, which operates as a key customer segment for CRSs, also exhibits some concentration. OTAs held an 18% share of all air ticket sales in 2019, which remained steady at 18% in 2024. This can be further disaggregated to 13% direct distribution agreements and 5% webscraping. The three largest players collectively hold over 50% of the OTA market share for aviation. These findings highlight the intricate distribution ecosystem and the significant influence of key intermediaries within the aviation sector's pricing and sales dynamics. The clear trends towards more direct, non-CRS sales underscore a notable shift in how aviation tickets are sold.

MSEs also represent an important, though less directly measurable, layer of the distribution landscape. Unlike OTAs or CRSs, MSEs do not process bookings but act as high-visibility gateways that drive substantial consumer traffic toward both airline websites and third-party sellers. Their influence on price discovery and consumer decision-making is therefore considerably larger than what can be inferred from ticket-attribution data alone, as many travellers use MSEs for initial searches even if the final purchase occurs elsewhere.

The **bus and coach sector's** market dynamics were comprehensively assessed, integrating data from Eurostat, and targeted data collection efforts. Post-COVID-19, passenger numbers experienced a rapid recovery despite still remaining below 2019 levels. This may indicate an increasing efficiency in service utilisation despite a slower recovery in overall service provision. While comprehensive data on PSO versus open access services remains challenging to obtain at the EU level, extrapolated data suggests a slight increase in PSO's share of passenger journeys over time. The sector is characterised by a large number of operators, estimated at 3,778 in 2019, with over 80% being SMEs. Although direct MDMS-specific data remains limited, the study acknowledges a small percentage of multimodal operators and the overall trend of increasing digital sales within the sector. Available data on MDMS platforms selling long-distance bus and coach tickets in the EU-27 remains limited, but stakeholder inputs highlight the prominence of two major players. The largest platform reported around 52 million tickets sold in 2023, equivalent to roughly 13–30% of the EU27 market depending on whether revenue or passenger volume is used, reflecting its extensive network coverage and dominant position in several major European markets. A second major platform reported approximately 26 million journeys sold in 2024, representing around 7–12% of the long-distance market, with particularly strong presence in Western and Central Europe, though with more limited penetration in Eastern and Southeastern regions.

In the case of the **waterborne transport sector**, encompassing both IWT and maritime transport, data is very limited beyond aggregated Eurostat figures and a few previous targeted studies. Despite these limitations, the study leveraged existing data and targeted questionnaire responses to estimate passenger activity, revealing a significant decline in 2020 due to the pandemic (a 45%

drop from 418 million passengers in 2019 to 230 million in 2020). Passengers have since returned to pre-pandemic levels in 2024. While the sector comprises a substantial number of enterprises, particularly in countries like Italy, Netherlands, Greece, and Croatia, the majority of sales are presumed to occur offline or directly through operators, often involving PSOs. Consequently, the quantitative assessment of online ticket sales, MDMS presence, and booking volumes via MDMS remained largely unfeasible, highlighting an enduring data gap in this specialised market.

11.5 APPENDIX – DETAILED 100 OD PAIRS ANALYSIS

This section presents the data and analysis underpinning the conclusions presented in section 11.2.2. For each of the 100 OD pairs, journey information is presented as collected from two booking channels: directly via operators, or the 'best case' (proxy – Google Maps/Flights and research of operator websites), and via MDMS platforms (proxy – Omio). Important caveats on this data are mentioned in section 11.2.2, including that this information represents travel from city centre to city centre and excludes time spent walking or taking short intra-city connecting legs (<10 mins). Within each platform, information availability is split by mode. Information is split into journey times and their associated number of legs (Table) and journey costs (Table).

11.5.1 Time analysis

The following should be noted:

- 'Flight' is not listed as a separate mode as it is always assumed that passengers need to travel to and from airports outside the city centre. Therefore, this mode is listed as 'Multi-modal: flight'. This is distinguished from 'Multi-modal: other' (land- and sea-based travel only).
- Google Maps only presents the ~6 or so fastest connections. It is therefore possible that more options are available within 'train', 'bus' and 'multi-modal: other' than those displayed in the table below, but these would naturally be slower than the ones identified in the table.
- Omio does not present multi-modal options. Time and leg values for 'Multi-modal: other' booked on MDMS are therefore always blank, although a delta is included representing the difference in minimum time between all available land- and sea- based modes. However, values are displayed for 'Multi-modal: flight' booked through MDMS because we have assumed a notional 2 hrs of travel time to account for legs to and from airports outside the city centre. This enables a limited comparison with what is available to book directly through operators.
- Other blank values indicate that the mode is not available on that channel. Note that this could be due to planned closures – since both extractions are for a specific date and time, a closure on a rail line, for example, would cause any rail connections using that line not to appear on either channel.
- The final column shows an 'assumed time delta', a.k.a. the difference in journey time found through the two channels for that mode. Values less than 100% indicate a time saving is possible compared to what is shown on Omio. In many cases, Omio seems to find a faster connection than those available directly through operators, despite the fact that booking through operators is meant to represent the 'best case' that is possible in a perfect MDMS. This is likely due to slight inconsistencies in the journey matching algorithm in each platform or the selection of a slightly different journey start time. We therefore assume the delta is 100% (i.e. no difference) in cases where the Omio time is faster.

Table 0-25: Comparison of journey times (and associated number of journey legs) available via two different channels: directly via operators (proxy – Google Maps/Flights), and via MDMS platforms (proxy – Omio).

ID	Cluster	OD pair description	Mode	Journey time - direct booking (hrs)	Journey legs - direct booking (#)	Journey time MDMS (hrs)
1	A	Barcelona, Spain to Palma, Spain	Train			
1	A	Barcelona, Spain to Palma, Spain	Bus			
1	A	Barcelona, Spain to Palma, Spain	Multi-modal: flight	3.58	3	4.75
1	A	Barcelona, Spain to Palma, Spain	Multi-modal: other	5.76	3	
2	A	Freising, Germany to Hamburg, Germany	Train	6.67	2	6.40
2	A	Freising, Germany to Hamburg, Germany	Bus			15.17
2	A	Freising, Germany to Hamburg, Germany	Multi-modal: flight	4.35	3	5.25
2	A	Freising, Germany to Hamburg, Germany	Multi-modal: other			
3	A	Copenhagen, Denmark to Aalborg, Denmark	Train	4.10	1	
3	A	Copenhagen, Denmark to Aalborg, Denmark	Bus	5.34	2	5.00
3	A	Copenhagen, Denmark to Aalborg, Denmark	Multi-modal: flight	9.63	3	4.75
3	A	Copenhagen, Denmark to Aalborg, Denmark	Multi-modal: other			
4	A	Ingolstadt, Germany to Munich, Germany	Train	0.62	1	0.70
4	A	Ingolstadt, Germany to Munich, Germany	Bus			
4	A	Ingolstadt, Germany to Munich, Germany	Multi-modal: flight			
4	A	Ingolstadt, Germany to Munich, Germany	Multi-modal: other			
5	A	Barcelona, Spain to Girona, Spain	Train	0.70	1	
5	A	Barcelona, Spain to Girona, Spain	Bus			1.83
5	A	Barcelona, Spain to Girona, Spain	Multi-modal: flight			
5	A	Barcelona, Spain to Girona, Spain	Multi-modal: other			
6	A	Helsinki, Finland to Oulu, Finland	Train	6.07	1	5.32
6	A	Helsinki, Finland to Oulu, Finland	Bus	8.17	1	8.67
6	A	Helsinki, Finland to Oulu, Finland	Multi-modal: flight	4.05	3	5.00
6	A	Helsinki, Finland to Oulu, Finland	Multi-modal: other			
7	A	Hoorn, Netherlands to Amsterdam, Netherlands	Train	0.42	1	0.52
7	A	Hoorn, Netherlands to Amsterdam, Netherlands	Bus			
7	A	Hoorn, Netherlands to Amsterdam, Netherlands	Multi-modal: flight			
7	A	Hoorn, Netherlands to Amsterdam, Netherlands	Multi-modal: other			
8	B	Paris, France to Nice, France	Train	5.90	1	5.58
8	B	Paris, France to Nice, France	Bus			12.75
8	B	Paris, France to Nice, France	Multi-modal: flight	4.38	3	5.42
8	B	Paris, France to Nice, France	Multi-modal: other	7.08	2	
9	B	Catania, Italy to Rome, Italy	Train	9.70	1	8.38
9	B	Catania, Italy to Rome, Italy	Bus	7.17	1	10.33
9	B	Catania, Italy to Rome, Italy	Multi-modal: flight	4.35	3	5.33
9	B	Catania, Italy to Rome, Italy	Multi-modal: other	9.00	2	
10	B	Athens, Greece to Thessaloníki, Greece	Train	4.88	1	
10	B	Athens, Greece to Thessaloníki, Greece	Bus	7.36	2	

ID	Cluster	OD pair description	Mode	Journey time - direct booking (hrs)	Journey legs - direct booking (#)	Journey time MDMS (hrs)
10	B	Athens, Greece to Thessaloníki, Greece	Multi-modal: flight	4.33	3	4.88
10	B	Athens, Greece to Thessaloníki, Greece	Multi-modal: other	7.50	4	
11	B	Piraeus, Greece to Ermoúpolis, Greece	Train			
11	B	Piraeus, Greece to Ermoúpolis, Greece	Bus			
11	B	Piraeus, Greece to Ermoúpolis, Greece	Multi-modal: flight			
11	B	Piraeus, Greece to Ermoúpolis, Greece	Multi-modal: other	2.16	1	
12	B	Busto Arsizio, Italy to Milan, Italy	Train	0.52	1	0.38
12	B	Busto Arsizio, Italy to Milan, Italy	Bus			0.63
12	B	Busto Arsizio, Italy to Milan, Italy	Multi-modal: flight			
12	B	Busto Arsizio, Italy to Milan, Italy	Multi-modal: other			
13	B	Gdańsk, Poland to Wejherowo, Poland	Train	1.00	2	0.73
13	B	Gdańsk, Poland to Wejherowo, Poland	Bus			
13	B	Gdańsk, Poland to Wejherowo, Poland	Multi-modal: flight			
13	B	Gdańsk, Poland to Wejherowo, Poland	Multi-modal: other	1.53	2	
14	B	Luleå, Sweden to Stockholm, Sweden	Train	11.15	3	11.03
14	B	Luleå, Sweden to Stockholm, Sweden	Bus			
14	B	Luleå, Sweden to Stockholm, Sweden	Multi-modal: flight			5.33
14	B	Luleå, Sweden to Stockholm, Sweden	Multi-modal: other	11.95	3	
15	B	Dubrovnik, Croatia to Split, Croatia	Train			
15	B	Dubrovnik, Croatia to Split, Croatia	Bus	3.76	1	3.75
15	B	Dubrovnik, Croatia to Split, Croatia	Multi-modal: flight			6.58
15	B	Dubrovnik, Croatia to Split, Croatia	Multi-modal: other	4.84	3	
16	B	Dublin, Ireland to Drogheda, Ireland	Train	0.50	1	
16	B	Dublin, Ireland to Drogheda, Ireland	Bus	0.83	1	0.53
16	B	Dublin, Ireland to Drogheda, Ireland	Multi-modal: flight			
16	B	Dublin, Ireland to Drogheda, Ireland	Multi-modal: other	0.78	2	
17	B	Riga, Latvia to Valmiera, Latvia	Train	1.80	1	
17	B	Riga, Latvia to Valmiera, Latvia	Bus	2.60	2	
17	B	Riga, Latvia to Valmiera, Latvia	Multi-modal: flight			
17	B	Riga, Latvia to Valmiera, Latvia	Multi-modal: other	2.57	2	
18	B	Vilnius, Lithuania to Kaunas, Lithuania	Train	1.18	1	
18	B	Vilnius, Lithuania to Kaunas, Lithuania	Bus	1.83	2	
18	B	Vilnius, Lithuania to Kaunas, Lithuania	Multi-modal: flight			
18	B	Vilnius, Lithuania to Kaunas, Lithuania	Multi-modal: other			
19	C	Warsaw, Poland to Amsterdam, Netherlands	Train	10.90	3	12.98
19	C	Warsaw, Poland to Amsterdam, Netherlands	Bus			17.00
19	C	Warsaw, Poland to Amsterdam, Netherlands	Multi-modal: flight	4.52	3	6.00
19	C	Warsaw, Poland to Amsterdam, Netherlands	Multi-modal: other			
20	C	Paris, France to Madrid, Spain	Train	9.83	2	9.98

ID	Cluster	OD pair description	Mode	Journey time - direct booking (hrs)	Journey legs - direct booking (#)	Journey time MDMS (hrs)
20	C	Paris, France to Madrid, Spain	Bus			14.75
20	C	Paris, France to Madrid, Spain	Multi-modal: flight	4.87	3	6.00
20	C	Paris, France to Madrid, Spain	Multi-modal: other	11.88	3	
21	C	Palma, Spain to Düsseldorf, Germany	Train			
21	C	Palma, Spain to Düsseldorf, Germany	Bus			
21	C	Palma, Spain to Düsseldorf, Germany	Multi-modal: flight	5.33	3	6.33
21	C	Palma, Spain to Düsseldorf, Germany	Multi-modal: other	26.33	5	
22	C	Rome, Italy to Barcelona, Spain	Train			
22	C	Rome, Italy to Barcelona, Spain	Bus			20.08
22	C	Rome, Italy to Barcelona, Spain	Multi-modal: flight	4.90	3	5.83
22	C	Rome, Italy to Barcelona, Spain	Multi-modal: other	15.95	7	
23	C	Budapest, Hungary to Madrid, Spain	Train			
23	C	Budapest, Hungary to Madrid, Spain	Bus			39.50
23	C	Budapest, Hungary to Madrid, Spain	Multi-modal: flight	6.64	3	7.33
23	C	Budapest, Hungary to Madrid, Spain	Multi-modal: other	29.62	5	
24	C	Tallinn, Estonia to Helsinki, Finland	Train			
24	C	Tallinn, Estonia to Helsinki, Finland	Bus	3.29	2	2.00
24	C	Tallinn, Estonia to Helsinki, Finland	Multi-modal: flight	3.04	3	
24	C	Tallinn, Estonia to Helsinki, Finland	Multi-modal: other	2.96	2	
25	C	Helsinki, Finland to Stockholm, Sweden	Train			
25	C	Helsinki, Finland to Stockholm, Sweden	Bus			
25	C	Helsinki, Finland to Stockholm, Sweden	Multi-modal: flight	3.90	3	5.00
25	C	Helsinki, Finland to Stockholm, Sweden	Multi-modal: other	13.41	4	
26	C	Hørsholm, Denmark to Malmö, Sweden	Train	1.33	2	
26	C	Hørsholm, Denmark to Malmö, Sweden	Bus			
26	C	Hørsholm, Denmark to Malmö, Sweden	Multi-modal: flight			
26	C	Hørsholm, Denmark to Malmö, Sweden	Multi-modal: other	2.00	2	
27	C	Amsterdam, Netherlands to Rome, Italy	Train	14.92	5	
27	C	Amsterdam, Netherlands to Rome, Italy	Bus			26.00
27	C	Amsterdam, Netherlands to Rome, Italy	Multi-modal: flight	5.17	3	6.17
27	C	Amsterdam, Netherlands to Rome, Italy	Multi-modal: other	15.65	6	
28	C	Frankfurt am Main, Germany to Vienna, Austria	Train	6.50	1	6.42
28	C	Frankfurt am Main, Germany to Vienna, Austria	Bus			9.83
28	C	Frankfurt am Main, Germany to Vienna, Austria	Multi-modal: flight	3.69	3	5.25
28	C	Frankfurt am Main, Germany to Vienna, Austria	Multi-modal: other			
29	C	Sofia, Bulgaria to Vienna, Austria	Train			
29	C	Sofia, Bulgaria to Vienna, Austria	Bus	14.92	1	14.48
29	C	Sofia, Bulgaria to Vienna, Austria	Multi-modal: flight	4.37	3	5.58
29	C	Sofia, Bulgaria to Vienna, Austria	Multi-modal: other	21.65	2	
30	C	Luxembourg, Luxembourg to Porto, Portugal	Train			
30	C	Luxembourg, Luxembourg to Porto, Portugal	Bus			29.75

ID	Cluster	OD pair description	Mode	Journey time - direct booking (hrs)	Journey legs - direct booking (#)	Journey time MDMS (hrs)
30	C	Luxembourg, Luxembourg to Porto, Portugal	Multi-modal: flight	5.32	3	6.42
30	C	Luxembourg, Luxembourg to Porto, Portugal	Multi-modal: other	23.47	6	
31	C	Copenhagen, Denmark to Hamburg, Germany	Train	4.67	1	5.98
31	C	Copenhagen, Denmark to Hamburg, Germany	Bus	5.18	1	5.17
31	C	Copenhagen, Denmark to Hamburg, Germany	Multi-modal: flight	3.86	3	5.08
31	C	Copenhagen, Denmark to Hamburg, Germany	Multi-modal: other	6.25	2	
32	C	Prague, Czech Republic to Vienna, Austria	Train	4.10	1	4.03
32	C	Prague, Czech Republic to Vienna, Austria	Bus	4.67	1	3.90
32	C	Prague, Czech Republic to Vienna, Austria	Multi-modal: flight	3.68	3	4.83
32	C	Prague, Czech Republic to Vienna, Austria	Multi-modal: other	4.77	3	
33	D	Budapest, Hungary to Bratislava, Slovakia	Train	2.20	2	9.47
33	D	Budapest, Hungary to Bratislava, Slovakia	Bus			2.25
33	D	Budapest, Hungary to Bratislava, Slovakia	Multi-modal: flight	23.27	3	7.10
33	D	Budapest, Hungary to Bratislava, Slovakia	Multi-modal: other			
34	D	Trbovlje, Slovenia to Zagreb, Croatia	Train			
34	D	Trbovlje, Slovenia to Zagreb, Croatia	Bus			
34	D	Trbovlje, Slovenia to Zagreb, Croatia	Multi-modal: flight	6.58	3	
34	D	Trbovlje, Slovenia to Zagreb, Croatia	Multi-modal: other	3.42	3	
35	D	Bratislava, Slovakia to Prague, Czech Republic	Train	4.22	1	4.22
35	D	Bratislava, Slovakia to Prague, Czech Republic	Bus			4.08
35	D	Bratislava, Slovakia to Prague, Czech Republic	Multi-modal: flight	4.47	3	8.95
35	D	Bratislava, Slovakia to Prague, Czech Republic	Multi-modal: other			
36	D	Cluj-Napoca, Romania to Budapest, Hungary	Train	11.15	3	
36	D	Cluj-Napoca, Romania to Budapest, Hungary	Bus	8.18	2	6.42
36	D	Cluj-Napoca, Romania to Budapest, Hungary	Multi-modal: flight	6.98	3	
36	D	Cluj-Napoca, Romania to Budapest, Hungary	Multi-modal: other	7.74	4	
37	D	Paris, France to Lisbon, Portugal	Train			
37	D	Paris, France to Lisbon, Portugal	Bus			21.50
37	D	Paris, France to Lisbon, Portugal	Multi-modal: flight	5.76	3	6.50
37	D	Paris, France to Lisbon, Portugal	Multi-modal: other	18.42	3	
38	D	Lyon, France to Turin, Italy	Train	3.80	1	3.83
38	D	Lyon, France to Turin, Italy	Bus	5.26	3	4.17
38	D	Lyon, France to Turin, Italy	Multi-modal: flight	6.62	3	
38	D	Lyon, France to Turin, Italy	Multi-modal: other	5.01	3	
39	D	Paris, France to Porto, Portugal	Train			
39	D	Paris, France to Porto, Portugal	Bus			21.67
39	D	Paris, France to Porto, Portugal	Multi-modal: flight	5.20	3	6.25
39	D	Paris, France to Porto, Portugal	Multi-modal: other	18.17	3	
40	D	Dublin, Ireland to Paris, France	Train			
40	D	Dublin, Ireland to Paris, France	Bus			
40	D	Dublin, Ireland to Paris, France	Multi-modal: flight	4.99	3	5.58

ID	Cluster	OD pair description	Mode	Journey time - direct booking (hrs)	Journey legs - direct booking (#)	Journey time MDMS (hrs)
40	D	Dublin, Ireland to Paris, France	Multi-modal: other	12.57	6	
41	D	Lisbon, Portugal to Brussels, Belgium	Train			
41	D	Lisbon, Portugal to Brussels, Belgium	Bus			27.42
41	D	Lisbon, Portugal to Brussels, Belgium	Multi-modal: flight	5.69	3	6.58
41	D	Lisbon, Portugal to Brussels, Belgium	Multi-modal: other	22.15	5	
42	D	Bucharest, Romania to Vienna, Austria	Train	18.22	1	
42	D	Bucharest, Romania to Vienna, Austria	Bus			19.83
42	D	Bucharest, Romania to Vienna, Austria	Multi-modal: flight	4.37	3	5.67
42	D	Bucharest, Romania to Vienna, Austria	Multi-modal: other	20.00	3	
43	D	Brussels, Belgium to Rome, Italy	Train	13.55	7	22.17
43	D	Brussels, Belgium to Rome, Italy	Bus			24.58
43	D	Brussels, Belgium to Rome, Italy	Multi-modal: flight	5.11	3	6.08
43	D	Brussels, Belgium to Rome, Italy	Multi-modal: other	13.83	6	
44	D	Vilnius, Lithuania to Warsaw, Poland	Train	8.40	1	
44	D	Vilnius, Lithuania to Warsaw, Poland	Bus	7.81	1	6.42
44	D	Vilnius, Lithuania to Warsaw, Poland	Multi-modal: flight	3.50	3	5.08
44	D	Vilnius, Lithuania to Warsaw, Poland	Multi-modal: other	7.93	2	
45	D	Trbovlje, Slovenia to Paris, France	Train			13.87
45	D	Trbovlje, Slovenia to Paris, France	Bus			
45	D	Trbovlje, Slovenia to Paris, France	Multi-modal: flight	5.42	3	6.00
45	D	Trbovlje, Slovenia to Paris, France	Multi-modal: other	14.53	5	
46	E	Gijón, Spain to Córdoba, Spain	Train	6.48	3	
46	E	Gijón, Spain to Córdoba, Spain	Bus			11.75
46	E	Gijón, Spain to Córdoba, Spain	Multi-modal: flight	10.45	3	
46	E	Gijón, Spain to Córdoba, Spain	Multi-modal: other	7.53	4	
47	E	Vejle, Denmark to Roskilde, Denmark	Train	2.22	3	2.98
47	E	Vejle, Denmark to Roskilde, Denmark	Bus			
47	E	Vejle, Denmark to Roskilde, Denmark	Multi-modal: flight	4.02	3	4.83
47	E	Vejle, Denmark to Roskilde, Denmark	Multi-modal: other	3.15	3	
48	E	El Ejido, Spain to Moratalaz, Spain	Train			
48	E	El Ejido, Spain to Moratalaz, Spain	Bus	8.19	4	
48	E	El Ejido, Spain to Moratalaz, Spain	Multi-modal: flight	5.51	3	
48	E	El Ejido, Spain to Moratalaz, Spain	Multi-modal: other	8.47	4	
49	E	Kraków, Poland to Wrocław, Poland	Train	2.95	1	2.80
49	E	Kraków, Poland to Wrocław, Poland	Bus	4.03	2	3.25
49	E	Kraków, Poland to Wrocław, Poland	Multi-modal: flight	5.30	3	
49	E	Kraków, Poland to Wrocław, Poland	Multi-modal: other	4.05	2	
50	E	Pori, Finland to Rovaniemi, Finland	Train	9.40	2	8.55
50	E	Pori, Finland to Rovaniemi, Finland	Bus			
50	E	Pori, Finland to Rovaniemi, Finland	Multi-modal: flight			
50	E	Pori, Finland to Rovaniemi, Finland	Multi-modal: other	10.56	2	

ID	Cluster	OD pair description	Mode	Journey time - direct booking (hrs)	Journey legs - direct booking (#)	Journey time MDMS (hrs)
51	E	Lippstadt, Germany to Eschweiler, Germany	Train	3.00	3	2.97
51	E	Lippstadt, Germany to Eschweiler, Germany	Bus			8.08
51	E	Lippstadt, Germany to Eschweiler, Germany	Multi-modal: flight	8.63	3	
51	E	Lippstadt, Germany to Eschweiler, Germany	Multi-modal: other			
52	E	Zaandam, Netherlands to Oss, Netherlands	Train	1.68	3	2.13
52	E	Zaandam, Netherlands to Oss, Netherlands	Bus			
52	E	Zaandam, Netherlands to Oss, Netherlands	Multi-modal: flight			
52	E	Zaandam, Netherlands to Oss, Netherlands	Multi-modal: other			
53	E	Zaanstad, Netherlands to Almelo, Netherlands	Train			
53	E	Zaanstad, Netherlands to Almelo, Netherlands	Bus			
53	E	Zaanstad, Netherlands to Almelo, Netherlands	Multi-modal: flight	6.76	3	
53	E	Zaanstad, Netherlands to Almelo, Netherlands	Multi-modal: other	2.83	3	
54	F	Verviers, Belgium to Sint-Niklaas, Belgium	Train	2.30	2	2.33
54	F	Verviers, Belgium to Sint-Niklaas, Belgium	Bus			
54	F	Verviers, Belgium to Sint-Niklaas, Belgium	Multi-modal: flight	8.62	3	
54	F	Verviers, Belgium to Sint-Niklaas, Belgium	Multi-modal: other			
55	F	Rijeka, Croatia to Zagreb, Croatia	Train	4.80	1	
55	F	Rijeka, Croatia to Zagreb, Croatia	Bus	2.67	1	2.08
55	F	Rijeka, Croatia to Zagreb, Croatia	Multi-modal: flight	7.95	3	
55	F	Rijeka, Croatia to Zagreb, Croatia	Multi-modal: other			
56	F	Split, Croatia to Pula, Croatia	Train			
56	F	Split, Croatia to Pula, Croatia	Bus	9.42	2	9.75
56	F	Split, Croatia to Pula, Croatia	Multi-modal: flight			13.75
56	F	Split, Croatia to Pula, Croatia	Multi-modal: other			
57	F	Prievidza, Slovakia to Martin, Slovakia	Train	1.70	1	
57	F	Prievidza, Slovakia to Martin, Slovakia	Bus			1.00
57	F	Prievidza, Slovakia to Martin, Slovakia	Multi-modal: flight			
57	F	Prievidza, Slovakia to Martin, Slovakia	Multi-modal: other	2.28	2	
58	F	Prešov, Slovakia to Bratislava, Slovakia	Train	5.72	2	
58	F	Prešov, Slovakia to Bratislava, Slovakia	Bus	5.92	1	5.92
58	F	Prešov, Slovakia to Bratislava, Slovakia	Multi-modal: flight			
58	F	Prešov, Slovakia to Bratislava, Slovakia	Multi-modal: other	6.48	2	
59	F	Limerick, Ireland to Galway, Ireland	Train	1.87	1	
59	F	Limerick, Ireland to Galway, Ireland	Bus	1.30	1	2.17
59	F	Limerick, Ireland to Galway, Ireland	Multi-modal: flight			
59	F	Limerick, Ireland to Galway, Ireland	Multi-modal: other	1.92	2	
60	F	Riga, Latvia to Jelgava, Latvia	Train	0.75	1	
60	F	Riga, Latvia to Jelgava, Latvia	Bus	1.40	1	
60	F	Riga, Latvia to Jelgava, Latvia	Multi-modal: flight			
60	F	Riga, Latvia to Jelgava, Latvia	Multi-modal: other			
61	F	Zalaegerszeg, Hungary to Szeged, Hungary	Train			

ID	Cluster	OD pair description	Mode	Journey time - direct booking (hrs)	Journey legs - direct booking (#)	Journey time MDMS (hrs)
61	F	Zalaegerszeg, Hungary to Szeged, Hungary	Bus	7.29	2	
61	F	Zalaegerszeg, Hungary to Szeged, Hungary	Multi-modal: flight			
61	F	Zalaegerszeg, Hungary to Szeged, Hungary	Multi-modal: other	6.38	3	
62	F	Galátsi, Greece to Irákleion, Greece	Train			
62	F	Galátsi, Greece to Irákleion, Greece	Bus			
62	F	Galátsi, Greece to Irákleion, Greece	Multi-modal: flight	3.47	3	
62	F	Galátsi, Greece to Irákleion, Greece	Multi-modal: other	9.33	2	
63	F	Anderlecht, Belgium to Roeselare, Belgium	Train	1.90	2	1.88
63	F	Anderlecht, Belgium to Roeselare, Belgium	Bus			
63	F	Anderlecht, Belgium to Roeselare, Belgium	Multi-modal: flight			
63	F	Anderlecht, Belgium to Roeselare, Belgium	Multi-modal: other	2.03	2	
64	F	Grudziądz, Poland to Płock, Poland	Train	3.05	1	
64	F	Grudziądz, Poland to Płock, Poland	Bus	4.41	3	2.25
64	F	Grudziądz, Poland to Płock, Poland	Multi-modal: flight	6.35	3	
64	F	Grudziądz, Poland to Płock, Poland	Multi-modal: other	2.75	2	
65	F	Liberec, Czech Republic to Opava, Czech Republic	Train	7.50	3	5.50
65	F	Liberec, Czech Republic to Opava, Czech Republic	Bus			8.08
65	F	Liberec, Czech Republic to Opava, Czech Republic	Multi-modal: flight	10.50	3	
65	F	Liberec, Czech Republic to Opava, Czech Republic	Multi-modal: other	6.28	4	
66	F	Bucharest, Romania to Turda, Romania	Train			
66	F	Bucharest, Romania to Turda, Romania	Bus			
66	F	Bucharest, Romania to Turda, Romania	Multi-modal: flight	3.93	3	4.83
66	F	Bucharest, Romania to Turda, Romania	Multi-modal: other	12.76	4	
67	F	Halmstad, Sweden to Täby, Sweden	Train	6.21	2	
67	F	Halmstad, Sweden to Täby, Sweden	Bus			9.58
67	F	Halmstad, Sweden to Täby, Sweden	Multi-modal: flight	7.42	3	5.33
67	F	Halmstad, Sweden to Täby, Sweden	Multi-modal: other	5.82	2	
68	F	Klaipėda, Lithuania to Kaunas, Lithuania	Train	6.38	2	
68	F	Klaipėda, Lithuania to Kaunas, Lithuania	Bus	3.45	3	12.75
68	F	Klaipėda, Lithuania to Kaunas, Lithuania	Multi-modal: flight			
68	F	Klaipėda, Lithuania to Kaunas, Lithuania	Multi-modal: other			
69	G	Tourcoing, France to Dordrecht, Netherlands	Train	2.90	4	3.83
69	G	Tourcoing, France to Dordrecht, Netherlands	Bus			2.85
69	G	Tourcoing, France to Dordrecht, Netherlands	Multi-modal: flight	9.01	3	
69	G	Tourcoing, France to Dordrecht, Netherlands	Multi-modal: other			
70	G	Bonn, Germany to Ostend, Belgium	Train	5.62	5	4.05
70	G	Bonn, Germany to Ostend, Belgium	Bus			6.75
70	G	Bonn, Germany to Ostend, Belgium	Multi-modal: flight	8.48	3	
70	G	Bonn, Germany to Ostend, Belgium	Multi-modal: other	5.67	4	
71	G	Bergisch Gladbach, Germany to Žilina, Slovakia	Train	17.40	4	14.28
71	G	Bergisch Gladbach, Germany to Žilina, Slovakia	Bus			17.15

ID	Cluster	OD pair description	Mode	Journey time - direct booking (hrs)	Journey legs - direct booking (#)	Journey time MDMS (hrs)
71	G	Bergisch Gladbach, Germany to Žilina, Slovakia	Multi-modal: flight	10.45	3	7.75
71	G	Bergisch Gladbach, Germany to Žilina, Slovakia	Multi-modal: other	13.28	6	
72	G	Leiden, Netherlands to Tarbes, France	Train	10.72	4	
72	G	Leiden, Netherlands to Tarbes, France	Bus			20.58
72	G	Leiden, Netherlands to Tarbes, France	Multi-modal: flight	7.60	3	8.00
72	G	Leiden, Netherlands to Tarbes, France	Multi-modal: other	10.72	4	
73	G	Sundsvall, Sweden to Odense, Denmark	Train	13.47	4	
73	G	Sundsvall, Sweden to Odense, Denmark	Bus			
73	G	Sundsvall, Sweden to Odense, Denmark	Multi-modal: flight	7.31	3	7.75
73	G	Sundsvall, Sweden to Odense, Denmark	Multi-modal: other	12.30	5	
74	G	Saint-Malo, France to Kaiserslautern, Germany	Train	6.82	2	6.97
74	G	Saint-Malo, France to Kaiserslautern, Germany	Bus			19.58
74	G	Saint-Malo, France to Kaiserslautern, Germany	Multi-modal: flight	9.95	3	7.92
74	G	Saint-Malo, France to Kaiserslautern, Germany	Multi-modal: other	6.97	4	
75	G	Innsbruck, Austria to Grenoble, France	Train	9.25	3	
75	G	Innsbruck, Austria to Grenoble, France	Bus			13.58
75	G	Innsbruck, Austria to Grenoble, France	Multi-modal: flight	9.32	3	
75	G	Innsbruck, Austria to Grenoble, France	Multi-modal: other	10.30	3	
76	G	Livorno, Italy to Kempten (Allgäu), Germany	Train	10.17	7	
76	G	Livorno, Italy to Kempten (Allgäu), Germany	Bus			
76	G	Livorno, Italy to Kempten (Allgäu), Germany	Multi-modal: flight	7.49	3	5.25
76	G	Livorno, Italy to Kempten (Allgäu), Germany	Multi-modal: other			
77	G	San Severo, Italy to Lleida, Spain	Train			
77	G	San Severo, Italy to Lleida, Spain	Bus			
77	G	San Severo, Italy to Lleida, Spain	Multi-modal: flight	7.65	3	
77	G	San Severo, Italy to Lleida, Spain	Multi-modal: other	23.48	5	
78	G	Luxembourg, Luxembourg to Orléans, France	Train			4.68
78	G	Luxembourg, Luxembourg to Orléans, France	Bus			8.08
78	G	Luxembourg, Luxembourg to Orléans, France	Multi-modal: flight	12.91	3	5.00
78	G	Luxembourg, Luxembourg to Orléans, France	Multi-modal: other	5.40	2	
79	H	Haskovo, Bulgaria to Sassari, Italy	Train			
79	H	Haskovo, Bulgaria to Sassari, Italy	Bus			
79	H	Haskovo, Bulgaria to Sassari, Italy	Multi-modal: flight	10.08	3	
79	H	Haskovo, Bulgaria to Sassari, Italy	Multi-modal: other	46.29	8	
80	H	Mérignac, France to Matera, Italy	Train			
80	H	Mérignac, France to Matera, Italy	Bus			33.25
80	H	Mérignac, France to Matera, Italy	Multi-modal: flight	7.83	3	9.58
80	H	Mérignac, France to Matera, Italy	Multi-modal: other	23.85	8	
81	H	Budapest XI. kerület, Hungary to Padova, Italy	Train	11.47	3	
81	H	Budapest XI. kerület, Hungary to Padova, Italy	Bus			
81	H	Budapest XI. kerület, Hungary to Padova, Italy	Multi-modal: flight	5.42	3	

ID	Cluster	OD pair description	Mode	Journey time - direct booking (hrs)	Journey legs - direct booking (#)	Journey time MDMS (hrs)
81	H	Budapest XI. kerület, Hungary to Padova, Italy	Multi-modal: other	12.48	4	
82	H	Stalowa Wola, Poland to Varna, Bulgaria	Train			
82	H	Stalowa Wola, Poland to Varna, Bulgaria	Bus			
82	H	Stalowa Wola, Poland to Varna, Bulgaria	Multi-modal: flight	9.17	3	
82	H	Stalowa Wola, Poland to Varna, Bulgaria	Multi-modal: other	34.88	7	
83	H	Narva, Estonia to Como, Italy	Train			
83	H	Narva, Estonia to Como, Italy	Bus			48.33
83	H	Narva, Estonia to Como, Italy	Multi-modal: flight	17.13	3	
83	H	Narva, Estonia to Como, Italy	Multi-modal: other	36.57	10	
84	H	Olbia, Italy to Volos, Greece	Train			
84	H	Olbia, Italy to Volos, Greece	Bus			
84	H	Olbia, Italy to Volos, Greece	Multi-modal: flight	11.93	3	
84	H	Olbia, Italy to Volos, Greece	Multi-modal: other	42.08	10	
85	H	Slobozia, Romania to České Budějovice, Czech Republic	Train			
85	H	Slobozia, Romania to České Budějovice, Czech Republic	Bus			
85	H	Slobozia, Romania to České Budějovice, Czech Republic	Multi-modal: flight	12.60	3	
85	H	Slobozia, Romania to České Budějovice, Czech Republic	Multi-modal: other	27.73	7	
86	I	Gummersbach, Germany to Fulda, Germany	Train	3.94	3	3.73
86	I	Gummersbach, Germany to Fulda, Germany	Bus			
86	I	Gummersbach, Germany to Fulda, Germany	Multi-modal: flight	6.52	3	
86	I	Gummersbach, Germany to Fulda, Germany	Multi-modal: other	4.39	4	
87	I	Cottbus, Germany to Bremerhaven, Germany	Train	5.47	3	5.45
87	I	Cottbus, Germany to Bremerhaven, Germany	Bus			
87	I	Cottbus, Germany to Bremerhaven, Germany	Multi-modal: flight	7.53	3	6.92
87	I	Cottbus, Germany to Bremerhaven, Germany	Multi-modal: other			
88	I	Bayreuth, Germany to Aalen, Germany	Train	3.35	3	3.35
88	I	Bayreuth, Germany to Aalen, Germany	Bus			2.17
88	I	Bayreuth, Germany to Aalen, Germany	Multi-modal: flight	5.78	3	
88	I	Bayreuth, Germany to Aalen, Germany	Multi-modal: other	4.03	5	
89	I	Sliven, Bulgaria to Shumen, Bulgaria	Train	3.08	2	
89	I	Sliven, Bulgaria to Shumen, Bulgaria	Bus			
89	I	Sliven, Bulgaria to Shumen, Bulgaria	Multi-modal: flight			
89	I	Sliven, Bulgaria to Shumen, Bulgaria	Multi-modal: other	6.98	4	
90	I	Szczecin, Poland to Białystok, Poland	Train	7.34	3	6.95
90	I	Szczecin, Poland to Białystok, Poland	Bus			12.08
90	I	Szczecin, Poland to Białystok, Poland	Multi-modal: flight	7.50	3	
90	I	Szczecin, Poland to Białystok, Poland	Multi-modal: other	8.63	2	
91	I	Łódź, Poland to Tarnów, Poland	Train	4.79	2	
91	I	Łódź, Poland to Tarnów, Poland	Bus			6.42
91	I	Łódź, Poland to Tarnów, Poland	Multi-modal: flight	5.68	3	
91	I	Łódź, Poland to Tarnów, Poland	Multi-modal: other			

ID	Cluster	OD pair description	Mode	Journey time - direct booking (hrs)	Journey legs - direct booking (#)	Journey time MDMS (hrs)
92	I	Botoşani, Romania to Buzău, Romania	Train			
92	I	Botoşani, Romania to Buzău, Romania	Bus	14.20	3	
92	I	Botoşani, Romania to Buzău, Romania	Multi-modal: flight	5.77	3	5.25
92	I	Botoşani, Romania to Buzău, Romania	Multi-modal: other	11.48	3	
93	J	Schweinfurt, Germany to Vigevano, Italy	Train	11.03	7	12.42
93	J	Schweinfurt, Germany to Vigevano, Italy	Bus			15.17
93	J	Schweinfurt, Germany to Vigevano, Italy	Multi-modal: flight	6.77	3	5.17
93	J	Schweinfurt, Germany to Vigevano, Italy	Multi-modal: other			
94	J	Seinäjoki, Finland to Mülheim, Germany	Train			
94	J	Seinäjoki, Finland to Mülheim, Germany	Bus			
94	J	Seinäjoki, Finland to Mülheim, Germany	Multi-modal: flight	8.48	3	
94	J	Seinäjoki, Finland to Mülheim, Germany	Multi-modal: other	32.56	8	
95	J	Tübingen, Germany to Tulcea, Romania	Train	34.50	6	
95	J	Tübingen, Germany to Tulcea, Romania	Bus			
95	J	Tübingen, Germany to Tulcea, Romania	Multi-modal: flight	9.53	3	
95	J	Tübingen, Germany to Tulcea, Romania	Multi-modal: other	35.00	9	
96	J	Albi, France to Flensburg, Germany	Train			
96	J	Albi, France to Flensburg, Germany	Bus			
96	J	Albi, France to Flensburg, Germany	Multi-modal: flight	10.40	3	8.00
96	J	Albi, France to Flensburg, Germany	Multi-modal: other	20.76	6	
97	J	Bad Salzuflen, Germany to Pardubice, Czech Republic	Train	10.40	4	10.67
97	J	Bad Salzuflen, Germany to Pardubice, Czech Republic	Bus			18.42
97	J	Bad Salzuflen, Germany to Pardubice, Czech Republic	Multi-modal: flight	7.04	3	
97	J	Bad Salzuflen, Germany to Pardubice, Czech Republic	Multi-modal: other	8.90	4	
98	J	Crotone, Italy to Schwerte, Germany	Train			
98	J	Crotone, Italy to Schwerte, Germany	Bus			35.50
98	J	Crotone, Italy to Schwerte, Germany	Multi-modal: flight	8.19	3	
98	J	Crotone, Italy to Schwerte, Germany	Multi-modal: other	22.07	9	
99	J	Lahti, Finland to Jönköping, Sweden	Train			
99	J	Lahti, Finland to Jönköping, Sweden	Bus			
99	J	Lahti, Finland to Jönköping, Sweden	Multi-modal: flight	8.77	3	5.42
99	J	Lahti, Finland to Jönköping, Sweden	Multi-modal: other	19.49	7	
100	J	Pardubice, Czech Republic to Nyíregyháza, Hungary	Train	9.25	3	
100	J	Pardubice, Czech Republic to Nyíregyháza, Hungary	Bus			
100	J	Pardubice, Czech Republic to Nyíregyháza, Hungary	Multi-modal: flight	7.07	3	
100	J	Pardubice, Czech Republic to Nyíregyháza, Hungary	Multi-modal: other	10.25	4	

Source: Ricardo analysis based on data from Google Maps[254], Google Flights[255], and Omio[256]

11.5.2 Cost analysis

As with the time analysis above, please note that the final column 'assumed cost delta', shows a value of 100% (i.e. no difference) in cases where the Omio cost is cheaper.

Table 0-26: Comparison of journey costs available via two different channels: directly via operators (as collected from operator websites), and via MDMS platforms (proxy – Omio).

ID	Cluster	OD pair description	Mode	Journey cost - direct booking (EUR)	Journey cost - MDMS (EUR)	Assumed cost delta (%)
1	A	Barcelona, Spain to Palma, Spain	Train			
1	A	Barcelona, Spain to Palma, Spain	Bus			
1	A	Barcelona, Spain to Palma, Spain	Multi-modal: flight	37.49	15.47	100%
1	A	Barcelona, Spain to Palma, Spain	Multi-modal: other	87.90		
2	A	Freising, Germany to Hamburg, Germany	Train	45.79	79.73	57%
2	A	Freising, Germany to Hamburg, Germany	Bus		48.79	
2	A	Freising, Germany to Hamburg, Germany	Multi-modal: flight	159.76	128.52	100%
2	A	Freising, Germany to Hamburg, Germany	Multi-modal: other			94%
3	A	Copenhagen, Denmark to Aalborg, Denmark	Train	88.58		
3	A	Copenhagen, Denmark to Aalborg, Denmark	Bus	18.35	24.99	73%
3	A	Copenhagen, Denmark to Aalborg, Denmark	Multi-modal: flight	298.69	53.55	100%
3	A	Copenhagen, Denmark to Aalborg, Denmark	Multi-modal: other			100%
4	A	Ingolstadt, Germany to Munich, Germany	Train	14.99	8.33	100%
4	A	Ingolstadt, Germany to Munich, Germany	Bus			
4	A	Ingolstadt, Germany to Munich, Germany	Multi-modal: flight			
4	A	Ingolstadt, Germany to Munich, Germany	Multi-modal: other			100%
5	A	Barcelona, Spain to Girona, Spain	Train	13.35		
5	A	Barcelona, Spain to Girona, Spain	Bus		19.04	
5	A	Barcelona, Spain to Girona, Spain	Multi-modal: flight			
5	A	Barcelona, Spain to Girona, Spain	Multi-modal: other			70%

[254] See e.g. Google Maps Platform Documentation | Routes API | Google for Developers
[255] See e.g. Flights Search | Google for Developers
[256] See Book & Compare - Train, Coach, Flight & Ferry Tickets - Omio

ID	Cluster	OD pair description	Mode	Journey cost - direct booking (EUR)	Journey cost - MDMS (EUR)	Assumed cost delta (%)
6	A	Helsinki, Finland to Oulu, Finland	Train	59.00	30.94	100%
6	A	Helsinki, Finland to Oulu, Finland	Bus	18.30	23.80	77%
6	A	Helsinki, Finland to Oulu, Finland	Multi-modal: flight	98.18	101.15	97%
6	A	Helsinki, Finland to Oulu, Finland	Multi-modal: other			100%
7	A	Hoorn, Netherlands to Amsterdam, Netherlands	Train	10.20	13.09	78%
7	A	Hoorn, Netherlands to Amsterdam, Netherlands	Bus			
7	A	Hoorn, Netherlands to Amsterdam, Netherlands	Multi-modal: flight			
7	A	Hoorn, Netherlands to Amsterdam, Netherlands	Multi-modal: other			78%
8	B	Paris, France to Nice, France	Train	99.00	90.44	100%
8	B	Paris, France to Nice, France	Bus		71.40	
8	B	Paris, France to Nice, France	Multi-modal: flight	148.51	117.81	100%
8	B	Paris, France to Nice, France	Multi-modal: other	67.20		94%
9	B	Catania, Italy to Rome, Italy	Train	31.90	41.65	77%
9	B	Catania, Italy to Rome, Italy	Bus		30.94	
9	B	Catania, Italy to Rome, Italy	Multi-modal: flight	83.40	24.99	100%
9	B	Catania, Italy to Rome, Italy	Multi-modal: other	42.34		100%
10	B	Athens, Greece to Thessaloníki, Greece	Train	0.00		
10	B	Athens, Greece to Thessaloníki, Greece	Bus	0.00		
10	B	Athens, Greece to Thessaloníki, Greece	Multi-modal: flight	74.97	78.54	95%
10	B	Athens, Greece to Thessaloníki, Greece	Multi-modal: other	0.00		
11	B	Piraeus, Greece to Ermoúpolis, Greece	Train			
11	B	Piraeus, Greece to Ermoúpolis, Greece	Bus			
11	B	Piraeus, Greece to Ermoúpolis, Greece	Multi-modal: flight			
11	B	Piraeus, Greece to Ermoúpolis, Greece	Multi-modal: other	54.70		
12	B	Busto Arsizio, Italy to Milan, Italy	Train	4.40	4.76	92%
12	B	Busto Arsizio, Italy to Milan, Italy	Bus		4.76	
12	B	Busto Arsizio, Italy to Milan, Italy	Multi-modal: flight			
12	B	Busto Arsizio, Italy to Milan, Italy	Multi-modal: other			92%
13	B	Gdańsk, Poland to Wejherowo, Poland	Train	4.03	15.47	26%
13	B	Gdańsk, Poland to Wejherowo, Poland	Bus			
13	B	Gdańsk, Poland to Wejherowo, Poland	Multi-modal: flight			

ID	Cluster	OD pair description	Mode	Journey cost - direct booking (EUR)	Journey cost - MDMS (EUR)	Assumed cost delta (%)
13	B	Gdańsk, Poland to Wejherowo, Poland	Multi-modal: other	0.00		
14	B	Luleå, Sweden to Stockholm, Sweden	Train	80.06	76.16	100%
14	B	Luleå, Sweden to Stockholm, Sweden	Bus			
14	B	Luleå, Sweden to Stockholm, Sweden	Multi-modal: flight		28.56	
14	B	Luleå, Sweden to Stockholm, Sweden	Multi-modal: other	83.43		100%
15	B	Dubrovnik, Croatia to Split, Croatia	Train			
15	B	Dubrovnik, Croatia to Split, Croatia	Bus	16.00	20.23	79%
15	B	Dubrovnik, Croatia to Split, Croatia	Multi-modal: flight		101.15	
15	B	Dubrovnik, Croatia to Split, Croatia	Multi-modal: other	50.00		79%
16	B	Dublin, Ireland to Drogheda, Ireland	Train			
16	B	Dublin, Ireland to Drogheda, Ireland	Bus	0.00	9.52	0%
16	B	Dublin, Ireland to Drogheda, Ireland	Multi-modal: flight			
16	B	Dublin, Ireland to Drogheda, Ireland	Multi-modal: other	0.00		
17	B	Riga, Latvia to Valmiera, Latvia	Train			
17	B	Riga, Latvia to Valmiera, Latvia	Bus	0.00		
17	B	Riga, Latvia to Valmiera, Latvia	Multi-modal: flight			
17	B	Riga, Latvia to Valmiera, Latvia	Multi-modal: other	0.00		
18	B	Vilnius, Lithuania to Kaunas, Lithuania	Train			
18	B	Vilnius, Lithuania to Kaunas, Lithuania	Bus			
18	B	Vilnius, Lithuania to Kaunas, Lithuania	Multi-modal: flight			
18	B	Vilnius, Lithuania to Kaunas, Lithuania	Multi-modal: other			
19	C	Warsaw, Poland to Amsterdam, Netherlands	Train	73.29	76.16	96%
19	C	Warsaw, Poland to Amsterdam, Netherlands	Bus		63.07	
19	C	Warsaw, Poland to Amsterdam, Netherlands	Multi-modal: flight	223.72	155.89	100%
19	C	Warsaw, Poland to Amsterdam, Netherlands	Multi-modal: other			100%
20	C	Paris, France to Madrid, Spain	Train	133.72	214.20	62%
20	C	Paris, France to Madrid, Spain	Bus		51.17	
20	C	Paris, France to Madrid, Spain	Multi-modal: flight	183.74	104.72	100%
20	C	Paris, France to Madrid, Spain	Multi-modal: other	171.58		100%
21	C	Palma, Spain to Düsseldorf, Germany	Train			
21	C	Palma, Spain to Düsseldorf, Germany	Bus			
21	C	Palma, Spain to Düsseldorf, Germany	Multi-modal: flight	42.13	36.89	100%

ID	Cluster	OD pair description	Mode	Journey cost - direct booking (EUR)	Journey cost - MDMS (EUR)	Assumed cost delta (%)
21	C	Palma, Spain to Düsseldorf, Germany	Multi-modal: other	0.00		
22	C	Rome, Italy to Barcelona, Spain	Train			
22	C	Rome, Italy to Barcelona, Spain	Bus		110.67	
22	C	Rome, Italy to Barcelona, Spain	Multi-modal: flight	59.07	32.13	100%
22	C	Rome, Italy to Barcelona, Spain	Multi-modal: other	165.58		100%
23	C	Budapest, Hungary to Madrid, Spain	Train			
23	C	Budapest, Hungary to Madrid, Spain	Bus		160.65	
23	C	Budapest, Hungary to Madrid, Spain	Multi-modal: flight	80.92	109.48	74%
23	C	Budapest, Hungary to Madrid, Spain	Multi-modal: other	0.00		
24	C	Tallinn, Estonia to Helsinki, Finland	Train			
24	C	Tallinn, Estonia to Helsinki, Finland	Bus	40.31	46.41	87%
24	C	Tallinn, Estonia to Helsinki, Finland	Multi-modal: flight	81.52		
24	C	Tallinn, Estonia to Helsinki, Finland	Multi-modal: other	37.30		80%
25	C	Helsinki, Finland to Stockholm, Sweden	Train			
25	C	Helsinki, Finland to Stockholm, Sweden	Bus			
25	C	Helsinki, Finland to Stockholm, Sweden	Multi-modal: flight	108.08	34.51	100%
25	C	Helsinki, Finland to Stockholm, Sweden	Multi-modal: other	62.90		
26	C	Hørsholm, Denmark to Malmö, Sweden	Train	28.81		
26	C	Hørsholm, Denmark to Malmö, Sweden	Bus			
26	C	Hørsholm, Denmark to Malmö, Sweden	Multi-modal: flight			
26	C	Hørsholm, Denmark to Malmö, Sweden	Multi-modal: other	13.94		
27	C	Amsterdam, Netherlands to Rome, Italy	Train	159.06		
27	C	Amsterdam, Netherlands to Rome, Italy	Bus		104.72	
27	C	Amsterdam, Netherlands to Rome, Italy	Multi-modal: flight	176.22	160.65	100%
27	C	Amsterdam, Netherlands to Rome, Italy	Multi-modal: other			100%
28	C	Frankfurt am Main, Germany to Vienna, Austria	Train	50.00	71.40	70%
28	C	Frankfurt am Main, Germany to Vienna, Austria	Bus		42.84	
28	C	Frankfurt am Main, Germany to Vienna, Austria	Multi-modal: flight	201.11	160.65	100%
28	C	Frankfurt am Main, Germany to Vienna, Austria	Multi-modal: other			100%
29	C	Sofia, Bulgaria to Vienna, Austria	Train			

ID	Cluster	OD pair description	Mode	Journey cost - direct booking (EUR)	Journey cost - MDMS (EUR)	Assumed cost delta (%)
29	C	Sofia, Bulgaria to Vienna, Austria	Bus	70.05	36.89	100%
29	C	Sofia, Bulgaria to Vienna, Austria	Multi-modal: flight	42.84	27.37	100%
29	C	Sofia, Bulgaria to Vienna, Austria	Multi-modal: other	102.29		100%
30	C	Luxembourg, Luxembourg to Porto, Portugal	Train			
30	C	Luxembourg, Luxembourg to Porto, Portugal	Bus		140.42	
30	C	Luxembourg, Luxembourg to Porto, Portugal	Multi-modal: flight	166.49	245.14	68%
30	C	Luxembourg, Luxembourg to Porto, Portugal	Multi-modal: other	0.00		
31	C	Copenhagen, Denmark to Hamburg, Germany	Train		30.94	
31	C	Copenhagen, Denmark to Hamburg, Germany	Bus	18.37	29.75	62%
31	C	Copenhagen, Denmark to Hamburg, Germany	Multi-modal: flight	199.92	139.23	100%
31	C	Copenhagen, Denmark to Hamburg, Germany	Multi-modal: other	20.15		62%
32	C	Prague, Czech Republic to Vienna, Austria	Train	20.70	26.18	79%
32	C	Prague, Czech Republic to Vienna, Austria	Bus	15.90	17.85	89%
32	C	Prague, Czech Republic to Vienna, Austria	Multi-modal: flight	151.80	183.26	83%
32	C	Prague, Czech Republic to Vienna, Austria	Multi-modal: other			89%
33	D	Budapest, Hungary to Bratislava, Slovakia	Train	10.66	36.89	29%
33	D	Budapest, Hungary to Bratislava, Slovakia	Bus		13.09	
33	D	Budapest, Hungary to Bratislava, Slovakia	Multi-modal: flight	254.07	198.73	100%
33	D	Budapest, Hungary to Bratislava, Slovakia	Multi-modal: other			81%
34	D	Trbovlje, Slovenia to Zagreb, Croatia	Train			
34	D	Trbovlje, Slovenia to Zagreb, Croatia	Bus			
34	D	Trbovlje, Slovenia to Zagreb, Croatia	Multi-modal: flight	344.51		
34	D	Trbovlje, Slovenia to Zagreb, Croatia	Multi-modal: other	8.58		
35	D	Bratislava, Slovakia to Prague, Czech Republic	Train	10.90	17.85	61%
35	D	Bratislava, Slovakia to Prague, Czech Republic	Bus		16.66	
35	D	Bratislava, Slovakia to Prague, Czech Republic	Multi-modal: flight	95.80	185.64	52%
35	D	Bratislava, Slovakia to Prague, Czech Republic	Multi-modal: other			65%
36	D	Cluj-Napoca, Romania to Budapest, Hungary	Train	53.29		
36	D	Cluj-Napoca, Romania to Budapest, Hungary	Bus	22.49	26.18	86%

ID	Cluster	OD pair description	Mode	Journey cost - direct booking (EUR)	Journey cost - MDMS (EUR)	Assumed cost delta (%)
36	D	Cluj-Napoca, Romania to Budapest, Hungary	Multi-modal: flight	188.62		
36	D	Cluj-Napoca, Romania to Budapest, Hungary	Multi-modal: other	29.61		86%
37	D	Paris, France to Lisbon, Portugal	Train			
37	D	Paris, France to Lisbon, Portugal	Bus		86.87	
37	D	Paris, France to Lisbon, Portugal	Multi-modal: flight	123.84	148.75	83%
37	D	Paris, France to Lisbon, Portugal	Multi-modal: other	0.00		
38	D	Lyon, France to Turin, Italy	Train	0.00	98.77	0%
38	D	Lyon, France to Turin, Italy	Bus	25.03	27.37	91%
38	D	Lyon, France to Turin, Italy	Multi-modal: flight	337.25		
38	D	Lyon, France to Turin, Italy	Multi-modal: other	64.90		91%
39	D	Paris, France to Porto, Portugal	Train			
39	D	Paris, France to Porto, Portugal	Bus		85.68	
39	D	Paris, France to Porto, Portugal	Multi-modal: flight	114.36	116.62	98%
39	D	Paris, France to Porto, Portugal	Multi-modal: other	0.00		
40	D	Dublin, Ireland to Paris, France	Train			
40	D	Dublin, Ireland to Paris, France	Bus			
40	D	Dublin, Ireland to Paris, France	Multi-modal: flight	56.58	26.18	100%
40	D	Dublin, Ireland to Paris, France	Multi-modal: other			
41	D	Lisbon, Portugal to Brussels, Belgium	Train			
41	D	Lisbon, Portugal to Brussels, Belgium	Bus		70.21	
41	D	Lisbon, Portugal to Brussels, Belgium	Multi-modal: flight	179.69	72.59	100%
41	D	Lisbon, Portugal to Brussels, Belgium	Multi-modal: other			
42	D	Bucharest, Romania to Vienna, Austria	Train	60.72		
42	D	Bucharest, Romania to Vienna, Austria	Bus		52.36	
42	D	Bucharest, Romania to Vienna, Austria	Multi-modal: flight	79.14	28.56	100%
42	D	Bucharest, Romania to Vienna, Austria	Multi-modal: other			100%
43	D	Brussels, Belgium to Rome, Italy	Train	0.00	230.86	0%
43	D	Brussels, Belgium to Rome, Italy	Bus		88.06	
43	D	Brussels, Belgium to Rome, Italy	Multi-modal: flight	126.24	79.73	100%
43	D	Brussels, Belgium to Rome, Italy	Multi-modal: other	0.00		
44	D	Vilnius, Lithuania to Warsaw, Poland	Train			

ID	Cluster	OD pair description	Mode	Journey cost - direct booking (EUR)	Journey cost - MDMS (EUR)	Assumed cost delta (%)
44	D	Vilnius, Lithuania to Warsaw, Poland	Bus	21.93	23.80	92%
44	D	Vilnius, Lithuania to Warsaw, Poland	Multi-modal: flight	347.48	581.91	60%
44	D	Vilnius, Lithuania to Warsaw, Poland	Multi-modal: other			92%
45	D	Trbovlje, Slovenia to Paris, France	Train		317.73	
45	D	Trbovlje, Slovenia to Paris, France	Bus			
45	D	Trbovlje, Slovenia to Paris, France	Multi-modal: flight	132.57	105.91	100%
45	D	Trbovlje, Slovenia to Paris, France	Multi-modal: other			
46	E	Gijón, Spain to Córdoba, Spain	Train	61.45		
46	E	Gijón, Spain to Córdoba, Spain	Bus		44.03	
46	E	Gijón, Spain to Córdoba, Spain	Multi-modal: flight	226.27		
46	E	Gijón, Spain to Córdoba, Spain	Multi-modal: other	101.07		100%
47	E	Vejle, Denmark to Roskilde, Denmark	Train		64.26	
47	E	Vejle, Denmark to Roskilde, Denmark	Bus			
47	E	Vejle, Denmark to Roskilde, Denmark	Multi-modal: flight	133.94	152.32	88%
47	E	Vejle, Denmark to Roskilde, Denmark	Multi-modal: other			
48	E	El Ejido, Spain to Moratalaz, Spain	Train			
48	E	El Ejido, Spain to Moratalaz, Spain	Bus	36.79		
48	E	El Ejido, Spain to Moratalaz, Spain	Multi-modal: flight	69.26		
48	E	El Ejido, Spain to Moratalaz, Spain	Multi-modal: other	41.14		
49	E	Kraków, Poland to Wrocław, Poland	Train	14.73	49.98	29%
49	E	Kraków, Poland to Wrocław, Poland	Bus	7.10	8.33	85%
49	E	Kraków, Poland to Wrocław, Poland	Multi-modal: flight	138.64		
49	E	Kraków, Poland to Wrocław, Poland	Multi-modal: other	14.73		85%
50	E	Pori, Finland to Rovaniemi, Finland	Train	37.00	45.22	82%
50	E	Pori, Finland to Rovaniemi, Finland	Bus			
50	E	Pori, Finland to Rovaniemi, Finland	Multi-modal: flight			
50	E	Pori, Finland to Rovaniemi, Finland	Multi-modal: other	29.70		66%
51	E	Lippstadt, Germany to Eschweiler, Germany	Train	38.60	45.22	85%
51	E	Lippstadt, Germany to Eschweiler, Germany	Bus		19.04	
51	E	Lippstadt, Germany to Eschweiler, Germany	Multi-modal: flight	288.44		
51	E	Lippstadt, Germany to Eschweiler, Germany	Multi-modal: other			100%
52	E	Zaandam, Netherlands to Oss, Netherlands	Train	24.30	28.56	85%

ID	Cluster	OD pair description	Mode	Journey cost - direct booking (EUR)	Journey cost - MDMS (EUR)	Assumed cost delta (%)
52	E	Zaandam, Netherlands to Oss, Netherlands	Bus			
52	E	Zaandam, Netherlands to Oss, Netherlands	Multi-modal: flight			
52	E	Zaandam, Netherlands to Oss, Netherlands	Multi-modal: other			85%
53	E	Zaanstad, Netherlands to Almelo, Netherlands	Train			
53	E	Zaanstad, Netherlands to Almelo, Netherlands	Bus			
53	E	Zaanstad, Netherlands to Almelo, Netherlands	Multi-modal: flight	332.90		
53	E	Zaanstad, Netherlands to Almelo, Netherlands	Multi-modal: other	35.40		
54	F	Verviers, Belgium to Sint-Niklaas, Belgium	Train	0.00	28.56	0%
54	F	Verviers, Belgium to Sint-Niklaas, Belgium	Bus			
54	F	Verviers, Belgium to Sint-Niklaas, Belgium	Multi-modal: flight	242.44		
54	F	Verviers, Belgium to Sint-Niklaas, Belgium	Multi-modal: other			
55	F	Rijeka, Croatia to Zagreb, Croatia	Train	7.97		
55	F	Rijeka, Croatia to Zagreb, Croatia	Bus	13.10	11.90	100%
55	F	Rijeka, Croatia to Zagreb, Croatia	Multi-modal: flight	283.82		
55	F	Rijeka, Croatia to Zagreb, Croatia	Multi-modal: other			67%
56	F	Split, Croatia to Pula, Croatia	Train			
56	F	Split, Croatia to Pula, Croatia	Bus	48.96	52.36	94%
56	F	Split, Croatia to Pula, Croatia	Multi-modal: flight		146.37	
56	F	Split, Croatia to Pula, Croatia	Multi-modal: other			94%
57	F	Prievidza, Slovakia to Martin, Slovakia	Train			
57	F	Prievidza, Slovakia to Martin, Slovakia	Bus		4.76	
57	F	Prievidza, Slovakia to Martin, Slovakia	Multi-modal: flight			
57	F	Prievidza, Slovakia to Martin, Slovakia	Multi-modal: other	4.90		100%
58	F	Prešov, Slovakia to Bratislava, Slovakia	Train	19.80		
58	F	Prešov, Slovakia to Bratislava, Slovakia	Bus	25.10	30.94	81%
58	F	Prešov, Slovakia to Bratislava, Slovakia	Multi-modal: flight			
58	F	Prešov, Slovakia to Bratislava, Slovakia	Multi-modal: other	39.20		64%
59	F	Limerick, Ireland to Galway, Ireland	Train	0.00		
59	F	Limerick, Ireland to Galway, Ireland	Bus	20.00	11.90	100%
59	F	Limerick, Ireland to Galway, Ireland	Multi-modal: flight			

ID	Cluster	OD pair description	Mode	Journey cost - direct booking (EUR)	Journey cost - MDMS (EUR)	Assumed cost delta (%)
59	F	Limerick, Ireland to Galway, Ireland	Multi-modal: other	20.35		100%
60	F	Riga, Latvia to Jelgava, Latvia	Train	2.50		
60	F	Riga, Latvia to Jelgava, Latvia	Bus	3.00		
60	F	Riga, Latvia to Jelgava, Latvia	Multi-modal: flight			
60	F	Riga, Latvia to Jelgava, Latvia	Multi-modal: other			
61	F	Zalaegerszeg, Hungary to Szeged, Hungary	Train			
61	F	Zalaegerszeg, Hungary to Szeged, Hungary	Bus	16.93		
61	F	Zalaegerszeg, Hungary to Szeged, Hungary	Multi-modal: flight			
61	F	Zalaegerszeg, Hungary to Szeged, Hungary	Multi-modal: other			
62	F	Galátsi, Greece to Irákleion, Greece	Train			
62	F	Galátsi, Greece to Irákleion, Greece	Bus			
62	F	Galátsi, Greece to Irákleion, Greece	Multi-modal: flight	64.26		
62	F	Galátsi, Greece to Irákleion, Greece	Multi-modal: other	272.10		
63	F	Anderlecht, Belgium to Roeselare, Belgium	Train		23.80	
63	F	Anderlecht, Belgium to Roeselare, Belgium	Bus			
63	F	Anderlecht, Belgium to Roeselare, Belgium	Multi-modal: flight			
63	F	Anderlecht, Belgium to Roeselare, Belgium	Multi-modal: other	19.10		80%
64	F	Grudziądz, Poland to Płock, Poland	Train	0.00		
64	F	Grudziądz, Poland to Płock, Poland	Bus	16.37	14.28	100%
64	F	Grudziądz, Poland to Płock, Poland	Multi-modal: flight	128.52		
64	F	Grudziądz, Poland to Płock, Poland	Multi-modal: other			100%
65	F	Liberec, Czech Republic to Opava, Czech Republic	Train		20.23	
65	F	Liberec, Czech Republic to Opava, Czech Republic	Bus		32.13	
65	F	Liberec, Czech Republic to Opava, Czech Republic	Multi-modal: flight	70.76		
65	F	Liberec, Czech Republic to Opava, Czech Republic	Multi-modal: other			
66	F	Bucharest, Romania to Turda, Romania	Train			
66	F	Bucharest, Romania to Turda, Romania	Bus			
66	F	Bucharest, Romania to Turda, Romania	Multi-modal: flight	110.67	126.14	88%
66	F	Bucharest, Romania to Turda, Romania	Multi-modal: other			
67	F	Halmstad, Sweden to Täby, Sweden	Train	82.63		
67	F	Halmstad, Sweden to Täby, Sweden	Bus		66.64	

ID	Cluster	OD pair description	Mode	Journey cost - direct booking (EUR)	Journey cost - MDMS (EUR)	Assumed cost delta (%)
67	F	Halmstad, Sweden to Täby, Sweden	Multi-modal: flight	184.35	322.49	57%
67	F	Halmstad, Sweden to Täby, Sweden	Multi-modal: other	76.98		100%
68	F	Klaipėda, Lithuania to Kaunas, Lithuania	Train			
68	F	Klaipėda, Lithuania to Kaunas, Lithuania	Bus		35.70	
68	F	Klaipėda, Lithuania to Kaunas, Lithuania	Multi-modal: flight			
68	F	Klaipėda, Lithuania to Kaunas, Lithuania	Multi-modal: other			
69	G	Tourcoing, France to Dordrecht, Netherlands	Train	49.10	113.05	43%
69	G	Tourcoing, France to Dordrecht, Netherlands	Bus		22.61	
69	G	Tourcoing, France to Dordrecht, Netherlands	Multi-modal: flight	256.55		
69	G	Tourcoing, France to Dordrecht, Netherlands	Multi-modal: other			100%
70	G	Bonn, Germany to Ostend, Belgium	Train	121.89	85.68	100%
70	G	Bonn, Germany to Ostend, Belgium	Bus		26.18	
70	G	Bonn, Germany to Ostend, Belgium	Multi-modal: flight	186.12		
70	G	Bonn, Germany to Ostend, Belgium	Multi-modal: other	52.70		100%
71	G	Bergisch Gladbach, Germany to Žilina, Slovakia	Train	123.98	94.01	100%
71	G	Bergisch Gladbach, Germany to Žilina, Slovakia	Bus		74.97	
71	G	Bergisch Gladbach, Germany to Žilina, Slovakia	Multi-modal: flight	431.26	168.98	100%
71	G	Bergisch Gladbach, Germany to Žilina, Slovakia	Multi-modal: other	198.38		100%
72	G	Leiden, Netherlands to Tarbes, France	Train	58.50		
72	G	Leiden, Netherlands to Tarbes, France	Bus		77.35	
72	G	Leiden, Netherlands to Tarbes, France	Multi-modal: flight	268.35	180.88	100%
72	G	Leiden, Netherlands to Tarbes, France	Multi-modal: other	59.00		76%
73	G	Sundsvall, Sweden to Odense, Denmark	Train			
73	G	Sundsvall, Sweden to Odense, Denmark	Bus			
73	G	Sundsvall, Sweden to Odense, Denmark	Multi-modal: flight	131.31	374.85	35%
73	G	Sundsvall, Sweden to Odense, Denmark	Multi-modal: other			
74	G	Saint-Malo, France to Kaiserslautern, Germany	Train	83.20	108.29	77%
74	G	Saint-Malo, France to Kaiserslautern, Germany	Bus		69.02	
74	G	Saint-Malo, France to Kaiserslautern, Germany	Multi-modal: flight	325.11	166.60	100%

ID	Cluster	OD pair description	Mode	Journey cost - direct booking (EUR)	Journey cost - MDMS (EUR)	Assumed cost delta (%)
74	G	Saint-Malo, France to Kaiserslautern, Germany	Multi-modal: other	99.20		100%
75	G	Innsbruck, Austria to Grenoble, France	Train	92.17		
75	G	Innsbruck, Austria to Grenoble, France	Bus		57.12	
75	G	Innsbruck, Austria to Grenoble, France	Multi-modal: flight	214.34		
75	G	Innsbruck, Austria to Grenoble, France	Multi-modal: other	71.62		100%
76	G	Livorno, Italy to Kempten (Allgäu), Germany	Train			
76	G	Livorno, Italy to Kempten (Allgäu), Germany	Bus			
76	G	Livorno, Italy to Kempten (Allgäu), Germany	Multi-modal: flight	247.60	29.75	100%
76	G	Livorno, Italy to Kempten (Allgäu), Germany	Multi-modal: other			
77	G	San Severo, Italy to Lleida, Spain	Train			
77	G	San Severo, Italy to Lleida, Spain	Bus			
77	G	San Severo, Italy to Lleida, Spain	Multi-modal: flight	88.06		
77	G	San Severo, Italy to Lleida, Spain	Multi-modal: other	19.45		
78	G	Luxembourg, Luxembourg to Orléans, France	Train		80.92	
78	G	Luxembourg, Luxembourg to Orléans, France	Bus		46.41	
78	G	Luxembourg, Luxembourg to Orléans, France	Multi-modal: flight	239.67	136.85	100%
78	G	Luxembourg, Luxembourg to Orléans, France	Multi-modal: other	128.00		100%
79	H	Haskovo, Bulgaria to Sassari, Italy	Train			
79	H	Haskovo, Bulgaria to Sassari, Italy	Bus			
79	H	Haskovo, Bulgaria to Sassari, Italy	Multi-modal: flight	94.72		
79	H	Haskovo, Bulgaria to Sassari, Italy	Multi-modal: other	24.90		
80	H	Mérignac, France to Matera, Italy	Train			
80	H	Mérignac, France to Matera, Italy	Bus		159.46	
80	H	Mérignac, France to Matera, Italy	Multi-modal: flight	305.71	158.27	100%
80	H	Mérignac, France to Matera, Italy	Multi-modal: other	0.00		
81	H	Budapest XI. kerület, Hungary to Padova, Italy	Train	53.25		
81	H	Budapest XI. kerület, Hungary to Padova, Italy	Bus			
81	H	Budapest XI. kerület, Hungary to Padova, Italy	Multi-modal: flight	64.26		
81	H	Budapest XI. kerület, Hungary to Padova, Italy	Multi-modal: other			

ID	Cluster	OD pair description	Mode	Journey cost - direct booking (EUR)	Journey cost - MDMS (EUR)	Assumed cost delta (%)
82	H	Stalowa Wola, Poland to Varna, Bulgaria	Train			
82	H	Stalowa Wola, Poland to Varna, Bulgaria	Bus			
82	H	Stalowa Wola, Poland to Varna, Bulgaria	Multi-modal: flight	73.19		
82	H	Stalowa Wola, Poland to Varna, Bulgaria	Multi-modal: other	17.60		
83	H	Narva, Estonia to Como, Italy	Train			
83	H	Narva, Estonia to Como, Italy	Bus		132.09	
83	H	Narva, Estonia to Como, Italy	Multi-modal: flight	332.61		
83	H	Narva, Estonia to Como, Italy	Multi-modal: other	0.00		
84	H	Olbia, Italy to Volos, Greece	Train			
84	H	Olbia, Italy to Volos, Greece	Bus			
84	H	Olbia, Italy to Volos, Greece	Multi-modal: flight	412.34		
84	H	Olbia, Italy to Volos, Greece	Multi-modal: other	0.00		
85	H	Slobozia, Romania to České Budějovice, Czech Republic	Train			
85	H	Slobozia, Romania to České Budějovice, Czech Republic	Bus			
85	H	Slobozia, Romania to České Budějovice, Czech Republic	Multi-modal: flight	280.64		
85	H	Slobozia, Romania to České Budějovice, Czech Republic	Multi-modal: other	85.27		
86	I	Gummersbach, Germany to Fulda, Germany	Train	115.98	49.98	100%
86	I	Gummersbach, Germany to Fulda, Germany	Bus			
86	I	Gummersbach, Germany to Fulda, Germany	Multi-modal: flight	198.33		
86	I	Gummersbach, Germany to Fulda, Germany	Multi-modal: other			100%
87	I	Cottbus, Germany to Bremerhaven, Germany	Train	29.00	76.16	38%
87	I	Cottbus, Germany to Bremerhaven, Germany	Bus			
87	I	Cottbus, Germany to Bremerhaven, Germany	Multi-modal: flight	340.54	258.23	100%
87	I	Cottbus, Germany to Bremerhaven, Germany	Multi-modal: other			38%
88	I	Bayreuth, Germany to Aalen, Germany	Train	46.18	28.56	100%
88	I	Bayreuth, Germany to Aalen, Germany	Bus		16.66	
88	I	Bayreuth, Germany to Aalen, Germany	Multi-modal: flight	259.02		
88	I	Bayreuth, Germany to Aalen, Germany	Multi-modal: other	67.58		100%
89	I	Sliven, Bulgaria to Shumen, Bulgaria	Train	0.00		
89	I	Sliven, Bulgaria to Shumen, Bulgaria	Bus			

ID	Cluster	OD pair description	Mode	Journey cost - direct booking (EUR)	Journey cost - MDMS (EUR)	Assumed cost delta (%)
89	I	Sliven, Bulgaria to Shumen, Bulgaria	Multi-modal: flight			
89	I	Sliven, Bulgaria to Shumen, Bulgaria	Multi-modal: other	0.00		
90	I	Szczecin, Poland to Białystok, Poland	Train	44.89	76.16	59%
90	I	Szczecin, Poland to Białystok, Poland	Bus		38.08	
90	I	Szczecin, Poland to Białystok, Poland	Multi-modal: flight	242.15		
90	I	Szczecin, Poland to Białystok, Poland	Multi-modal: other			100%
91	I	Łódź, Poland to Tarnów, Poland	Train	39.11		
91	I	Łódź, Poland to Tarnów, Poland	Bus		22.61	
91	I	Łódź, Poland to Tarnów, Poland	Multi-modal: flight	133.52		
91	I	Łódź, Poland to Tarnów, Poland	Multi-modal: other			100%
92	I	Botoşani, Romania to Buzău, Romania	Train			
92	I	Botoşani, Romania to Buzău, Romania	Bus	49.56		
92	I	Botoşani, Romania to Buzău, Romania	Multi-modal: flight	127.65	102.34	100%
92	I	Botoşani, Romania to Buzău, Romania	Multi-modal: other			
93	J	Schweinfurt, Germany to Vigevano, Italy	Train	145.26	123.76	100%
93	J	Schweinfurt, Germany to Vigevano, Italy	Bus		55.93	
93	J	Schweinfurt, Germany to Vigevano, Italy	Multi-modal: flight	328.44	74.97	100%
93	J	Schweinfurt, Germany to Vigevano, Italy	Multi-modal: other			100%
94	J	Seinäjoki, Finland to Mülheim, Germany	Train			
94	J	Seinäjoki, Finland to Mülheim, Germany	Bus			
94	J	Seinäjoki, Finland to Mülheim, Germany	Multi-modal: flight	268.11		
94	J	Seinäjoki, Finland to Mülheim, Germany	Multi-modal: other	0.00		
95	J	Tübingen, Germany to Tulcea, Romania	Train	0.00		
95	J	Tübingen, Germany to Tulcea, Romania	Bus			
95	J	Tübingen, Germany to Tulcea, Romania	Multi-modal: flight	216.58		
95	J	Tübingen, Germany to Tulcea, Romania	Multi-modal: other	71.70		
96	J	Albi, France to Flensburg, Germany	Train			
96	J	Albi, France to Flensburg, Germany	Bus			
96	J	Albi, France to Flensburg, Germany	Multi-modal: flight	279.15	217.77	100%
96	J	Albi, France to Flensburg, Germany	Multi-modal: other	0.00		
97	J	Bad Salzuflen, Germany to Pardubice, Czech Republic	Train		85.68	

ID	Cluster	OD pair description	Mode	Journey cost - direct booking (EUR)	Journey cost - MDMS (EUR)	Assumed cost delta (%)
97	J	Bad Salzuflen, Germany to Pardubice, Czech Republic	Bus		55.93	
97	J	Bad Salzuflen, Germany to Pardubice, Czech Republic	Multi-modal: flight	279.42		
97	J	Bad Salzuflen, Germany to Pardubice, Czech Republic	Multi-modal: other	101.98		100%
98	J	Crotone, Italy to Schwerte, Germany	Train			
98	J	Crotone, Italy to Schwerte, Germany	Bus		97.58	
98	J	Crotone, Italy to Schwerte, Germany	Multi-modal: flight	64.63		
98	J	Crotone, Italy to Schwerte, Germany	Multi-modal: other	0.00		
99	J	Lahti, Finland to Jönköping, Sweden	Train			
99	J	Lahti, Finland to Jönköping, Sweden	Bus			
99	J	Lahti, Finland to Jönköping, Sweden	Multi-modal: flight	475.22	203.49	100%
99	J	Lahti, Finland to Jönköping, Sweden	Multi-modal: other			
100	J	Pardubice, Czech Republic to Nyíregyháza, Hungary	Train			
100	J	Pardubice, Czech Republic to Nyíregyháza, Hungary	Bus			
100	J	Pardubice, Czech Republic to Nyíregyháza, Hungary	Multi-modal: flight	152.36		
100	J	Pardubice, Czech Republic to Nyíregyháza, Hungary	Multi-modal: other			

Source: Ricardo analysis based on data from Google Maps[257], Google Flights[258], and Omio[259]

[257] See e.g. Google Maps Platform Documentation | Routes API | Google for Developers
[258] See e.g. Flights Search | Google for Developers
[259] See Book & Compare - Train, Coach, Flight & Ferry Tickets - Omio

ANNEX 3: COMPETITIVENESS CHECK

12.1 OVERVIEW OF IMPACTS

This proposal supports the EU's green competitiveness agenda, directly reinforcing the European Green Deal and the Commission's 2024-2029 priorities by accelerating a shift towards sustainable transport modes, rail in particular, while strengthening the EU's economic resilience in an increasingly digital mobility landscape. All policy options deliver improved operational efficiency and increase in the transport activity by rail and coach due to better visibility and access to these services. In particular, PO2, PO3 and PO4, introduce the obligation to share tickets for indispensable railway undertakings (RU) (PM13), unlocking new competitive services and sustainable travel alternatives for passengers, directly addressing the market barriers highlighted in the Draghi Report[260]. When coupled with the obligation to neutrally display offers (PM1), these measures will support fairer competition of operators on all MDMS platforms, and especially indispensable RU platforms.

In Table 0-1 summarises the competitiveness performance of the preferred options, PO3.

Table 0-1: Overview of impacts on competitiveness.

Dimensions of competitiveness	Impact of the initiative (++ / + / 0 / - / -- / n.a.)	References to sub-sections of the main report or annexes
Cost and price competitiveness	+	Sections 6.1.8
International competitiveness	0	Section 6.1.8
Capacity to innovate	+	Section 6.1.10
SME competitiveness	+	Section 6.1.6 and Annex with SME Check

12.2 SYNTHETIC ASSESSMENT

The following sections summarise the results of a qualitative analysis of competitiveness with respect to the four sections mentioned above.

12.3 COST AND PRICE COMPETITIVENESS

For MDMS platforms, as explained in section 6.1.2, the preferred policy option (PO3) is expected to lead to adjustment costs and some limited administrative costs. Total costs, expressed as present value over 2028-2050 relative to the baseline, are estimated at EUR 125.1 million. At the same time, the streamlined negotiation processes (PM11 and PM12) deliver significant adjustment costs savings (EUR 141.2 million) in synergy with other measures that increase the number of new and renegotiated commercial agreements that benefit of the streamlined processes. Overall, PO3 leads to net benefits of EUR 16.1 million, expressed as present value over 2028-2050 relative to the baseline.

For transport operators, as explained in section 6.1.3, PO3 is expected to lead to adjustment costs related to the obligation to share and to very limited administrative costs for the designation of indispensable RUs. Total costs, expressed as present value over 2028-2050 relative to the baseline, are estimated at EUR 43.2 million. The streamlined negotiation processes (PM11 and PM12) deliver adjustment costs savings that outweigh the costs (EUR 141.2 million). Net benefits for transport operators, expressed as present value over 2028-2050 relative to the baseline, are estimated at EUR 98 million in PO3.

By reducing search and booking frictions and improving the visibility of transport offers, the preferred policy option PO3 enhances the efficiency of the rail and multimodal transport sectors, strengthening the competitive position of rail and coach services within the multimodal passenger transport market. Improved integration of

[260] Draghi, Mario - *The Future of European Competitiveness: In-Depth Analysis and Recommendations.* 2024, p. 213

rail services in MDMS platforms increases the attractiveness of rail-based itineraries relative to car-only or aviation trips.

PO3 results in an increase in rail and coach activity relative to the baseline, reflecting improved supply-demand matching and reduced transaction costs. The entire economy is likely to benefit from these developments since transport represents a significant share of household expenditure and is a critical input for many economic sectors, notably tourism. A better functioning of the transport sector would free resources for additional consumption and investment. This might result in knock-on effects throughout the entire economy in the long term, leveraging the initial impact on the transport sector.

12.4 INTERNATIONAL COMPETITIVENESS

The preferred policy option equally applies to EU and non-EU platforms when operating within the EU market and does not differentiate by nationality. It therefore does not introduce trade distortions. The impact on international competitiveness is expected to be neutral. The economic effects are confined to improving efficiency and performance within the EU passenger transport market.

12.5 CAPACITY TO INNOVATE

The capacity of MDMS platforms to innovate and develop more integrated, user-friendly, and competitive solutions depends on their ability to distribute a wide offer of services for a sufficiently large number of transport operators. The preferred option is expected to have the biggest impact on innovation as it best addresses the key barriers of access to tickets and creates greater transparency and equitable conditions on all MDMS platforms. This also creates visibility for and incentivises new entrants in the rail services market, enabling them to innovate and compete with establish railway undertakings.

12.6 SME COMPETITIVENESS

Adjustment costs savings for SME MDMS platforms. SME MDMS platforms will benefit from adjustment cost savings linked to the introduction of commercial agreement rules (PM11 and PM12). The costs savings are estimated at EUR 95.5 million due to the synergies with PM13 (obligation to share) and PM14 (obligation to host) that lead to a significantly higher number of new and renegotiated commercial agreements relative to the baseline.

Adjustment costs savings for SME transport operators. As for SME MDMS platforms, SME transport operators will also benefit from the introduction of commercial agreement rules for indispensable MDMS platforms (PM11) and indispensable RUs (PM12). The adjustment costs savings for SME transport operators, expressed as present value over 2028-2050 relative to the baseline, are estimates at EUR 101.3 million.

SMEs would also benefit from better market conditions: creating a level playing field for all stakeholders could be particularly beneficial for small businesses or start-ups. New entrant SMEs in the rail transport market would particularly benefit from the obligation for indispensable RU platforms to enter into commercial agreement with willing RUs (PM14). New entrant RUs face the problem of how to establish their brand and typically must resort to costly advertising campaigns, which can be prohibitive for SMEs. PM14 would allow them to benefit from indispensable RU platforms' brand visibility and reach immediately the very high share of customers that use those platforms. In addition, the prohibition of restrictive contractual clauses by indispensable RUs and indispensable MDMS platforms and the introduction of fairer distribution fee principles (PM11 and PM12) would facilitate agreements between platforms and operators, directly targeting gatekeeping behaviour, curbing anti-competitive practices, and enhancing transparency and fairness. This would therefore greatly support smaller MDMSs and operators in concluding contractual agreements with players benefiting from a strategic position in the market.

More detailed analysis on SMEs is provided on the SME Check in Annex.

ANNEX 4: SME CHECK

13.1 OVERVIEW OF IMPACTS ON SMES

Relevance for SMEs
The initiatives subject to this impact assessment are considered relevant for SMEs, although the SMEs are only indirectly affected. The initiatives have not been selected in the SME filter[261].

(1) IDENTIFICATION OF AFFECTED BUSINESSES AND ASSESSMENT OF RELEVANCE
Are SMEs directly affected? *(Yes/No)* **In which sectors?**
No. SMEs are out of scope of the initiatives, hence no requirement outlined in the preferred policy option affects directly SMEs.
Estimated number of directly affected SMEs
-
Estimated number of employees in directly affected SMEs
-
Are SMEs indirectly affected? *(Yes/No)* **In which sectors? What is the estimated number of indirectly affected SMEs and employees?**
Yes, SMEs are expected to be indirectly affected by the preferred policy option. Sectors affected: SME MDMS platforms and SME transport operators are expected to be indirectly affected by the preferred policy option. Estimated number of most affected SMEs and employees: For *SME transport operators*, across the EU, 3,211 coach operators, 9 RUs and 518 maritime transport operators are SMEs (see section 2.2.3 of Annex 4). No air carriers qualify as SME. In the preferred policy option, all SME transport operators (3,738) are indirectly affected by the commercial agreement rules for indispensable MDMS (PM11) and 9 SME RUs by the commercial agreement rules for indispensable RU (PM12). For *SME MDMS platforms*, desk research on both B2C and B2B markets in the context of the impact assessment support study suggests that 189 SME MDMS platforms are active throughout the EU. All of them are expected to be indirectly affected by the commercial agreement rules for indispensable RUs (PM12) and 72 of them in 2028 by the commercial agreement rules for indispensable MDMS (PM11).

(2) CONSULTATION OF SME STAKEHOLDERS
How has the input from the SME community been taken into consideration?
Stakeholder consultations gathered inputs of small businesses indirectly affected by the initiatives (SME transport operators, but also of SME MDMS platforms (both in the B2C and B2B sector)). Their input has been gathered through interviews, the targeted survey and the open public consultation (OPC) in 2022.
Are SMEs' views different from those of large businesses? *(Yes/No)*
Yes, the views of SMEs did vary compared to those of large businesses, viewing the identified problems as more significant and the policy measures as more effective than when looking at the broader respondent pool in the targeted survey, interviews, and OPC. In the 2022 OPC, SMEs agreed more to the fact that *Fair access for all operators to relevant multimodal digital mobility services is not granted*. Across all respondents, the average level of agreement was between somewhat agree and fully agree (4.27)[262], indicating that the majority of respondents perceive that fair access is not fully ensured. SMEs rated this even higher, closer to fully agree (4.68), suggesting that **SME operators perceive this issue as an even more significant limitation compared to the broader respondent pool**. Additionally, the 2022 OPC outlined how SMEs favoured more binding rules than other respondents. When answering whether they believed that the *initiatives objective could be achieved by non-binding guidance or recommendations*, the average level of agreement was between neutral and somewhat

[261] https://ec.europa.eu/docsroom/documents/63274

[262] A score of 5 represents that all respondents have fully agreed, a score of 4 that respondents on average have indicated somewhat agree, a score of 3 indicates on average neutral views.

agree (3.58), indicating a moderate level of support for non-binding guidance as a way to achieve the initiative's objectives. SMEs, however, rated this lower, closer to somewhat agree (3.02), showing that **smaller players see non-binding guidance as a less effective approach compared with the broader respondent pool.**

In rail, the **views of new entrant railway undertakings differed clearly from those of indispensable RUs. The former expressed clear support for the initiative, while the latter clearly opposed the measures**. The ability for new entrants to access incumbents' sales channels was perceived to be of "paramount importance" for a SME rail entrant interviewed. In particular, an SME RU argued during the interview that incumbent sales channels should be regarded as public property, accessible to any company. In this sense PM13, PM14 and PM15 were particularly well received, as ensuring the availability of their offers on key rail platforms. The *obligation for indispensable RUs to share their offer to requesting MDMS platforms* (PM13) is positively perceived, as it would "enable third party platforms to offer complete journeys for customers who want to use (their) trains as part of their journeys"[263]. The *obligation for indispensable RUs to enter into commercial agreement with willing Rus to enable the sales of tickets* (PM14) was believed by All Rail to potentially "doubling the modal shift of rail for long-distance travels". The *requirement for indispensable RU platforms to unbundle from their parent company* (PM15) was seen as a "game changer" by the new entrant industry association All Rail (which includes SMEs), securing new entrants' visibility on key platforms and supported by all new entrant rail operators surveyed. On the contrary, indispensable RUs were strongly opposed to these measures, perceiving them as ineffective, interfering with their commercial freedom. In particular PM13, PM14 and PM15 were perceived as too interventionist, with four out of five indispensable RUs surveyed perceiving each of these PMs ineffective, potentially creating administrative burden and potentially increasing ticket price and increasing market concentration.

For MDMS platforms, the views of SMEs compared to non-SME MDMS platforms did not substantially vary, although SMEs tend to agree to a larger extent with the problems and policy measures. During the targeted survey and interviews, **both outlined the difficulties in concluding commercial agreements on fair terms with large carriers and welcomed the introduction of principles to ensure fair commercial agreements**. In that sense, an SME MSE outlined in an interview the need to "promote cooperation between actors". An SME CRS outlined how "creating standardized commercial agreements is crucial to improving MDMS functionality" while 2 MDMS industry associations representing large MDMSs (ADN Mobilités and EUTT) outlined that implementing explicit FRAND principles applied to transport operators would be beneficial to enable transparency and efficiency within the ecosystem. However, it must be noted that large MDMS platforms tend to question the effectiveness of imposing principles on distribution fees and rules forbidding highly restrictive clauses on indispensable MDMS platforms (PM11), as they claim they would have no incentive to block access to their platform. **SME MDMS** did not make such allegations in the survey and seem **more attached to the introduction of fair principles** overall. In the 2022 OPC, this aspect was ranked higher than average by SMEs, indicating that they view it as a more important priority than the broader respondent group.

(3) ASSESSMENT OF IMPACTS ON SMEs[264]
What are the estimated direct costs for SMEs of the preferred policy option? (Fill in only if step 1 *flags direct impacts)*
Qualitative assessment
-
Quantitative assessment
There are no direct impacts associated to the preferred policy option.
What are the estimated direct benefits/cost savings for SMEs of the preferred policy option[265]?
Qualitative assessment
There are no direct impacts associated to the preferred policy option.
Quantitative assessment
There are no direct impacts associated to the preferred policy option.
What are the indirect impacts of this initiative on SMEs? *(Fill in only if step 1 flags indirect impacts)*

[263] Statement formulated by European Sleeper during their interview.

[264] The costs and benefits data in this annex are consistent with the data in annex 3. The preferred option includes the mitigating measures listed in section 4.

[265] The direct benefits for SMEs can also be cost savings.

While not directly affected by the preferred policy option (PO3), SME MDMS platforms and SME transport operators will indirectly benefit from the measures implemented. In this sense, an MDMS platform stated in the targeted survey that they "*do not expect these measures to increase costs for SMEs. In fact, especially the measures aimed to support independent MDMS will increase revenue opportunities for SMEs in all sectors involved*".
As described in section 6.1.5, PO3 will allow SME transport operators and SME MDMS platforms to conclude commercial agreements on fair terms with indispensable MDMS platforms (PM11) and indispensable RUs (PM12), streamlining negotiation processes. Thus, the adjustment costs savings in PO3 are estimated at **EUR 95.5 million for SME MDMS platforms and EUR 101.3 million for SME transport operators**, expressed as present value over 2028-2050 relative to the baseline. SME MDMS platform Dohop stated in an interview that "*SMEs are typically the entities that are currently suffering from the imbalance of power*" and would therefore directly benefit from these measures.

(4) MINIMISING NEGATIVE IMPACTS ON SMES
Are SMEs disproportionately affected compared to large companies? SMEs are out of scope of PO3 and they only indirectly benefit of costs savings. **If yes, are there any specific subgroups of SMEs more exposed than others?**
No
Have mitigating measures been included in the preferred option/proposal?
SMEs are out of scope of PO3 and they only indirectly benefit of costs savings.

CONTRIBUTION TO THE 35% BURDEN REDUCTION TARGET FOR SMES
Are there any administrative cost savings relevant for the 35% burden reduction target for SMEs?
No, there are no administrative costs savings or administrative costs for SMEs.

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15. ANNEX 6: STAKEHOLDER CONSULATION REPORT

This report provides a detailed overview of the stakeholder consultation activities that were carried out as part of the *Impact Assessment support study for the new proposal addressing market challenges for the development of multimodal digital mobility services (MDMS) and the single digital booking and ticketing regulation (SDBTR).*

The aim of this report is to:

- Inform policymakers on the outcome of all the consultation activities.
- Inform stakeholders on how their input has been taken into account.

It comprises the following sections:

1. Consultation strategy, which provides an overview of the elements of the consultation strategy, and the rationale for these.

2. Approach by consultation tool, which provides an overview of each tool, its rationale and the extent of the stakeholder engagement in each case.

3. Identified campaigns, which notes whether any campaigns were identified.

4. Contribution of consultation activities to tasks, which summarises how the feedback from stakeholders was used in the project.

5. Comparison of the results from different activities, which analyses and compares the feedback from different activities.

6. Annexes, which contain summaries of the findings of the respective consultation activities.

7. Annexes, which contain summaries of the findings of the respective consultation activities.

15.1 CONSULTATION STRATEGY

The consultation strategy was designed to enable the project team to cross-reference information obtained in the study from other sources, while also helping with filling in any data gaps that remain. The consultation strategy was made up of the following elements:

- Analysis of the Commission's Eurobarometer survey.
- Targeted survey.
- Targeted interviews.
- Workshops.
- Ad hoc data requests.
- Commission's Inception Impact Assessment (IIA).
- Two open public consultations (OPC) – one in 2021 and another in 2022.

The development and application of most of these elements is set out in more detail in the next section; here we provide a brief overview of each, along with a stakeholder mapping.

Prior to the start of the study, the Commission launched and analysed a ***Eurobarometer survey*** focusing on passengers' experience of MDMS. In order to identify the information that was most relevant for the study, an analysis of the results of the survey was undertaken. This is presented in Annex 1.

The aim of the ***survey*** was to obtain quantitative and qualitative information from stakeholders, which was complemented by the ***interviews***, which explored stakeholders' responses to the survey in more detail, and to push them to provide information that would be important for the project, such as information on costs. In practice, a number of stakeholders preferred to be interviewed without answering the survey questions, as they wanted to be able to make a number of targeted contributions, rather than having views on the range of issues covered by the survey. In addition, some stakeholders provided additional written contributions, e.g. to

complement their other feedback. More information on the development and use of the survey and interviews can be found in Section 15.3 and 15.5, below. Analytical summaries of the written contributions, survey responses and interviews can be found in Annexes 2, 4 and 5, respectively.

We also made provisions for the use of ***ad hoc data requests***. The aim of these was to provide scope for the project team to engage with stakeholders at any point in the project outside of the other consultation tools, as the need arose. We took advantage of these to develop and circulate ***data collection templates*** (see Section 15.4) in order to obtain targeted data that would be important for the market analysis tasks.

Finally, within the project, we held four ***stakeholder workshops***. The first, which was held early on in the project, aimed to inform stakeholders about the project, the problem definition and the policy objectives. The second workshop took place in the middle of the project and presented progress, in particular in relation to the market research, baseline, policy options and the assessment of the qualitative impacts. A third workshop – which was not foreseen at the beginning of the project – was held to support the task on impacts. The fourth and final workshop was used to validate the results of the study.

It is important to clarify that the problem tree was refined after the consultation activities had concluded. As a result, the problems that stakeholders addressed during the consultation activities differ somewhat from those presented in the final Impact Assessment (IA).

In the current IA, **Problem 1** is defined as *"Lack of transparency, unfair conditions, and an uneven playing field in the online ticketing market,"* while **Problem 2** is described as *"Incomplete offer of rail tickets on (rail) platforms."*

For the purposes of this support study, stakeholders' feedback on **Problem 1 of the IA** corresponds to their responses regarding both:

- **Problem 2** of the consultation (*"Uneven access of operators to indispensable MDMS platforms"*), and
- **Problem 3** of the consultation (*"Potential distortion of competition between regulated (CRS) and non-regulated B2B distribution channels performing similar functions to CRS"*).

Similarly, stakeholders' input on **Problem 2 of the IA** aligns with their responses to **Problem 1** of the consultation (*"Limited and distorted information and access to tickets for consumers on MDMS, particularly for rail"*).For each of the tools used in the stakeholder consultation strategy, we developed a mapping of each against stakeholder types, as summarised in Table 15-1.

Table 15-1 - Key stakeholder groups and mapping against activities

Stakeholder group	Rationale for their inclusion	Consultation activities
European institutions and bodies	**European agencies and standardisation bodies.** The most appropriate bodies were those that directly engage in a relevant sector, such as railways, and relevant standardisation bodies.	Targeted survey; targeted interviews; stakeholder workshops
Member State public authorities	**National authorities.** Relevant national ministries are responsible for setting the national strategic policy framework, including support for regional and long-distance sustainable transport, in order to meet national transport policy goals. It was also appropriate to consult competition authorities and agencies that oversee the transport sector. **Regional and city authorities.** Regional and long-distance journeys begin, take place and end, within the territories of regional and city authorities, many of which will be trying to encourage the use of sustainable modes of transport, both to, and within their territories. It was important to engage with the respective European representative organisations.	Targeted survey; targeted interviews; stakeholder workshops

Stakeholder group	Rationale for their inclusion	Consultation activities
Transport operators	**Transport operators.** It was important to engage directly with transport operators of all modes potentially affected by the MDMS and SDBTR initiatives, and the potential update to the Code of Conduct for Computerised Reservation System providers (CRS), so regional and long-distance air, rail, ferry, bus and coach operators. These operators provide the services, and so already provide information, booking and payment options directly to their customers. They will need to provide information to and engage with MDMS providers, in order to enable the wider provision of integrated services.	Targeted survey; targeted interviews; stakeholder workshops
MDMS providers	**Multimodal travel information service (MMTIS) providers**. While the Level 1 services provided by such companies are outside the scope of the proposed study, it was still important to engage with such providers as the information they hold can be the basis of MDMS. **Meta-search engines**. The companies that run such engines are an important part of the Level 2 MDMS services, which were covered in the proposed project, as these show different travel options to customers, and then direct customers to the relevant, often proprietary, booking site. **MaaS providers**. These play an active role in the MDMS ecosystem by enabling customers to easily make multimodal trips, and so need to have effective relationships with a range of transport operators, as well as payment providers. Some of these may also be linked to individual transport operators. **Online travel agents and travel management companies**. These aim to provide the best deal for their customers, taking account of the range of potential transport and payment options available, and so will need access to the relevant information, as well as the means to make bookings and payments. **Computerised Reservation Systems, and similar content aggregators**. Such companies provide information to travel agents and travel management companies in relation to services and prices, particularly for business travel, while some also provide booking services. For all of these, it was important to talk to individual companies, as well as their respective associations.	Targeted survey; targeted interviews; stakeholder workshops
Other stakeholders	**Consumer bodies and passenger organisations.** It was important to consult organisations that represent consumers in general, and the leisure and business users of specific modes of transport, in particular, as these are the ultimate beneficiaries of the MDMS and SDBTR initiatives. **Groups representing specific user categories**. It was important to consult representatives of groups that may face particular challenges travelling, such as the elderly or mobility impaired, particularly given that MDMS are subject to the EU's Accessibility Act.	Targeted survey; targeted interviews; stakeholder workshops

Stakeholder group	Rationale for their inclusion	Consultation activities
	Research organisations and experts with relevant expertise. It was also important to ensure that the most up-to-date research and academic knowledge was brought into the project, so relevant experts were consulted and involved, as appropriate, particularly in relation to the potential impacts of MDMS.	

15.2 APPROACH BY CONSULTATION TOOL

More detail on the development and application of each of the main consultation tools is provided below.

15.3 SURVEY

The survey was designed to include tailored questions for the main stakeholder categories in order to gather information relating to several aspects of the initiative and its underlying impact assessment, including the draft problem definition, potential policy measures, and the establishment of a baseline to assess the impact of the policy measures. The survey also sought information from stakeholders on the expected impacts and costs of the proposed policy measures.

The survey was initially open from 14 February to 11 April 2025, although the deadline was extended for a limited number of stakeholders until 23 April 2025. The survey received a total of 73 completed responses, broken down by stakeholder type as presented in Table 15-2.

Table 15-2 – Number of respondents to the survey by stakeholder type

Stakeholder group	Number of respondents
Transport operators	32
MDMS providers	19
National authorities	12
Other stakeholders, including experts and consumer groups	10

The survey questions, and an analysis of the responses to the survey, can be found in Annexes 3 and 4, respectively.

15.4 DATA COLLECTION TEMPLATES

The data collection templates were designed specifically to collect data that could be of use for the market analysis task. It was decided to separate these questions from the survey to ensure that relevant stakeholders could be targeted as well as reach the appropriate people within the respective organisations (as these were likely to be different from the people responding to the more policy-related questions of the survey) and also so as not to distract from the survey questions themselves.

Six separate data collection templates were developed and distributed focusing for different types of stakeholder. Each was distributed differently, and achieved different levels of feedback, as summarised in Table 15-3. In each case, an initial email was followed up after a couple of weeks with a chasing email. The data collection templates that were distributed can be found in Annex 6.

Table 15-3 – Distribution and effectiveness of data collection

Stakeholder group	Method of distribution	Results of exercise
National Statistical Offices	Contacted directly by the Commission	Responses were received from 10 different national offices, although the information received only covered a part of the data sought in all cases
Air transport operators	Sent directly to relevant industry associations and operators	Received four responses
Ferry operators	Sent directly to relevant industry association	Stakeholder (trade association, in collaboration with its members) did not have the data requested
Rail operators	Sent directly to relevant industry associations and operators	Received two responses, one from an incumbent operator and one from an open access operator
Bus/coach operators	Sent directly to relevant operators	Did not receive any response from operators
MDMS service providers	Sent directly to relevant industry associations and providers	Received responses from six MDMS providers, of which one was from a CRS

15.5 INTERVIEWS

The intention was for the interviews to build on the respective responses to the survey. In other words, the interview questions were developed uniquely for each stakeholder in order to, for example, fill gaps in their respective survey response or elaborate on their responses to particular questions. However, some stakeholders preferred not to respond to the survey – either as they did not have views on many of the topics covered by the survey or they considered that the survey was too lengthy (such as several members of ALLRAIL) – and so were only involved in an interview.

Two weeks after the survey was launched, targeted stakeholders were contacted with a request for an interview. The initial intention was to complete the interviews by the end of April 2025, but this deadline was extended in order to talk to as many stakeholders as possible. Most interviews were undertaken by 16 May, although an offer of an interview from a Member State authority after this data was accepted. The analysis of the interview responses is provided in Annex 5. Overall, 51 interviews were undertaken, details on which are presented in Table 15-4.

Table 15-4 – Number of respondents to the interview by stakeholder type

Stakeholder group	Number of respondents	Details
Transport operators	20	This included 10 rail operators (five incumbents and five open access operators), six airlines, three bus/coach operators and one interview with those representing maritime interests (this single interview involved the trade association and two operators)
MDMS providers	16	This includes three online travel agents (OTAs), three CRS, one meta-search engine, five new content aggregators (one associated to a public transport platform), one travel tech association, one expert in digital platforms and two travel industry associations.

Stakeholder group	Number of respondents	Details
Public authorities	7	These represented a geographically diverse cross-section of EU Member States[266], as well as national (ministries and regulators) and local authorities, e.g. metropolitan public transport authorities.
Other stakeholders, including experts and consumer groups	8	This included five public-interest and consumer advocacy groups[267], with the remainder being networks of cities and metropolitan transport authorities.

15.6 WORKSHOPS

As noted above, four stakeholder workshops were held in the course of the present initiative. The first, second and fourth workshops were developed to engage with, and obtain input from, as wide a range of stakeholders as possible. These were held at specific times in the stakeholder consultation process, i.e. 22 January 2025, 2 April and 12 June 2025, in order to keep stakeholders updated on the progress of the initiative, and to seek their views on specific issues. The third workshop held on 15 April was an additional, more targeted workshop, in order to discuss specific underlying assumptions in the calculation of impacts, especially in relation to the maximum modal shift potential. For this later workshop Member States' experts and independent experts were invited.

The focus of the first stakeholder workshop was on introducing the initiative to stakeholders, and on obtaining initial feedback on the draft problems and problem drivers, as well as seeking views on the potential evolution of these without additional EU intervention. This workshop was attended by 346 participants.

The second stakeholder workshop shared progress on specific tasks with stakeholders, such as the initial results of the market research (Task 1) and the initial baseline (Task 4). In addition, the workshop also presented the grouping of policy measures into policy options and sought stakeholders' views on them, including the extent to which the policy options address the problems (Task 3) and the assessment of impacts on reduced travel time, reduced costs and modal shift (Task 5). This workshop was attended by 285 participants.

The additional, third stakeholder workshop was designed to support the work on the assessment of impacts. Specifically, the workshop aimed to discuss and gather views from Member State representatives, consumer organisations, academics and experts, on the underlying assumptions and results of the multi factor analysis (MFA). In order to do this, it was also necessary to present the quantitative baseline and the grouping of the policy measures into policy options. The third workshop was attended by 23 stakeholders, 17 of which represented 10 Member State authorities, with a further two representing other national transport organisations who attended on behalf of their national transport ministry, two from a passenger group, two from an NGO and one expert. National transport organisations were not specifically invited to participate to this workshop, but were welcome to attend if their national ministry deemed it necessary or could not attend. This explains the low number of national transport organisations participating to the meeting, compared to national authorities.

The fourth workshop focused on the assessment of impacts of the different policy options and sought the views of all relevant stakeholder groups thereon. This involved the presentation of the policy options and the methodology for the assessment of the modal shift that might occur as a result of the implementation of these policy options. This was followed by a discussion of, and a collation of stakeholders' views on, the potential for modal shift as a result of the implementation of the respective policy options. This workshop was attended by 108 stakeholders.

The minutes of each workshop can be found in Annex 7.

[266] AT, BE, CZ, FI, IT, PT, SE

[267] This category includes five organisations, three of which wanted to be referenced by the name of the organisation (T&E, BEUC and EPF) while one wanted to remain anonymous and another did not specify its preference, so its response was anonymised.

15.7 IDENTIFIED CAMPAIGNS

Campaigns are typically seen in response to Public Consultations (PCs). There was no PC for this study. However, the responses received by stakeholders were examined to identify whether there had been any evidence of a campaign or even coordinated responses. During this process, no evidence was found of a campaign or a coordinated response having taken place.

15.8 CONTRIBUTION OF CONSULTATION ACTIVITIES TO TASKS

The different consultation activities and tools contributed to the development of different tasks within the study.

The **data collection using the data collection templates** was the main consultation tool that contributed to the market analysis, which in turn enabled the substantiation of the problem definition in Task 1. 15.4These data were used to support the wider data collection exercise that aimed to understand the current state of play in the respective transport sectors, both in terms of the use of the respective modes, and also their specific use of MDMS. Progress on this task was presented at the second workshop.

Initial feedback on the causal links relating to the specific problems to support the work of Task 2 was obtained during the **first workshop**. Relevant questions on each problem, and their associated problem drivers, were included in the **survey** in order to assess the extent of stakeholder support for these causal links. Some of these responses were further explored in higher detail in the course of the **interviews**.

The policy measures were initially shared with stakeholders in the **survey**, which sought stakeholders' views on the potential effectiveness of these measures (Task 3) in addressing the problem drivers. Some of these views were explored in more detail in the course of the **interviews**. A first organisation of policy measures into policy options was first shared at the **second workshop**. Feedback from each of these activities was then collected in order to further refine the measures and the options. The final set of policy options was presented at the **final workshop**.

Stakeholders' views on the baseline were sought in the course of the **survey** and explored further during **interviews**. Initial findings regarding the baseline were shared in the course of the **second workshop**. Feedback from stakeholders that was received in the course of this workshop was subsequently taken on board.

The **survey** contained a dedicated section seeking information on the costs associated with each measure, as well as more general views on other potential impacts of specific measures. This information was used to inform Task 5, the analysis of the impacts. The initial results of the MFA of the potential impacts of the different policy options were presented and discussed in the **third workshop** with a selected group of experts. Stakeholder feedback from this workshop was used to further develop the assessment of the impacts. Feedback on specific aspects of the assessment of impacts, i.e. the mechanisms that lead to modal shift and the qualitative assessment of certain economic impacts, was obtained during the final workshop, which was used to inform the assessment of impacts.

15.9 COMPARISON OF RESULTS FROM DIFFERENT ACTIVITIES

The following sections present a high-level summary of the key findings from the consultation, focusing on the survey, interviews and the stakeholder workshops. The analysis is split by problems, policy measures and impacts. The full analysis of the survey and interview responses can be found in Annexes 4 and 5, respectively, while the workshop minutes can be found in Annex 7.

15.9.1 Problems

The nature of the problems was explored in the survey, interviews and the first workshop. A Mentimeter poll at the ***first workshop*** identified the differing stakeholder views on the problems that had been presented. Attendees were asked to indicate, on a scale of 1 to 5, whether they agreed that each of the problems to be addressed in the initiative was in fact a problem. As indicated in Section 3 of Annex 3.1, there was a wide

range of views present in the workshop, although for each problem more respondents agreed[268] than disagreed[269] that the problem existed. For Problem 1 (*Limited and distorted information and access to tickets for consumers on MDMS, in particular for rail*), around a half of those responding to the workshop's poll agreed with the problem (53%, 69 out 131), whereas around a third disagreed (34%, 45 out of 131; the remaining 17 were neutral). The views were more balanced in relation to Problem 2 (*Uneven access of operators to indispensable MDMS platforms*), as 43% (56 out of 130) agreed with the problem, and 39% disagreed (51 out of 130; 23 were neutral). Finally, for Problem 3 (*potential distortion of competition between regulated (CRS) and non-regulated B2B distribution channels performing similar functions to CRS*), 44% (55 out of 124) agreed with the problem, and 31% disagreed (39 out of 124; 30 were neutral).

15.9.1.1 Problem 1

In the responses to the ***survey***, it was possible to identify the reasons behind the contrasting responses that had emerged during the first workshop. In relation to **Problem 1**, *Limited and distorted information and access to tickets for consumers on MDMS, in particular for rail*, the 19 transport operators disagreed with the problem as stated against 6 that agreed, out of 27 that expressed a view. All 20 MDMS providers and all 11 stakeholders in the 'Other' category agreed with the problem. In response to the survey, 14 stakeholders from the aviation sector (including Airlines for Europe, European Regions Airline Association (ERA), Lufthansa Group, and nine other medium/large airlines, one airline group and one global trade association) argued that the problem did not reflect the situation in the air transport sector, as the air market was already transparent and competitive, and allowed customers to compare the offerings from different airlines.

In the ***interviews***, 9 (out of 16) MDMS providers (5 new content aggregators/associations, plus tourism industry association EU Travel Tech and the independent travel information website The Man in the Seat 61, one CRS and one OTA) and all five new entrant rail operators and their associations agreed with the problem due to concerns with the persistent market dominance of incumbent rail operators, which have vertically-integrated MDMS platforms. The same stakeholders identified issues in how these operators handle other operators' offers, if they do. Several other concerns were raised in this respect, including the quality of the information presented on MDMS platforms (4 MDMS providers out of 16 (three new content aggregators/associations and tourism industry association EU Travel Tech) and 4 transport operators out of 19 (3 new entrant rail operators including WestBahn and Snälltåget and one ferry operator)) and a general lack of coordination (4 MDMS providers out of 16, including tourism industry association ADN Mobilités, two new content aggregators in the rail business, one travel tech association, 1 organisation out of 8 in the category 'Other' and AllRail).

15.9.1.2 Problem 2

The ***survey*** responses in relation to **Problem 2** – *Uneven access of operators to indispensable MDMS platforms* – were similarly polarised. 14 out of 19 MDMS providers disagreed with the problem as stated, against 3 that agreed and 2 that neither agreed nor disagreed. The other stakeholder categories however, had on aggregate a majority agreeing with the problem. Indeed, 16 of 29 transport operators and 8 of 13 national authorities agreed with the problem as stated (against 8 and 4 that opposed, respectively, with the remaining 5 and 1, respectively, neither agreeing nor disagreeing). Of 13 airline operators (including associations) that responded to this question, 11 agreed that the problem existed, as opposed to 1 that did not (1 was neutral), whereas of the 8 rail operators that had a view, only two (both new entrants) agreed that the problem existed, whereas 6 did not (including one new entrant).

In response to relevant open questions of the ***survey***, nine MDMS providers (including tourism industry associations ECTAA, EU Travel Tech, FTO, SRF, travel agency network, Welcome Travel Group SpA. B2C MDMS provider, Skyscanner, FRIGERIO VIAGGI and three other anonymous MDMS providers / new content aggregators) argued that the problem was counter to their business model that aimed to provide a wide range of content to consumers. Instead, they highlighted that the real challenge was in gaining access to operator information, not the other way around, and stressed that they have no incentive to discriminate when they do not operate transport services themselves. Three CRSs viewed access decisions as commercially rational rather than discriminatory, with difficulties arising mainly from operator behaviour or market structure rather than MDMS practices. Eight operators (including Airlines for Europe, ALLRAIL, and ERA) did see a problem,

[268] Meaning that they either 'totally agreed' (i.e. they responded '5') or they responded '4' indicating more agreement than disagreement.
[269] Meaning that they either 'totally disagreed' (i.e. they responded '1') or they responded '2' indicating more disagreement than agreement.

and called for stronger regulation to ensure neutral display obligations, prevent discrimination and mandate transparency in how content is presented.

15.9.1.3 Problem 3

The survey findings in relation to **Problem 3**, which was the *potential distortion of competition between regulated (CRS) and non-regulated B2B distribution channels performing similar functions to CRS*, suggested that all stakeholder groups broadly agreed with the problem. For example, 13 MDMS providers (of which 6 were OTAs, 2 were CRSs, 2 were new content aggregators another MDMS provider) agreed with the problem as stated (compared to 3 (2 OTAs and a meta-search engine) that did not, out of 16 that expressed a view) and 11 transport operators agreed, as opposed to 3 that disagreed (and 4 neither agreed nor disagreed), out of 18 that expressed a view.

Those who agreed with Problem 3, as stated, noted in the open ***survey*** questions and ***interviews*** that there was no longer fair competition between CRS, which are covered by the CRS Code of Conduct (CoC), and other stakeholders operating similar services that are not covered by the CoC. In the interviews, 1 MDMS provider and 4 airlines / airline association also suggested the CRS CoC was out of date, as it was designed before the rise of new content aggregators and airline websites.

In the course of the ***interviews***, 4 out of 16 MDMS providers, including tourism industry association EU Travel Tech and B2C MDMS provider DoHop, and Helsinki Region Transport, noted that there is a marked trend towards direct distribution by operators, which is evident across both the airline and rail sectors and is characterised by a desire to maintain control over pricing, ticketing, and customer data. In addition, 4 out of 5 air carriers highlighted insufficient enforcement mechanisms, particularly regarding OTAs. On the other hand, two MDMS providers out of 16 and three incumbent rail operators / rail associations out of five, including SNCF and CER, argued that the current regulatory tools, including those governing access and passenger rights, are adequate.

15.9.2 Policy measures

15.9.2.1 Policy measure 1: Obligation for all MDMS to apply the CRS Code of Conduct's neutral display obligations. Neutral display ranking criteria and display rules are updated. For transport operators (in all modes): obligation to apply data accuracy rules

Overall, in the ***survey*** more stakeholders thought that this policy measure (PM) would be effective in addressing Problem 1 (29 out of 72) compared to those who did not (11), although 32 stakeholders were either neutral (26) or did not know (6). MDMS providers were the only stakeholder group in which more respondents believed that the measure would be ineffective than effective (8 expressed this view, against 4 stating it would be effective, out of 19 respondents that expressed a view). Concerns expressed in the ***interviews*** in relation to this policy measure suggested that the CoC was outdated (two out of two airline associations, two out of airlines, four out of 16 MDMS providers – including one OTA, one new content aggregator, one CRS and EU Travel Tech – and BEUC), as it does not cover the diversity of actors now operating in the distribution ecosystem. In addition, a rail operator, a new entrant and a national authority questioned what neutral display meant in practice, and how this would be enforced.

15.9.2.2 Policy measure 2: Obligation for all MDMS to apply the CRS Code of Conduct's rules on fair treatment of transport operators limited to load and process data provided with equal care and timelines

Stakeholder views in the ***survey*** on the effectiveness of PM 2 in addressing either Problem 1 or Problem 2 were split. In relation to Problem 1, 27 (out of 72) stakeholders expected it to be effective, whereas 24 were expecting it to be ineffective, with 12 stakeholders being neutral and 9 answering that they did not know. In relation to Problem 2, 24 (out of 68) stakeholders expected the measure to be effective, whereas 25 expected it to be ineffective, with 82 being neutral and 11 answering that they did not know.

For both problems, the majority of both MDMS providers and transport operators thought that the measure would be ineffective. In relation to Problem 1, only 4 out of 18 MDMS providers thought that the measure would be effective, while 10 expected it to be ineffective, while the equivalent numbers for transport operators were 9 and 12 (out of 26, with 5 neither agreeing nor disagreeing). For Problem 2, the numbers were similar, with 5 out of 18 MDMS providers expecting the measure to be effective, whereas 13 expecting it to be ineffective (and 6 neither agreed nor disagreed), while 7 out of 23 transport operators expected it to be effective and 10 expected it to be ineffective (and 6 neither agreed nor disagreed).

15.9.2.3 *Policy measure 3: Obligation for all MDMS to apply the CRS Code of Conduct's rules on marketing and booking data*

Overall, in the ***survey*** stakeholders had similar views on the potential effectiveness of PM 3 in addressing Problem 2 and Problem 1. For Problem 1, across all stakeholder groups, 19 out of 69 expected it to be effective, whereas 25 stakeholders expected it to be ineffective (13 neither agreed nor disagreed and 12 did not know). On the other hand, in relation to Problem 2, 18 out of 68 stakeholders expected the measure to be effective, whereas 27 expected it to be ineffective (11 neither agreed nor disagreed and 12 did not know).

Only 3 MDMS providers felt that the measure would be effective in dealing with both Problem 1 (out of 19) and Problem 2 (out of 20), whereas 12 expected it to be ineffective in addressing Problem 1 and 14 that it would be ineffective in dealing with Problem 2 (and 2 for Problem 1 and 1 for Problem 2 neither agreed nor disagreed and in both cases 2 did not know). Concerning transport operators, 6 out of 29 expect the measure to be effective in dealing with Problem 1 and 5 out of 27 with Problem 2, as opposed to 11 and 10 operators that believed it would be ineffective in dealing with Problems 1 and 2, respectively (6 neither agreed nor disagreed and 6 did not know in relation to Problem 1, with the equivalent numbers for Problem 2 being 7 and 5).

In the ***interviews***, two out of two airline associations and two airlines out of four, four MDMS providers out of 16 (including one OTA), one new content aggregator, one CRS and EU Travel Tech, and BEUC raised concerns in relation to PM 3 that the CRS CoC was out of date.

15.9.2.4 *Policy measure 4: Update definition of "CRS" to apply the following CRS Code of Conduct's rules to all B2B MDMS irrespective of business model: fair treatment of subscribers, equivalent treatment of EU airlines on 3rd country B2B MDMS*

Across all groups, in the ***survey*** more stakeholders (26 out of 66) expected this measure to be effective in addressing Problem 3 than ineffective (11), although 29 stakeholders were either neutral (4) or answered that they did not know (25). By stakeholder group, it was the MDMS providers who were less convinced, with 6 (out of 20) expecting the measure to be effective, while 9 expected it to be ineffective (1 neither agreed nor disagreed and 4 did not know).

15.9.2.5 *Policy measure 5: Remove provisions from CRS Code of Conduct on data protection which are no longer necessary due to GDPR*

Views in the ***survey*** in relation to PM 5 and its effectiveness in addressing Problem 3 were split. Across all stakeholder groups, 9 out of 66 expected the measure to be effective, whereas 10 expected it to be ineffective, with 22 being neutral and 25 responding that they did not know. Of the 10 stakeholders who believed that the measure would be ineffective, 7 were MDMS providers (only 2 MDMS providers expected the measure to be effective, with 5 neither agreeing nor disagreeing and 6 did not know).

15.9.2.6 *Policy measure 6: Obligation for Member States to appoint a national authority to settle disputes between parties*

Overall, across all stakeholder groups in the ***survey***, more stakeholders expect this measure to be effective (36 out of 71) than ineffective (14) in addressing Problem 1, although 14 stakeholders were neutral and 7 responded that they did not know. The response from MDMS providers was split, as 7 out of 20 expected it to be effective and 8 expected it to be ineffective (3 neither agreed nor disagreed and 2 did not know). MDMS providers were the least convinced of this measure's effectiveness, as only 3 out of 17 expected it to be effective, whereas 7 expected it to be ineffective (5 neither agreed nor disagreed and 2 did not know).

The response in the ***survey*** in relation to Problem 2 was less conclusive, as 17 out of 56 stakeholders expected it to be effective, whereas 12 expected it to be ineffective, with 19 being neutral and 8 responding that they did not know. MDMS providers were the least convinced of this measure's effectiveness, as only 3 out of 17 expected it to be effective, whereas 7 expected it to be ineffective (5 neither agreed nor disagreed and 2 did not know).

When expanding on their concerns, two new content aggregators, two airlines, two rail new entrants, a national authority and two 'Other' (including BEUC) foresaw a potential beneficial role for such an authority as mentioned in the measure, including its potential to ensure market fairness, resolve disputes efficiently, and foster cross-border consistency in enforcement and governance. On the other hand, CER and the Czech authority argued that existing judicial and administrative bodies were sufficient for handling market disputes.

15.9.2.7 *Policy measure 7: Obligation for all B2C MDMS to share non-personal data for mobility management with public authorities*

Across all stakeholder groups in the ***survey***, fewer stakeholders thought that PM 7 would be effective in addressing Problem 1 (15 out of 71) than expected it to be ineffective (20), although 27 stakeholders were neutral and 9 replied that they did not know. MDMS providers were least convinced, as only 1 (out of 20) expected the measure to be very effective, whereas 11 expected it to be very ineffective (4 neither agreed nor disagreed and 4 did not know).

In the ***interviews***, 2 national authorities and the European Passengers' Federation supported this policy measure, as they saw it as important for public authorities to have these data to support the planning of mobility in their areas of jurisdiction. On the other side, new rail entrant Snälltåget was concerned that such information could be used by public authorities to develop services that compete with commercially-operated services.

15.9.2.8 *Policy measure 8: Obligation for all B2B and B2C MDMS to display information on GHG emissions of trips - only when the data is provided by the operators.*

The views in the ***survey*** on the effectiveness of PM 8 on addressing Problem 1 was split, as across all stakeholder groups, 28 (out of 71) expected it to be effective, whereas 25 stakeholders expected it to be ineffective, with 16 stakeholders remaining neutral and 2 responding that they did not know.

In the ***interviews***, support for this measure came from stakeholders, such as SNCF and CER, two MDMS providers / association, one airline, new rail entrant Snälltåget, EPF and T&E. They underlined that this would be an important awareness raising measure for consumers, and also that this was important to enable consumers to compare the environmental impact of different journeys. Two MDMS providers, two rail operators (one incumbent) and an airline underlined that the way in which the information was calculated needed to be standardised, which would be challenging. On the other hand, the Czech Authority and the Helsinki Region Transport were sceptical that this information would have an impact on customers' multimodal travel choices.

15.9.2.9 *Policy measure 9: Legislation sets thresholds to identify MDMS and rail operators in scope*

Stakeholders overall were quite negative in relation to the effectiveness of the measure in addressing Problem 1, as 15 (out of 71) expected it to be effective and 19 expected it to be ineffective, with 17 stakeholders remaining neutral and 20 responding that they did not know. Fewer MDMS providers and transport operators felt that the measure would be effective (4 out of 20 and 3 out of 30, respectively) than considered that the measure would be ineffective (9 and 7, respectively; in each case, 5 neither agreed nor disagreed, and 2 MDMS providers and 15 transport operators did not know).

In relation to addressing Problem 2, stakeholders were split in the ***survey*** as to how effective PM 9 would be, as 14 (out of 67) expected it to be effective, 15 stakeholders expected it to be ineffective, 17 remained neutral and 21 answered that they did not know. MDMS providers were equally split, with 5 (out of 20) expecting the measure to be effective and 5 expecting it to be ineffective (7 neither agreed nor disagreed and 3 did not know). Transport operators were more negative, with only 2 (out of 27) expecting the measure to be very effective against 7 expecting it to be ineffective (4 neither agreed nor disagreed and 14 did not know).

In the second ***workshop***, stakeholders were asked via a Mentimeter poll for their views on an appropriate threshold to define an indispensable rail operator. It was proposed that an operator should be considered to be indispensable if it operated at least 50% of the total, annual rail services (measured in passenger-kilometres) operated in a Member State. 43 out of 70 respondents felt that this threshold should be lower. In relation to the threshold for an indispensable MDMS, stakeholders did not support the use of either turnover or number of users as an appropriate metric.

15.9.2.10 *Policy measure 10: EC adopts Decisions to designate indispensable MDMS (B2C with significant market power) and rail operators with significant market power at EU and national levels*

Stakeholders were split in the ***survey*** in relation to how effective PM 10 would be in addressing both Problem 1 and Problem 2. Overall, across all stakeholder groups, 15 out of 70 expected it to be effective in addressing Problem 1 and 16 out of 67 expected it to be effective in addressing Problem 2, whereas, respectively, 18 and 19 stakeholders expected it to be ineffective. In both cases, however, a large number of stakeholders were either neutral (17 and 14, respectively) or responded that they did not know (20 and 18, respectively).

For both problems, fewer MDMS providers and transport operators thought that the measure would be effective in addressing the respective problems than thought that they would be ineffective. In relation to Problem 1, 4

out of 20 MDMS providers and 2 out of 29 transport operators expected it to be effective, whereas 9 MDMS providers and 7 transport operators expected it to be ineffective (5 MDMS providers and 6 transport operators neither agreed nor disagreed, and 2 MDMS providers and 14 transport operators did not know). In relation to Problem 2, 5 out of 20 MDMS providers expected the measure to be effective, whereas 6 expected it to be ineffective, while for transport operators the views expressed were 3 and 8 (out of 26), respectively (6 MDMS providers and 4 transport operators neither agreed nor disagreed, and 3 MDMS providers and 11 transport operators did not know).

15.9.2.11 Policy measure 11: EC adopts Decisions to designate indispensable MDMS (vertically integrated and B2C with significant market power) and rail operators with significant market power) at EU and national levels

Stakeholders were again split in the ***survey*** in terms of how effective PM 11 would be in addressing both Problem 1 and Problem 2. Across all stakeholder groups, 18 out of 69 expected it to be effective in addressing Problem 1, 16 stakeholders expected it to be ineffective, 14 remained neutral and 21 responded that they did not know. The numbers were reversed for Problem 2, as across all stakeholder groups 16 out of 67 expected the measure to be effective, 18 expected it to be ineffective, 12 remained neutral and 21 stated that they did not know.

In relation to both problems, 5 out of 20 MDMS providers expected the measure to be effective, whereas 7 MDMS providers in relation to Problem 1 and 5 in relation to Problem 2 expected the measure to be ineffective (for both problems 6 MDMS providers neither agreed nor disagreed, and 2 did not know for Problem 1 and 4 did not know for Problem 2). Transport operators were more negative, as only 4 out of 28 expected the measure to be effective in relation to Problem 1, and 3 out of 26 in relation to Problem 2, whereas 7 operators expected it to be ineffective in both cases (for both problems 3 transport operators neither agreed nor disagreed, and 14 did not know for Problem 1 and 13 did not know for Problem 2).

In the *interviews*, for both PMs 10 and 11, nine stakeholders argued that defining any MDMS or operator as indispensable risks distorting the market, overregulating the sector, and failing to reflect the complex and evolving distribution landscape (four MDMS providers / associations, including B2C MDMS provider Skyscanner, tourism industry association ADN Mobilités and one CRS, the travel agents association ECTAA, three incumbent rail operators/associations, including DB and CER, and UITP). Five stakeholders adopted a more cautious stance, expressing concern over how 'indispensability' is defined (three airlines/association of airlines, one new entrant rail operator, one new content aggregator).

15.9.2.12 Policy measure 12: Applies to B2B MDMS and B2C MDMS with significant market power: respect principles on distribution fees and cannot impose highly restrictive clauses (exclusivity clauses, unfair and unjustified conditions, marketing clauses and other technical restrictions) when entering into commercial agreements with transport operators

Across all stakeholder groups in the ***survey***, more stakeholders (31 out of 69) expected PM 12 to be effective in addressing Problem 2, than expected the measure to be ineffective (20), although 9 stakeholders remained neutral and 9 responded that they did not know. MDMS providers were the most dissenting group, as 5 out of 20 expected the measure to be effective, whereas 13 expected it to be ineffective (2 did not know).

15.9.2.13 Policy measure 13: Applies to all MDMS: respect principles on distribution fees and cannot impose highly restrictive clauses (exclusivity clauses, marketing clauses and other technical restrictions) when entering into commercial agreements with transport operators

The responses in the ***survey*** in relation to PM 13 were similar to those for PM 12. Across all stakeholder groups, 34 out of 69 expected the measure to be effective in addressing Problem 2, 22 stakeholders expected it to be ineffective, 5 remained neutral and 8 responded that they did not know. As with PM 12, MDMS providers were the largest dissenters, as 5 out of 20 expected the measure to be effective, whereas 13 expected it to be ineffective (2 did not know).

15.9.2.14 Policy measure 14: Applies to all rail operators with significant market power and to all other rail operators in relation to PSO and cross-border services: respecting the principles on distribution fees and without imposing highly restrictive clauses (exclusivity clauses, marketing clauses and other technical restrictions) when entering into commercial agreements with MDMS

Responses in the ***survey*** from stakeholders as to whether PM 14 would be effective in addressing Problem 1 were split, as across all stakeholder groups 19 out of 69 expected it to be effective, whereas 14 expected it to

be ineffective. 16 stakeholders remained neutral and 20 responded that they did not know. Transport operators were the least convinced about the effectiveness of PM 14, as only 2 out of 29 expected it to be effective, 6 expected it to be ineffective, 4 remained neutral and 17 responded that they did not know. On the other hand, 7 out of 20 MDMS providers and 6 out of 11 national authorities expected PM 14 to be effective, compared to 5 MDMS providers and 2 national authorities that expected it to be ineffective (6 MDMS providers and 3 national authorities remained neutral and 2 MDMS providers responded that they did not know).

15.9.2.15 Policy measure 15: Applies to all rail operators: respecting the principles on distribution fees and without imposing highly restrictive clauses (exclusivity clauses, marketing clauses and other technical restrictions) when entering into commercial agreements with MDMS

The responses in relation to PM 15 in the ***survey*** followed a similar pattern to those for PM 14. Stakeholders were split as to whether PM 15 would be effective in addressing Problem 1, as across all stakeholder groups, 21 out of 70 expected it to be effective, whereas 13 expected it to be ineffective. 18 stakeholders remained neutral and 18 responded that they did not know. As with PM 14, transport operators were those least convinced, as only 2 out of 29 expected the measure to be effective, 5 expected it to be ineffective, 7 remained neutral and 15 responded that they did not know.

In the course of the ***interviews***, many of those (such as three MDMS providers/associations (including tourism industry associations ADN Mobilités and EU Travel Tech, as well as one OTA), two new entrant rail operators/association (including AllRail), one national authority and one consumer organisation) who support PMs 12 to 15 argue for the application of fair, reasonable, and non-discriminatory terms (FRAND) principles, although 1 MDMS provider questioned whether this might be over-prescriptive. Other stakeholders, i.e. DB, CER, SNCF, and UITP, were concerned with a regulation defining distribution fees as this could distort the true value of services rendered and overlook the internal costs borne by providers.

15.9.2.16 Policy measure 16: Applies to all vertically integrated MDMS with significant market power: obligation to enter into commercial agreements with willing transport operators (active within the geographical and modal scope covered by the MDMS) to enable re-linking and/or the sale of tickets (extension of the parent carrier provisions)

Stakeholders were divided in the ***survey*** in relation to whether PM 16 would be effective in addressing Problem 2. Across all stakeholder groups, 22 out of 68 expected it to be effective against 20 stakeholders which expected it to be ineffective, as well as 17 stakeholders that remained neutral and 9 responding that they did not know. Transport operators were least convinced, as 5 out of 27 expected it to be effective, whereas 15 expected it to be ineffective (4 neither agreed nor disagreed and 3 did not know).

The ***interviews*** revealed further information on the concerns of those who opposed this measure. Eight stakeholders (one independent MDMS provider, an incumbent rail operator, an association of airlines, the public transport operators' association UITP, two national authorities and two tourism industry associations, ADN Mobilités and ECTAA) argued that collaboration in distribution should not be mandated but rather guided by mutual commercial interest. While proponents of broader access claim it would enhance consumer choice, other stakeholders, i.e. two incumbent rail operators / rail association (including CER), a national authority, and ECTAA, caution that forcing all platforms to sell competing services could paradoxically consolidate the market, as it would make dominant platforms even more attractive to operators. Three air transport stakeholders argued that their sector has already evolved past the stage of airline-controlled distribution.

15.9.2.17 Policy measure 17: Applies to all rail operators with significant market power and to all other rail operators in relation to PSO and cross-border services: obligation to enter into commercial agreements with willing MDMS to enable the sale of tickets

Overall, in the ***survey*** more stakeholders thought that PM 17 would be effective in addressing Problem 1. Across all stakeholder groups, 22 out of 70 expected the measure to be effective, 14 expected it to be ineffective, 13 remained neutral and 21 replied that they did not know. Again, transport operators were the least convinced stakeholder group, as only 2 out of 29 expected the measure to be effective, 8 expected it to be ineffective, 2 remained neutral and 17 answered that they did not know.

15.9.2.18 Policy measure 18: Applies to all vertically integrated MDMS with significant market power: obligation to unbundle its distribution system from the systems of its parent operator

Overall, stakeholders were split in the ***survey*** on the potential effectiveness of PM 18 in addressing Problem 2. Across all stakeholder groups, 19 out of 69 expected the measure to be effective, 21 stakeholders expected it to be ineffective, 16 stakeholders remained neutral and 13 stated that they did not know. Transport operators

were again the least convinced as to the effectiveness of this measure, as only 3 out of 28 expected it to be effective, whereas 15 expected it to be very ineffective (4 neither agreed nor disagreed and 6 did not know). In response to the associated open question in the ***survey***, some argued that unbundling distribution systems from parent operators could undermine the competitive position of rail compared to air travel and could infringe on commercial liberty and autonomy by making rail operators dependent on external platforms.

In relation to this PM 18, concerns were raised by incumbents and public transport operators (DB, CER, SNCF, three MDMS new content aggregators / MDMS association, one new entrant rail operator, one national authority and the UITP) in the ***interviews*** that ticket sales were an important source of revenue for operators, so it was important that they retained control over these. Three rail operators / rail associations (including CER and WestBahn), EU Travel Tech, UITP and a national authority also cautioned against this measure, as they were concerned that this measure could be too ambitious at this stage. An open access operators presented a strong case for at least access to vertically integrated MDMS. A public transport operators' association noted that consumers still often prefer to use the websites of operators that they know to buy tickets, and so brand loyalty could act as a barrier to the success of the proposed unbundling.

15.9.2.19 Other policy measures

In the ***interviews***, a common theme that was raised was a call for harmonisation, both in technical standards and enforcement mechanisms; concerns regarding market inclusiveness and the protection of passengers' rights in complex multimodal journeys were also raised. 2 Rail incumbents, namely .DB, and SJ AB, and CER argued that the Open Sales and Distributional Model (OSDM) was the way forward, but a new entrant rail operator was concerned that they had not had a role in shaping these standards. One CRS, one travel industry association and rail operators' association CER argued for the scope of the initiative to be wider, so also include air transport. Two MDMS providers, including GBTA, suggested that a strengthened framework on passenger rights was needed to cover journeys using multiple operators.

15.9.3 Impacts

While few stakeholders responded to some of the questions in the ***survey*** regarding impacts, it is possible to draw some conclusions. Six out of 53 stakeholders, including ALLRAIL, a B2C online travel agency, an independent B2B MDMS provider, an independent B2C MDMS provider and two relevant MDMS sector associations, believed that the young would benefit more from the initiative, as they are more digitally literate, on average, than the older generation. For the latter, the importance of retaining non-digital options was highlighted by nine out of 53 stakeholders (ALLRAIL, a ferry operator, a municipal transport operator, two railway operators, a rail sector association, Helsinki Region Transport, National Transport Authority of Ireland, and the Norwegian Railway Directorate). There was also some consensus that addressing Problem 1 would be effective in terms of improving the availability and choice of offers on MDMS platforms (41 out of 58; 5 ineffective, 7 neither agreed nor disagree and 5 did not know), and on the accuracy and completeness of this information (43 out of 58; 6 ineffective, 5 neither agreed nor disagree and 4 did not know).

Addressing Problems 1, 2 and 3 were also considered to be beneficial for improving the internal market. For example, 30 out of 55 expected that addressing Problem 1 would be effective for transport operators (6 ineffective, 13 neutral and 6 did not know) and 37 of 56 thought that it would be effective for MDMS platforms (7 ineffective, 5 were neutral and 7 did not know).

In the course of the ***interviews***, CER, Helsinki Region Transport and BEUC argued that there would be little impact in terms of modal shift from the initiative, as there were physical capacity constraints on the rail network. On the other hand, two rail operators (including WestBahn), the tourism industry association ADN Mobilités, two national authorities, and T&E argued that enhanced competition as a result of these measures, increases access to rail services, which has the potential to lead to modal shift.

ANNEXES

15.10 ANNEX 6.1: SUMMARY OF THE EUROBAROMETERS FINDINGS

The European Commission's MDMS Eurobarometer survey, conducted between 28 August and 2 September 2024, assessed travel behaviours and preferences across the EU. The final report, Flash Eurobarometer 551[270], was published on 1 April 2025. The study surveyed a representative sample of 25,805 EU citizens aged 15 and over, residing in each of the 27 Member States of the EU. The participants were selected to meet quotas applied for age, gender and geographical region to ensure balanced representation.

The survey focused on the use of MDMS and the potential of Single Digital Booking and Ticketing solutions to improve the travel experience within the EU. It gathered insights into the frequency of travel and modes used for leisure and work; factors influencing travel choices; methods and barriers to online travel booking; and challenges in combining different transport modes. Each area highlights trends and variations across Member States and demographic groups.

Key findings from the Eurobarometer survey are presented below, examining regional and long-distance travel choices.

i) Frequency of regional and long-distance journeys and modes used

The Eurobarometer survey highlights how often people travel regionally (50–300 km) and long-distance (300 km or more) for leisure and work[271]. The results show clear differences in travel habits based on purpose, age, gender, education, and country.

Regional and long-distance travel for leisure is relatively common. About 27% of respondents travel for leisure once a month or more often, 31% travel every two to three months, and 29% travel once or twice a year. In contrast, regional and long-distance work travel is less frequent, with a majority (55%) never travelling regionally or long-distance for work. Among those who do travel for work, 13% travel monthly, 10% every two to three months, and 12% once or twice a year.

There are notable differences between countries. For leisure travel, Cyprus (58%) and Slovenia (53%) have the highest share of people travelling monthly or more often, compared to France (17%) and Spain (19%), where far fewer people travel regionally and long-distance as often. For work travel, Bulgaria leads, with 26% travelling monthly and 22% travelling every two to three months. Cyprus and Greece also show higher rates of work travel compared to countries like France and Spain, where fewer than 10% of respondents travel monthly for work.

Travelling by car is the most commonly used mode of transport for regional and long-distance journeys, with 82% of respondents reporting they have used it for such journeys in the past two years. This preference is consistent across all Member States except Malta, where other modes play a larger role. Among collective modes of transport, train ranks highest, used by 53% of respondents, followed by plane (37%), and by bus or coach (31%). Boats and ferries are less common overall, mentioned by 9%, but are more popular in countries like Greece (38%), Malta (37%), and Estonia (31%).

The choice of mode of transport also differs based on the purpose of travel. For leisure, trains (53%) and flights (37%) are commonly used, whereas work-related journeys rely more on cars (82%).

ii) Key factors influencing travel choices

Understanding the parameters that affect travel choices allows the better assessment of the possible contribution of potential policy measures in influencing travel choices, including inducing modal shift.

Cost is the most significant factor when planning regional or long-distance journeys, selected by 61% of respondents. Total travel duration follows at 47%, with departure or arrival time (36%) and comfort (29%) also ranking highly. Other considerations include the ease of finding travel options (17%), ease of booking tickets (16%), and the number of connections (14%). Environmental impact (10%), accessibility for passengers with reduced mobility (9%), and passenger rights (8%) are less frequently selected, albeit still represented as contributing factors.

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[270] Multimodal Digital Mobility Service - April 2025 - - Eurobarometer survey

[271] These distance ranges were included in the survey to help respondents understand the types of travel being assessed. However, they do not represent strict definitions and should not be interpreted as fixed thresholds for regional and long-distance trips in this initiative.

While environmental impact is important to over three-quarters of respondents, only 21% indicated they would adapt their journeys accordingly, citing challenges such as habit changes (22%) and the lack of sustainable options (22%). Cost remains a barrier, with 12% stating they cannot afford more sustainable travel. However, when asked what factors would encourage them to book more environmentally friendly travel, 46% said they would do so if the cost were comparable, 29% if the journey was equally fast, 28% if departure or arrival times were as convenient as other options, and 22% indicated it would depend on the ease of finding an environmentally friendly alternative.

iii) Travel booking channels and barriers to booking online

A significant majority of respondents (76%) reported booking their regional or long-distance journeys online. Among these, the most common method is booking directly through the website or app of the transport operator, used by 51% of respondents. Around a quarter (26%) compare options on travelling planning and price comparison tools before booking, while 24% use the website or app of a travel agent or ticket vendor. In contrast, just 23% of respondents rely on phone or in-person bookings through travel agents or directly at stations or airports.

Ease of booking and ease of finding travel options (mentioned by 16% and 17% of respondents respectively) are deemed secondary considerations compared to other factors when planning travel. However, input around barriers to online booking, e.g., concerns/challenges regarding hidden costs (19%), reaching customer support (15%), incomplete information (14%), and fare availability (14%), show that many people struggle to book easily online. Some respondents also worry about data protection (14%) or find booking websites or apps difficult to use.

Socio-demographic factors reveal additional insights. Younger respondents (15-24) and those aged 25-39 are more likely to book journeys online, particularly after comparing travel options. However, younger respondents also express greater concern over hidden costs (22%) and fare availability (19%). Older respondents (55+) are less likely to encounter barriers, with 41% reporting that none of the listed issues deter them from booking online. Similarly, individuals with higher education levels or who are still studying are more likely to embrace online booking, citing fewer challenges compared to those with lower education levels.

The identification of these barriers supports the design of potential policy measures to address them that could further increase the convenience of online booking tools. These results suggest that channels that allow increased comparability of travel options are particularly important to assist consumers in choosing the travel option that best serves their needs.

iv) Challenges in combining transport modes

A significant number of respondents have experience combining different transport modes (e.g., a flight with a rail service, or a rail service with a coach service) or operators (e.g., international and local rail services, flights operated by different airlines) to complete their journeys, although they cited several key challenges in doing so.

Just over a quarter (27%) reported combining different collective transport modes to reach their destination about ‘once or twice a year’. Train and bus/coach was the most frequently combined mode in 16 Member States, particularly in Slovakia (65%) and Czechia (54%). Airplane and train combinations were most common in Malta (56%), Cyprus (47%), and Germany (44%), while airplane and bus/coach were prevalent in Cyprus (61%), Malta (52%), and Ireland (49%). Ferry/boat combinations were more common in Greece, Croatia, and Estonia. In contrast, countries like France and Belgium reported higher proportions of respondents who never combined modes. Despite the fairly high prevalence of multimodal travel, over a third found it difficult to book such journeys.

Respondents who never or rarely booked journeys combining different collective transport modes or different transport operators within one mode were asked why they did not. The most common reason cited was that it was not needed, as one transport service or operator brought them directly to their destination (selected by 29% of respondents). Excluding those who answered that it was not needed, the following key barriers were highlighted:

- *The journey would have taken too long (25%)*: Important reason mentioned in Luxembourg (33%), France (30%), Malta (30%) and Poland (29%), while only 10% selected this reason in Latvia.
- *The journey would have been more expensive (20%):* Cited as a significant barrier in France (27%), compared to about one in ten respondents in Bulgaria and Slovakia.

- *Not being able to find a suitable combination (17%):* Most frequently selected among respondents in Cyprus, Finland and Luxembourg (all 26%), while this was not found to be a significant barrier in Belgium, Denmark, Germany, and the Netherlands (all 13%).
- *Not wanting to buy several separate tickets and risk being stranded if they miss a connection (13%):* A common barrier in Cyprus (23%) and Malta (22%), but considered less of a problem in the Netherlands (8%).

Other less common reasons included never having thought about combining different collective modes or operators, or not knowing that combining modes was possible (7%), not knowing where to search for such travel information (5%), and not being able to buy all tickets in one place (5%). A small proportion cited environmental concerns (3%) or other reasons (11%).

These findings indicate the willingness of passengers to potentially use multi-modal travel options should these options be shorter, cheaper and better linked together as a service.

15.11 ANNEX 6.2: ANALYTICAL SUMMARY OF THE WRITTEN CONTRIBUTIONS

In this section, we provided a summary of the additional written contributions that were received. This covers the following:

- Study on the impact of online intermediaries on consumers and carriers – Airlines for Europe (A4E).
- CRS Code of Conduct Review Impact Assessment Submission of American Airlines – American Airlines.
- GBTA Position Paper: Impact Assessment study MDMS & SDBTR – GBTA.
- Overview and challenges - integrated ticketing and through-ticketing measures in the EU – IRG Rail.
- Issues with Imposing 'Full-Content' for MDMS and Alternative Approaches – American Airlines.

i) Study on the impact of online intermediaries on consumers and carriers – Airlines for Europe

The report by Syntesia for A4E explores the role and impact of online intermediaries – particularly Online Travel Agents (OTAs) – in the EU air ticket distribution market. It was based on consultation with major airlines and a detailed mystery shopping exercise. The study reveals that OTAs like Edreams, Etraveli, and their subsidiaries dominate a highly concentrated market. Their operations often involve unauthorised practices, such as screen-scraping, which allows them to access and sell tickets without airline consent, thereby severing direct airline-consumer communication. The market structure encourages pricing strategies and practices that do not always benefit consumers or airlines.

From the consumer's perspective, while OTAs have the potential to add value by offering bundled services and facilitating comparison shopping, the study found that this potential is rarely realised. Instead, OTAs typically charge significantly higher prices than airlines – an average of 23% more – even for comparable services. Most of this discrepancy arises from inflated costs for ancillary services, such as baggage and seat selection. One OTA was found to offer lower prices, possibly due to specific commercial agreements. In contrast, Meta-Search Engines (MSEs) were seen to provide useful, largely transparent price comparisons without such negative effects.

The study also documented numerous concerning OTA practices, including hidden mark-ups, bait-and-switch tactics, misleading loyalty schemes and unclear fee structures. These tactics exploit consumer inertia and confusion, often resulting in consumers paying more for services that airlines offer for free. Some OTAs even interfere with critical communications such as delay or cancellation alerts and have used customer data in unauthorised ways, such as for automatic check-ins. Overall, the report concludes that OTAs, while potentially beneficial, currently fail to deliver fair value or transparency to consumers and contribute to a suboptimal travel experience.

ii) CRS Code of Conduct Review Impact Assessment Submission of American Airlines – American Airlines

The American Airlines submission argues that Computerised Reservation Systems (CRSs) continue to wield significant and harmful market power in the air travel distribution chain, particularly within the corporate travel segment dominated by Travel Management Companies (TMCs). Despite the growth of direct airline sales and online booking tools, CRSs – namely Amadeus, Sabre, and Travelport – still control critical access points between airlines and travel agents. These systems charge high booking fees (averaging €15–25 per ticket), fund loyalty payments to TMCs, and enforce restrictive contractual clauses that hinder competition and innovation. This setup raises air travel costs across the board, as airlines pass on these expenses to all passengers, not just corporate clients.

The submission details how these CRS practices create lock-in effects for travel agents and TMCs, reducing their incentive to explore more modern and efficient distribution technologies like IATA's New Distribution Capability (NDC). CRSs have reportedly slowed down the adoption of such technologies by enforcing "Full Content" and parity clauses and offering lucrative loyalty payments to maintain control. This market behaviour discourages travel agents from switching to lower-cost alternatives, ultimately inflating distribution costs and limiting the availability of enhanced, tailored travel services for consumers. Studies and litigation, including a

jury verdict against Sabre in the U.S., underscore how these anti-competitive practices have stifled innovation and harmed the broader travel ecosystem.

American Airlines emphasises the broader economic impact of this entrenched CRS market structure. They estimate that CRS-related booking fees could cost European travellers up to €2.9 billion annually, a burden largely driven by outdated technology and loyalty-driven inefficiencies. These fees act as a gatekeeper tax, pushing up fares without delivering proportional consumer value. In addition, the growing consolidation among TMCs – encouraged by their preferential access to CRS payments – reduces competition in the travel agent market. This dynamic reinforces CRS dominance and further blocks new entrants offering innovative solutions, creating a feedback loop that diminishes both technological progress and market fairness.

In response, the airline supports retaining and expanding the EU's CRS Code of Conduct (CoC), aligning it with the principles of the Digital Markets Act (DMA). They propose broader prohibitions on CRS biasing, stricter bans on parity clauses, and curbs on unjustified loyalty payments. American Airlines also recommends enabling private enforcement alongside regulatory oversight to enhance accountability. They argue that maintaining and strengthening the CoC is a low-cost, high-benefit measure to ensure fair competition, promote innovation, and protect consumers in the EU travel market.

iii) GBTA Position Paper: Impact Assessment study MDMS & SDBTR - GBTA

The Global Business Travel Association (GBTA) supports the European Commission's efforts to address the challenges in developing MDMS and implementing the SDBTR. GBTA highlights that business travellers need seamless, efficient, and sustainable booking options that integrate various transport modes into a single ticket. However, a lack of data access, transparency, and standardisation - especially regarding emissions – prevents the uptake of such services. GBTA asserts that legislative action is needed to mandate open access to transport data and emissions information and ensure that MDMS platforms provide a neutral display of travel options.

To address these issues, GBTA recommends four key policy actions: (1) mandating open, fair, and non-discriminatory access to real-time data from all transport operators – not just rail, but also airlines and public transport providers; (2) providing harmonised greenhouse gas (GHG) emissions data to empower sustainable travel decisions; (3) requiring neutral display of transport options so companies can align bookings with corporate policies; and (4) creating a "one-stop shop" experience for travellers, offering integrated information and services. GBTA emphasises that the MDMS and SDBTR initiatives must include obligations for all major transport players to ensure full market participation.

Without these regulatory changes, the GBTA warns, Europe will continue to struggle with fragmented digital mobility services, hindering the shift toward greener business travel. Business travellers will remain unable to make informed, sustainable decisions due to inconsistent data and limited booking options. GBTA supports specific policy proposals in the Ricardo Impact Assessment and calls for their extension to all transport modes, not just rail, to unlock the full potential of MDMS and support the EU's environmental and mobility goals.

iv) Overview and challenges - integrated ticketing and through-ticketing measures in the EU – IRG Rail

This report from the Independent Regulators' Group - Rail (IRG-Rail) provides an overview of integrated and through-ticketing systems across the EU's Member States. It examines ticketing solutions, categorising them into clusters such as centralised/shared transport information, partial integration, full integration, and Mobility as a Service (MaaS). The paper discusses how these systems vary in implementation despite a common EU legal framework, with some countries offering seamless multimodal ticketing, while others still grapple with fragmentation and accessibility issues. Notably, the report highlights the role of regulatory bodies in overseeing fairness in ticketing access and the need to enhance multimodal, cross-border mobility solutions.

The report identifies key challenges affecting ticketing integration, including commercial requirements, fragmented national and regional systems, and technological barriers. It notes that non-discriminatory access to ticketing data and digital infrastructure is crucial for railway operators and passengers alike. Case studies from Sweden and France illustrate competitive concerns around ticket distribution, with incumbents controlling access to digital platforms, sometimes restricting competition. The document also touches on legal provisions, including the EU's Fourth Railway Package and Regulation (EU) 2021/782, which pushes for wider through-ticketing adoption to facilitate more consumer-friendly options.

Lastly, the paper delves into the role of regulatory bodies in ensuring fair access to ticketing systems and sales channels, balancing competition with consumer protection. Some countries, such as Finland and Norway, have

developed centralised or mandated ticketing frameworks to promote transparency and interoperability. The document concludes by emphasising the need for continued regulatory oversight, highlighting that ticketing integration remains a work in progress. As the EU prepares legislative updates on multimodal ticketing, regulators and transport operators must work together to overcome barriers and provide seamless, user-friendly mobility options.

v) Issues with Imposing 'Full-Content' for MDMS and Alternative Approaches – American Airlines

This report examines the implications of imposing a "full content" obligation within the context of MDMS. Full content obligations refer to agreements between airlines and Global Distribution Systems (GDSs) that require airlines to provide the same fare and availability information across all distribution channels, including travel agencies and online booking platforms. These agreements ensure that all consumers, regardless of where they book, have access to the same flight options and pricing. However, they can also limit airlines' ability to offer exclusive deals on their own websites or through alternative distribution channels.

The European Commission is considering mandating that Transport Service Providers (TSPs) make all their content equally available across all MDMS platforms, including established CRSs. The report argues that such a requirement could hinder competition and innovation, reinforcing the dominance of CRSs that already control travel agent access and impose high booking fees on airlines. It warns that forcing uniform content distribution would make it difficult for new platforms to compete, ultimately limiting options for travellers and maintaining high costs in the airline ticket distribution sector.

The document further contends that a "full content" obligation contradicts recent regulatory decisions aimed at preventing anti-competitive practices. It highlights cases like the Amazon e-books investigation, where selection parity clauses were challenged for restricting competitors' ability to offer differentiated content. Similarly, imposing full content requirements in the MDMS space could prevent differentiation among platforms, reducing incentives for new market entrants. The report argues that such a requirement would unfairly raise barriers to entry, making it harder for lower-cost, innovative platforms to compete effectively.

Instead of enforcing "full content", the report proposes alternative measures that would both support multimodal transport growth and promote competition in the airline ticket distribution market. It suggests enhancing the existing CRS CoC protections by prohibiting CRS bias, restricting full content parity provisions, banning loyalty payments that distort competition, and recognising private enforcement mechanisms to ensure compliance. Additionally, the document outlines proposals being developed with IATA to facilitate multimodal transport without restricting competition. The report ultimately advocates for regulatory approaches that balance fair access to transport services with fostering a competitive, consumer-friendly market.

15.12 ANNEX 6.3: SURVEY QUESTIONS

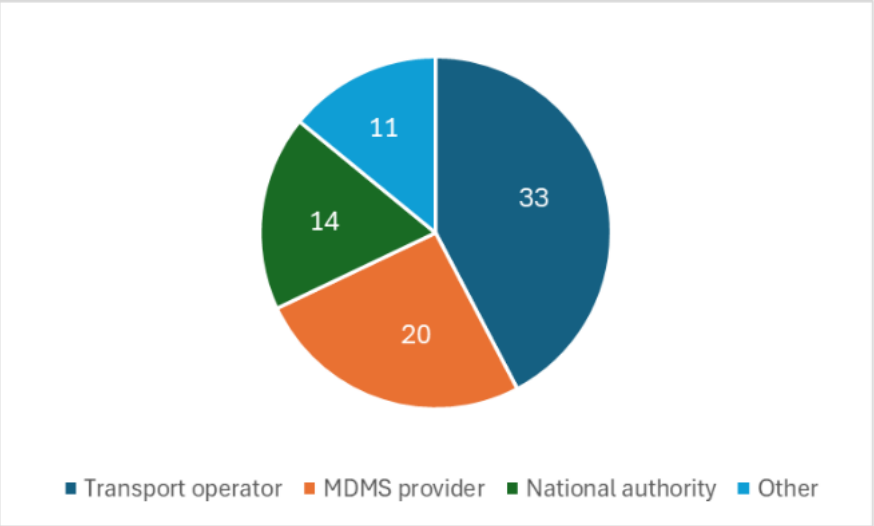
MDMS_IA_Survey .pdf

15.13 ANNEX 6.4: ANALYTICAL SUMMARY OF THE SURVEYS

15.13.1 Profile of the respondents

The survey received a total of 78 completed responses. Of those, 33 came from transport operators. Around one quarter of the responses, 20 of 78, came from MDMS providers, followed by national authorities from which we received 14 responses. The remaining 11 responses were from 'Other' stakeholders, such as consumer groups, NGOs and experts (see Figure 1).

Figure 15-1 Profile of the survey respondents (number)

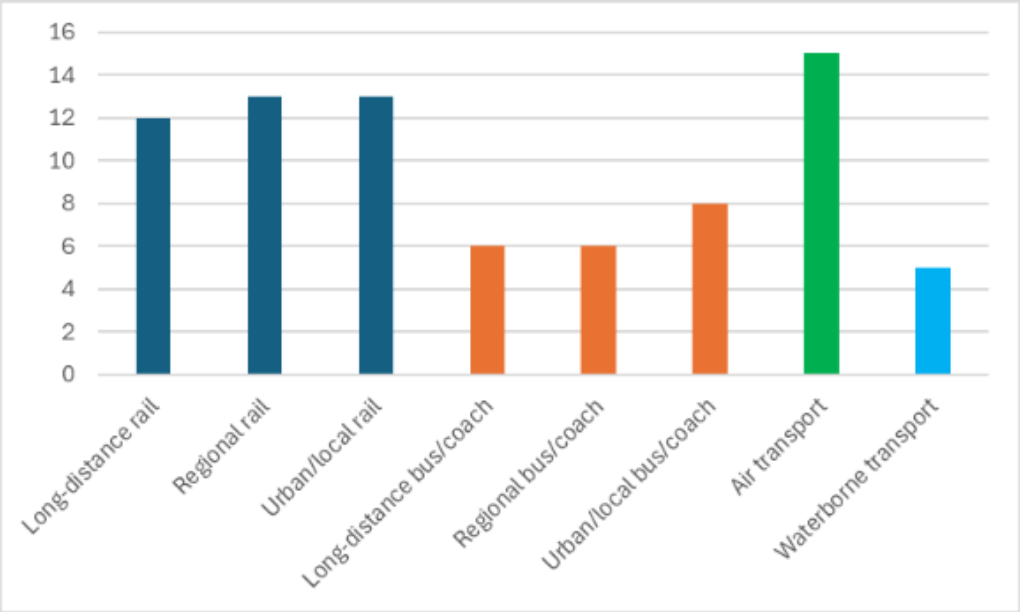


Total: 78 responses

Operators were asked to indicate the modes that they covered, many of which covered multiple modes. More operators that responded were responsible for rail and/or air services, than for bus/coach or waterborne services (see Figure 2). The operators were also asked whether they operated their own MDMS platform; of the 22 that answered this question, nine did operate their own MDMS platform and 13 did not. MDMS providers were asked to indicate how best to describe their activities. The 14 responses received to this question were spread over all of the options provided, with three respondents each indicating that they were a multimodal travel information service provider, an online travel agent or a CRS.

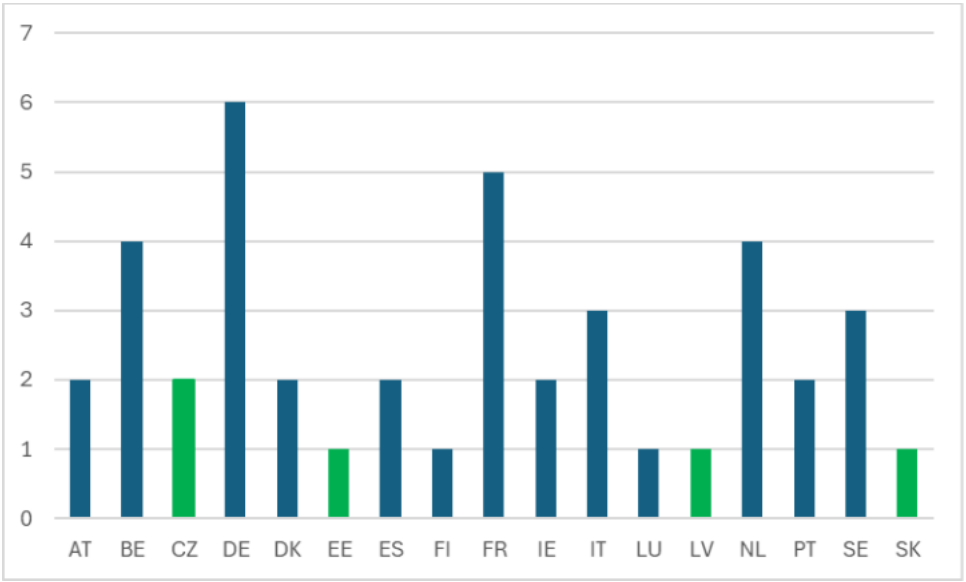
9 of 33 transport operators who responded to the survey were rail operators. These 9 rail operators can be further divided into incumbent and new-entrant respondents: 6 of 9 were incumbents, and 3 of 9 were new entrants. It is important to note that some incumbent rail operators also serve as MDMS providers. For the purpose of this study, these operators have been counted only once—as rail operators—and have not been included in the MDMS provider breakdown. Therefore, all MDMS providers in this study are independent providers.

Figure 15-2 Modes covered by transport operators that responded to the survey (number; multiple responses possible)



The majority of the respondents that indicated where they operated were active across the EU/EFTA/EEA (43). Of the 18 respondents whose activities were undertaken in a single or multiple Member States, they covered 13 of the EU16, whereas only four of the newer Member States (EU11) were represented (see Figure 3). Companies – so transport operators and MDMS providers – were asked to indicate their size by number of employees. Of the 31 that responded to this question, all but two identified themselves as large, so more than 250 employees. The other two – both MDMS providers – classified themselves as medium-sized companies (50-250 employees).

Figure 15-3 Location of the activities of the respondents that were active in a single or multiple Member States (number)



Finally, it is worth noting that a relatively large number of respondents (34 out of 78) requested that their responses be anonymous[272], if we chose to refer directly to any aspect of their response in any report.

15.13.2 Survey participants

Table 15-5 List of survey participants referenced by name of organisation

Stakeholder category	Organisation
MDMS providers (and related associations)	ADN Mobilites
	BT4Europe (European Network of Business Travel Associations)
	Dohop
	The European Travel Agents' and Tour Operators' Associations (ECTAA)
	EU Travel Tech
	Federazione Turismo Organizzato (FTO)
	MaaS Alliance
	Skyscanner
	SRF
	Welcome Travel Group SpA
Transport operators (and related associations)	Airlines for Europe
	ALLRAIL - Alliance of New Entrants Rail Operators in Europe
	Association of Finnish Cities and Municipalities
	Community of European Railway and Infrastructure Companies (CER)
	CP - Comboios de Portugal
	Czech Railways
	Deutsche Bahn AG
	European Regions Airline Association (ERA)
	Finnish Public Transport Association
	Lufthansa Group
	Metropolitano de Lisboa, EPE
	SJ AB
	SNCF Group
	International Association of Public Transport (UITP)
	Verband Deutscher Verkehrsunternehmen (VDV)

[272] Those who requested to be anonymised are MDMS providers: benerail, Verenigde Innovatieve Mobiliteitsdienstverleners, eDreams ODIGEO, Cartorange S.r.l., Travelport International Operations Limited, Gattinoni Travel Network, Amadeus IT Group, S.A., Omio Corp., Trainline, Aerticket Suisse AG; Transport operators: Aegean Air, IATA, Flix, Stena Line Scandinavia AB, NS, WiderÃ¸e Flyveselspa, Air France-KLM, American Airlines, Volotea, Finnair, International Airlines Group (IAG), easyJet Airline, Ryanair, Transdev Group, Icelandair, TUI EU-Corporate Office; Other category: CEN-CENELEC, CWT Estonia; National authority: Trenord, Federal Public Service Mobility and Transport (BE), Bundeskartellamt (DE); Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology - Directorate General II - Mobility - Department Intelligent Transport Systems & Digital Transformation (AT), Ministry of Transport of the Czech Republic.

Stakeholder category	Organisation
	Wiener Stadtwerke GmbH
National authorities	Autorité de régulation des transports (ART) *FR*
	Competition Council of Latvia *LV*
	Federal Office of Transport *EU/EFTA/EEA*
	Finnish Ministry of Transport and Communications *FI*
	Instituto da Mobilidade e dos Transportes (IMT) *PT*
	National Transport Authority of Ireland *IE*
	Norwegian Railway Directorate (Jernbanedirektoratet) *NO*
	Road transport administration *LV*
Other	BEUC - The European Consumer Organisation
	CERTH/HIT
	European Passengers' Federation (EPF)
	FRIGERIO VIAGGI
	POLIS
	The Man in Seat 61
	Transport & Environment (T&E)
	UVET GLOBAL BUSINESS TRAVEL SPA
	Verbraucherzentrale Bundesverband

15.13.3 Problem definition

15.13.3.1 To what extent do you agree with problems specified above?

15.13.3.1.1 To what extent do you agree with Problem 1 (Limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?

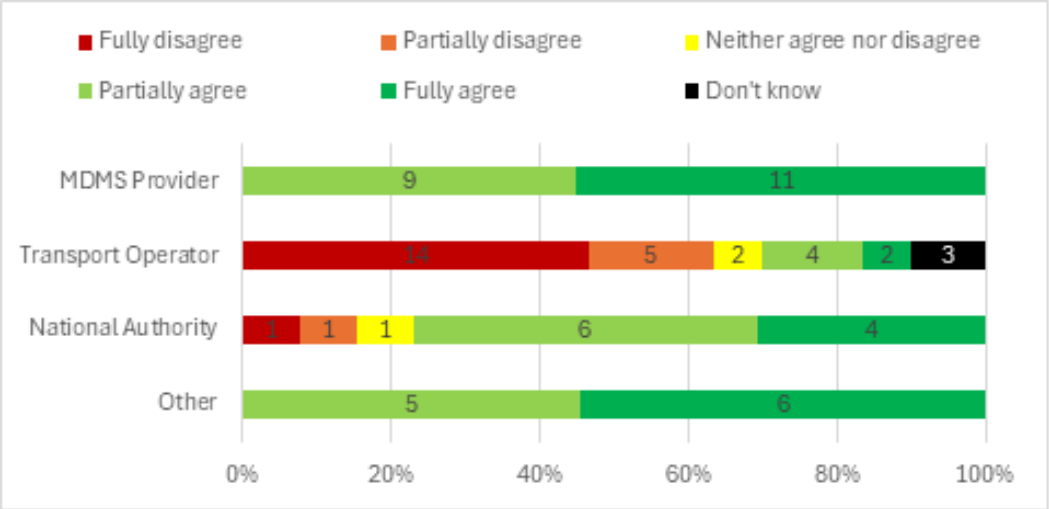
Stakeholders were asked to indicate the extent to which they agree with Problem 1 (see Figure 4). Across all stakeholder groups, 47 out of 74 agreed (23 fully agreed while 24 partially agreed). On the other hand, 21 out of 74 disagreed (15 fully, 6 partially), with the remaining 6 out of 74 either neutral (neither agreed nor disagreed; 3) or did not have a view (3).

By stakeholder group, there was a distinct split in views, with the majority of transport operators disagreeing with Problem 1, whereas there was broad support from the other stakeholder groups. Of the transport operators, only 6 of 30 agreed with Problem 1 (2 fully, 4 partially), whereas 19 of 30 disagreed (14 fully and 5 partially). Additionally, all the 3 railway new entrant operators agree with Problem 1 (1 fully agree and 2 partially agree).

All 20 MDMS providers agreed with Problem 1 (11 fully, 9 partially), as did all 11 'Other' stakeholders (6 fully, 5 partially). Focusing on vertically integrated MDMS (who appear classified as "Transport operators", since they tend to be incumbent railway operators), 3 out of 5 disagreed with Problem 1 (2 fully disagree and 1 partially disagree), while 1 Partially agree and 1 provided no response.

There were a few dissenting voices among national authorities, although 10 of 13 agreed – 4 fully (PT, CH, LV1, 1 anonymous) and 6 partially (FI-1, FI-2, LV-2, FR, and 2 anonymised) – whereas 2 of 10 disagreed – 1 fully (IE) and 1 partially (NO). 1 national authority remained neutral.

Figure 15-4 To what extent do you agree with Problem 1 (Limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.3.1.2 Please explain your answer in relation to Problem 1 (Limited and distorted information and access to tickets for consumers on MDMS, in particular for rail).

When asked to explain their answers, there were mixed views expressed by **transport operators**, often depending on the mode of transport they operate in. Some operators agreed that limited and distorted information on MDMS platforms is a problem, particularly in the rail sector, see previous chapter. One incumbent rail operator, SJ AB, highlighted ongoing issues in enabling consumers to access comprehensive and accurate ticketing information, especially for international rail travel. This operator acknowledged that while domestic systems may be adequate, "more needs to be done" when it comes to international travel, citing that there are "commercial challenges" that need to be addressed "particularly related to through-tickets between multiple countries". A bus and rail network operator noted that while their tickets are made available via a wide range of online platforms, concerns remain about transparency, particularly where dominant platforms list several operators without clearly displaying rankings or prices, making it difficult to make informed choices.

However, VDV (Verband Deutscher Verkehrsunternehmen), representing German transport operators, stated that consumers already have access to relevant information via existing MDMS platforms and noted that "there has been lots of progress in the past few years."

From the aviation sector, 14 stakeholders (including Airlines for Europe, ERA, Lufthansa Group, and nine other medium/large airlines, one airline group and one global trade association), disagreed with the problem definition, arguing that it does not apply to the air travel sector. One large airline company described the airline market as "highly transparent and competitive", with "numerous travel options [offered] to consumers across various channels". ERA similarly indicated that air travel pricing is "highly dynamic" and "publicly accessible", already allowing passengers to compare different carriers, schedules and fares. American Airlines shared these views indicating that Problem 1 "concerns primarily rail [and] indispensable rail operators". Additionally, American Airlines expressed concern over the potential for regulation to restrict airlines' commercial freedom in managing their content. This stakeholder argued that a "full content" requirement would eliminate content as a competitive factor, raise barriers for new platforms, and hinder innovation. They stated that this would exacerbate the market power of existing distribution systems and increase costs for airlines, ultimately affecting consumers. They also noted that no individual airline is an "indispensable" operator, unlike rail operators, which may have market power.

Notably, one large national rail operator indicated that the problem statement is “not specific enough” and does not reflect the specialised nature of MDMS platforms, which are often tailored to specific regions or markets.

This stakeholder argued that it is “unreasonable to expect that vertically integrated or regionally focused MDMS platforms should specialise in providing every conceivable option”. They added that their value comes from having a detailed coverage within their own specific focus areas.

MDMS providers all agreed with Problem 1. They largely pointed out that it is operators, particularly major airlines and rail carriers, that are responsible for limiting and distorting access to content, not MDMS providers themselves.

Three CRSs responded to the question. They agreed that Problem 1 stems largely from transport operators’ distribution strategies rather than the platforms themselves. One CRS emphasised the role of geographic scope and market demand, noting that “MDMS cannot be mandated to offer all European content if there is no market demand or positive business case,” and pointed to challenges such as “aggregation issues, where data needs to be aligned across urban, regional, national and international levels”. A second CRS similarly shared the view that that limited or distorted access is caused by operators, while also noting that CRSs face competition from alternative distribution channels and direct carrier sales. A third CRS highlighted the impact on consumers, describing it as “difficult and cumbersome…especially cross-border trips and offers combining competing transport operators”.

Four OTAs agreed with Problem 1, indicating that challenges primarily stem from the commercial and technical practices of transport operators rather than from MDMS platforms. One OTA stated that certain airlines “limit the comparability, availability and attractiveness of their services on indirect distribution channels,” which “harms consumer choice and competition.” Another OTA reported that “some operators restrict the information that can be shown on MDMS platforms or impose prohibitively low commission rates,” creating barriers to providing accurate and comprehensive content. A third OTA noted that such commercial conditions “threaten the very existence of independent MDMS,” explaining that “parity of access without viable commercial terms is insufficient.” A fourth OTA observed that “strong transport operators remove full content from neutral and cost-effective B2B MDMS,” requiring intermediaries to make significant technical investments to maintain coverage. Overall, these stakeholders considered that certain distribution practices may affect competition and consumer choice, while underlining that independent MDMS providers aim to present the widest possible range of offers to consumers.

While airlines noted that Problem 1 does not exist for aviation (as discussed above), 5 out of 20 MDMS providers (including ETT, Skyscanner and BT4) argued that it does actually apply across both rail and aviation sectors. One MDMS provider stated that airlines limit the comparability and availability of their services on MDMS platforms which affects the platforms’ ability to offer a comprehensive and transparent service. This same provider raised the issue of vertical integration, stating that “dominant transport operators often favour their own distribution channels” causing further disadvantage to independent MDMS providers. Another MDMS provider, Skyscanner, noted that Problem 1 can also arise in the air travel sector. They mentioned that some airlines primarily promote sales through their own websites and distribution channels meaning that certain fares or supporting information (such as baggage fees) may be more prominently available there than on third-party MDMS platforms. Skyscanner noted that MDMS platforms do aim to display as many offers as possible but differences in airline distribution strategies can affect the completeness and comparability of content for consumers.

A prominent MDMS provider in the rail sector raised the importance of geographical scope when considering Problem 1, and that the challenges with data access and ticket availability depend on whether the service is regional, national, or international. This stakeholder agreed in part with the problem but stressed that “MDMS cannot be mandated to offer all European content if there is no market demand or positive business case”. Eight **national and regional authorities** (including Autorité de régulation des transports (ART), the Competition Council of Latvia, Federal Office of Transport (CH), Finnish Ministry of Transport and Communications, Helsinki Region Transport, one regional/local authority network, one other national transport body, and one national competition authority) acknowledged that Problem 1 reflects some real challenges in the current MDMS landscape. They mentioned problems that can arise due to non-aligned systems (mentioned by one regional/local authority network) or the protection of business interests, brand value and customer data (mentioned by the Finnish Ministry of Transport and Communications). Helsinki Region Transport highlighted that “buying is not as easy for consumers as it could be”.

The Autorité de régulation des transports (ART), observed that vertically integrated MDMS platforms may restrict access to full ticket offers, either by limiting access to APIs or by only offering tickets from their own integrated services. In contrast, The Competition Council of Latvia highlighted that it is incumbent rail operators that are "[withholding] ticketing data or [imposing] restrictive conditions on MDMS platforms".

Three stakeholders from the **national authority** group disagreed with the problem. Each of them (National Transport Authority of Ireland, Norwegian Railway Directorate and Ministry of Transport of the Czech Republic) stated that there is no issue with limited or distorted information for travel in their respective s countries. They highlighted that service details are available, and fares are easy to combine and compare. The National Transport Authority of Ireland also noted that they are "not aware of any limited willingness of indispensable operators to provide their full product ranges". The Norwegian Railway Directorate felt that Problem 1 overlooks the main issue, which is improving access to local public transport to support a shift from car use, rather than focusing on rail ticketing.

In terms of **other stakeholders**, 10 organisations who strongly agreed with Problem 1 highlighted the fragmented nature of Europe's rail ticketing and mobility data systems, indicating that this fragmentation prevents consumers from easily planning, comparing and booking multimodal and cross-border trips. Specific points raised include:

- **Fragmentation of booking systems (2)**:
  - **The Man in Seat 61** described cross-border journeys requiring multiple separate tickets (e.g., Nice–Ventimiglia on SNCF, then Ventimiglia–Milan on Trenitalia), leading to inconsistent pricing, passenger rights, and additional booking fees.
  - **BEUC** highlighted similar issues, showing that information, prices, and ancillary services vary depending on the platform, making it difficult for consumers to compare options.
- **Limited access to full ticket data by B2C MDMS (4)**:
  - **FRIGERIO VIAGGI**, **POLIS**, **T&E, Verbraucherzentrale Bundesverband**, and a private travel management company, highlighted that incumbent rail operators restrict or withhold ticketing content, making it costly and burdensome for third-party platforms to provide complete and accurate booking options.
  - **FRIGERIO VIAGGI** described this as incumbent operators "[abusing their dominant position by proposing unviable economic conditions and restricting access to offers, data and content for independent vendors]."
- **Complexity for multimodal or multi-operator trips (1)**:
  - The **EPF** emphasised that long-distance, cross-border trips require switching between multiple platforms, making it difficult to find the best price or combination of operators.
  - The **EPF** recommended "one-stop-shop" solutions offering unbiased, comprehensive information, including all relevant modes, operators, and fare types, with straightforward ticketing and payment.
- **Unfriendly user systems and legacy focus (1):**
  - A European standards organisation highlighted that current systems are still focused on legacy railway offerings rather than user needs.
- **Vertical integration / self-preferencing (4):**
  - FRIGERIO VIAGGI, POLIS, Verbraucherzentrale Bundesverband and a private travel management company noted that incumbent operators or integrated MDMS prioritize their own services, lack legal obligations to remain neutral, and may restrict access to competing operators' offers, limiting consumer choice and creating incomplete or distorted information.
- **Potential market correction through demand (1)**:
  - **CERTH/HIT** acknowledged the problem but suggested that customer demand may eventually mitigate it.

On the other hand, three stakeholders did not consider Problem 1 to be a significant problem:

- **Finnish Public Transport Association** considered it "unrealistic" to expect interest in improving multi-operator information everywhere in Europe.

- **BEUC** indicated that the issue of limited access to tickets is not relevant for the air travel sector, as airlines already operate in a transparent and competitive market with multiple channels including direct sales, online travel agencies, and meta-search engines. BEUC argued that a full content mandate for airlines could reduce flexibility, hinder competition, and strengthen dominant distribution platforms.
- **T&E** shared a similar view for air travel, highlighting that dynamic pricing and the wide availability of ticket options already ensure sufficient access for consumers.

15.13.3.1.3 To what extent do you agree with Problem 2 (Uneven access of operators to indispensable MDMS platforms)?

Stakeholders were asked to indicate the extent to which they agree with Problem 2 (see Figure 5). Across all stakeholder groups, 34 of 75 agreed (10 fully, 24 partially), while 28 of 75 stakeholders disagreed (12 fully, 16 partially). Thirteen stakeholders neither agreed nor disagreed (10) or did not know (3).

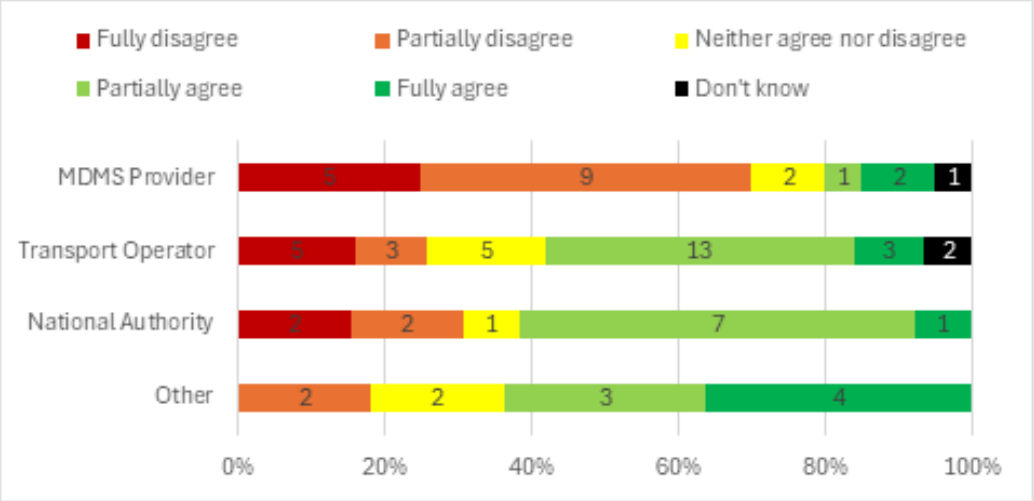
MDMS providers were the least likely to recognise Problem 2 as an issue, as only 3 of 20 agreed (2 fully, 1 partially), whereas 14 of 20 disagreed (5 fully,9 partially). Focusing on vertically integrated MDMS providers (classified as transport operators in this sample, as they tend to be incumbent rail operators), 4 out of 5 disagreed (3 fully disagreed and 1 partially disagreed), and 1 provider did not respond.

Among transport operators, 16 of 31 agreed (3 fully, 13 partially), whereas half as many (8) disagreed (5 fully, 3 partially). Considering new entrant rail operators, 2 out of 3 agreed (1 fully, 1 partially), while 1 out of 3 partially disagreed.

For national authorities, similarly twice as many (8 of 13) agreed – 1 fully (CH) and 7 partially (PT, FI-1, FI-2, FR, LV-1, and 2 anonymised) – as opposed to 4 of 13 who disagreed – 2 fully (IE and 1 other) and 2 partially (LV-2, NO).

'Other' stakeholders were more supportive, as 7 of 11 agreed (4 fully, 3 partially), whereas only 2 partially disagreed. For each of the other stakeholder types, a majority of stakeholders participating in the survey agreed with Problem 2.

Figure 15-5 To what extent do you agree with Problem 2 (Uneven access of operators to indispensable MDMS platforms)?



15.13.3.1.4 Please explain your answer in relation to Problem 2 (Uneven access of operators to indispensable MDMS platforms).

The majority of **MDMS providers** disagreed with Problem 2, indicating that there is no uneven access for transport operators to their platforms. They argued that their business model depends on offering a wide range of content to meet customer needs and they actively seek to include as many operators as possible. Any absence of certain operators is typically due to restrictive or economically unviable contractual terms by those operators or, in rare cases, concerns about poor customer service. Nine MDMS providers (including ECTAA, EU Travel Tech, FRIGERIO VIAGGI, FTO, Skyscanner SRF, Welcome Travel Group SpA and three other anonymous MDMS providers / new content aggregators) highlighted that the real challenge lies in gaining

access to operator information, not the other way around, and stressed that they have no incentive to discriminate when they do not operate transport services themselves. Skyscanner, EU Travel Tech and one other MDMS provider in the rail sector specifically described independent MDMS platforms as already delivering wide choice, promoting smaller and new-entrant operators, and supporting competitive, consumer-friendly markets. Overall, the group questioned whether the issue is widespread or significant enough to justify regulatory intervention.

Three *CRSs* agreed that there is no evidence of uneven access for transport operators to independent MDMS platforms. One CRS noted that "content is key" and that MDMS platforms "want the operator content", but often face "unfair terms that the operators impose". A second CRS mentioned that the inclusion of operators is based on "a positive business case driven by consumer demand," noting that factors such as API integration costs, commission levels, and maintenance fees determine feasibility. They stated that "this may appear as uneven access, but this is driven by objective business logic," and suggested that standardisation and "fair and reasonable remuneration to cover IT costs" could mitigate these challenges. A third CRS questioned whether uneven access is a widespread problem at all, arguing that there is "no demonstrated problem for any transport operator to access third-party MDMS platforms," while cautioning that mandating access on operator-owned platforms could "reinforce their often-dominant position" in distribution markets. Overall, CRSs viewed access decisions as commercially rational rather than discriminatory, with difficulties arising mainly from operator behaviour or market structure rather than MDMS practices.

The majority of **transport operators** agreed with Problem 2. Those that agreed highlighted that uneven access to MDMS platforms is a significant issue, often caused by the "lack of standardised protocols" and exploitative practices by dominant CRS providers. They noted that some MDMS platforms unfairly restrict or block competitor visibility, harming competition and market entry for new players. Two medium-sized airline operators raised concerns about major OTAs selectively promoting certain operators or adding non-transparent fees, which misleads consumers and distorts competition. The ERA mentioned that regional airlines in particular struggle to compete fairly due to limited economies of scale and the prioritisation of major carriers by gatekeeping platforms, reducing consumer choice especially for connectivity to peripheral areas in Europe. Eight stakeholders, including Airlines for Europe, ALLRAIL, and ERA, called for stronger regulation to ensure neutral display obligations, prevent discrimination and mandate transparency in how content is presented. Finally, Wiener Stadtwerke GmbH noted that access conditions vary widely across MDMS platforms, with high integration costs and selective policies disproportionately affecting smaller or regional operators.

Lufthansa Group, who was neutral to this problem, indicated that "airlines do not have difficulties [in accessing] MDMS platforms". They added that the question is if the airlines are willing to pay the associated cost. They noted that for some newer or smaller airlines, the cost may lead to a "negative business case".

Those who disagreed with the problem argued that access to MDMS platforms is generally transparent and fair. They shared that MDMS openly display offers from competitors through contractual agreements, allowing passengers to purchase tickets across multiple providers. An airline association noted that on the B2B side, the CRS Code of Conduct prevents CRSs from discriminating airlines but that OTAs have an incentive (from their business model) to be able to provide the widest possible content. One incumbent rail operator noted that access may depend on meeting certain requirements and contracts that apply uniformly to all (e.g. quality standards), but that some operators may not have access if they do not adhere to "the certain rules" an MDMS has set. One large transport operator highlighted that regions should be mentioned in relation to this problem as in most cases "it is not the transport operator deciding whether tickets should be made available on an MDMS platform, but the region".

Most **national authorities** agreed with Problem 2. They highlighted that the situation varies by operator size and mainly concerns long-distance rail services. Three national authorities (including Autorité de régulation des transports and the Competition Council of Latvia) raised concerns about the lack of visibility on dominant platforms owned by incumbent rail operators, with legal actions citing unfair competition due to exclusion from search results. The Autorité de régulation des transports (ART) pointed out that these incumbent platforms often do not provide access to all available offers, especially from other rail operators. Additionally, two authorities, including the Competition Council of Latvia, noted that smaller regional bus and rail operators may face technical, financial or commercial barriers when trying to integrate with MDMS platforms, which tend to favour larger operators. Five national authorities, including the National Transport Authority of Ireland, Finnish Ministry of Transport and Communications, the Road Transport Administration, and the Norwegian Railway Directorate, disagreed with Problem 2, claiming there is no issue around operator access to MDMS platforms.

Other stakeholders mostly agreed with Problem 2. Five stakeholders, namely the BEUC, EPF, the Man in Seat 61, T&E, and Verbraucherzentrale Bundesverband, agreed that incumbent MDMS platforms like Deutsche Bahn's DB Navigator and SNCF Connect dominate national rail markets and often restrict access to competitors. Verbraucherzentrale Bundesverband specifically highlighted the gatekeeper effect which limits competition and consumer choice, favouring incumbents' commercial interests over consumer needs. Many note that smaller operators, especially SMEs in road and regional transport, face high technical, financial, and commercial barriers to integrating with these dominant platforms.

Three organisations provided mixed responses, acknowledging the problem but noting practical limitations or potential moderation over time (The Man in Seat 61, EPF, CERTH/HIT). One stakeholder added that current MDMS platforms are "not user friendly" and "still focused on [the] historical railway offer".

15.13.3.1.5 To what extent do you agree with Problem 3 (Potential distortion of competition between regulated (CRS) and non-regulated B2B distribution channels performing similar functions to CRS)?

Stakeholders were asked to indicate the extent to which they agree with Problem 3 (see Figure 6). Across all stakeholder groups, 36 of 74 agreed (19 fully, 17 partially), whereas 7 stakeholders disagreed (3 fully, 4 partially). However, 31 of 74 stakeholders neither agreed nor disagreed (7) or did not know (24) compared to the previous two problems.

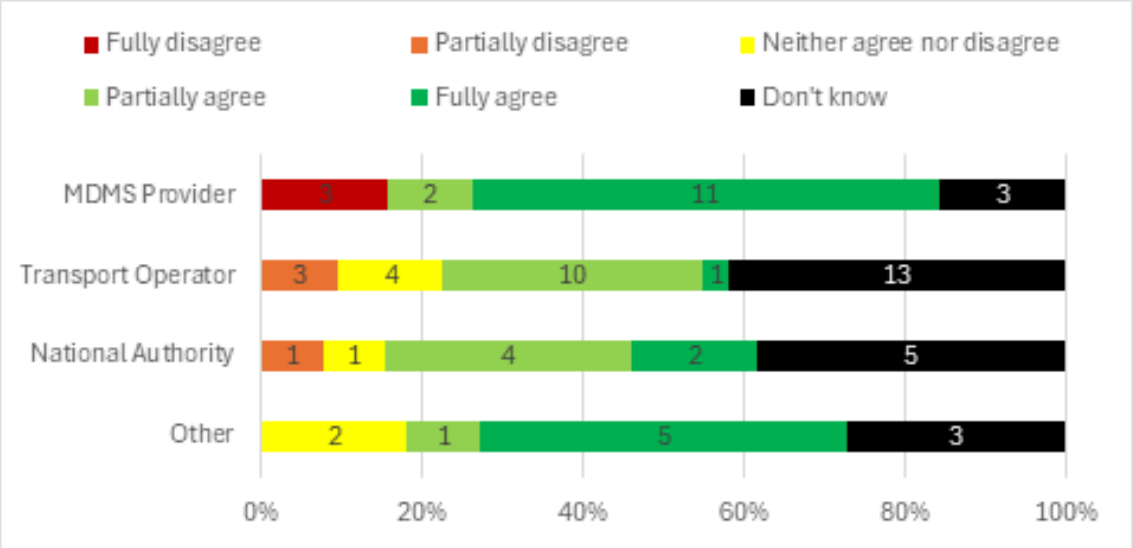
By stakeholder group, those who responded were more likely to agree with Problem 3 than disagree. Among MDMS providers, 13 of 19 fully agreed (11 fully, 2 partially), while 3 fully disagreed. Among vertically integrated MDMS, 4 out of 5 do not know or offered no answer, while 1 partially disagrees.

Similarly, 11 of 31 transport operators agreed (1 fully, 10 partially), while 3 partially disagreed. Focusing on new entrant rail operators, all 3 of them agreed (2 fully and 1 partially)

6 of 13 national authorities agreed – 2 fully (CH, NO) and 4 partially (PT, FI-1, FI-2, LV-1). Only one national authority disagreed (LV-2), all other national authorities (6 of 13) were neutral or did not know (IE, FR) .

In terms of 'Other' stakeholders, 6 of 9 agreed (5 fully, 1 partially), the remaining 3 of 9 did not know or were neutral.

Figure 15-6 To what extent do you agree with Problem 3 (Potential distortion of competition between regulated (CRS) and non-regulated B2B distribution channels performing similar functions to CRS)?



15.13.3.1.6 Please explain your answer in relation to Problem 3 (Potential distortion of competition between regulated (CRS) and non-regulated B2B distribution channels performing similar functions to CRS).

Transport operators mostly agreed with Problem 3. Air sector stakeholders (including an association, three medium-sized airlines and two large airlines) who agreed with the problem stated that the current regulation under the CRS Code of Conduct (CoC) is effective for traditional CRSs but no longer reflects market realities.

Ten stakeholders (including Airlines for Europe and ERA) noted that OTAs, metasearch engines, and other MDMS platforms now play a dominant role in distribution but are not subject to similar rules. One of the large airlines specified that the CoC should be extended or updated to apply its core principles, such as transparency, equal access, and fairness, to all MDMS actors. Another large airline supported this view, stressing the need for stronger enforcement mechanisms and regulatory consistency across both traditional and new B2B distribution channels.

Two transport operators who neither agreed nor disagreed noted that while the CRS CoC promotes fairness and transparency, its scope is limited. One large rail and coach operator said that it does not cover rail or OTAs, which would be necessary for a broader impact. The other, a large airline, supported extending its principles to unregulated players like OTAs, given their growing role. Those who disagreed with the problem had various reasons. One large airline argued that CRSs still hold significant market power, particularly in corporate travel, and that the CoC remains essential, though its extension to powerful new intermediaries may be appropriate. Lufthansa Group warned that applying the CoC to small or emerging MDMS platforms could harm innovation, as these actors lack the scale and content of established CRSs. SNCF argued that existing national and EU regulations were sufficient, highlighting the growth of independent platforms like Trainline and Omio as evidence of a competitive market.

MDMS providers mostly agreed with Problem 3. Those who agreed, including EU Travel Tech, an OTA, and a small travel options platform, highlighted a lack of fair competition between regulated CRSs and unregulated B2B aggregators, OTAs and metasearch platforms, but highlighted that it is exclusively an air sector problem. They argued that CRSs must comply with strict rules, such as neutral display requirements, while other distribution channels performing similar functions face no such obligations, leading to market distortion. One OTA stakeholder noted that airlines are increasingly withdrawing content from CRSs and distributing it through other channels (for example Direct Connect and new content aggregators), using systems for example based on New Distribution Capability (NDC). This forces intermediaries to connect individually to multiple sources, increasing costs and reducing transparency for consumers. As a result, it's harder for users to compare offers, and independent distributors are disadvantaged. One rail MDMS provider agreed that commission-based ranking can be problematic and pointed out differing consumer expectations: traditional operators are expected to offer full support, while private platforms are not, despite offering similar services.

All three *CRSs* shared the view that there is a distortion of competition between regulated CRSs and other, non-regulated B2B distribution channels, though they highlighted different aspects. One CRS operating in the rail sector explained that while its ranking algorithm may appear to disadvantage certain services, such as slower sleeper trains, this results from objective parameters like "amount of transfer [and] duration of the journey," rather than any commercial incentive. It also highlighted disparities in consumer expectations, noting that incumbent distributors are expected to provide more comprehensive after-sales and accessibility support than newer or independent players. A second CRS underlined that competitive pressures have intensified as alternative, unregulated distribution models have expanded, arguing that the CRS Code is outdated and that "many provisions… are no longer relevant today." It added that any future regulation should apply consistently "to all distribution channels." A third CRS similarly stressed that there is "no level playing field" between regulated B2B content aggregators (traditional CRSs) and other intermediaries that effectively perform the same role, warning that this asymmetry leads to "a distortion of competition." Overall, all three CRSs shared the view that existing rules unfairly constrain regulated CRSs while allowing newer, non-regulated actors to compete without equivalent obligations.

Overall, these respondents called for either extending the CRS CoC to all relevant distribution channels or developing a new, harmonised regulatory framework to ensure fair competition and consumer transparency across the board.

MDMS providers who disagreed with Problem 3, including Skycanner, a global MDMS platform, and a rail travel options platform, argued that the real issue in the air ticket distribution market is not a distortion between regulated and non-regulated B2B channels, but rather the growing imbalance between airlines and MDMS providers, especially with the rollout of NDC. Skyscanner warned that NDC allows airlines to selectively control access to content, for instance by imposing CRS surcharges or withholding content from traditional channels, which may ultimately reduce MDMS access and consumer transparency. A rail MDMS stakeholder stated that they do not see any distortion between CRS and non-regulated B2B platforms, with another large platform adding that such platforms are not bypassing CRS obligations but rather meeting demand for modern, efficient distribution solutions that enhance, rather than distort, competition.

OTAs provided a range of perspectives. One OTA highlighted that historically, the CRS CoC "sought to 'prevent abuse of competition and to ensure a supply of neutral information to consumers'," but with airlines developing their own controlled distribution channels, CRS transparency now covers a shrinking part of the market, leaving consumers without a "like for like" comparison of air ticket offers. This OTA added that connecting to multiple airline-controlled channels is "technically complex" and "financially burdensome" for ticket vendors, with airlines strategically making traditional GDS sourcing less attractive, including through surcharges on tickets purchased via GDSs. Another OTA observed that there is "no fair competition between regulated CRSs and any other B2B content aggregators" because strong transport operators, particularly airlines, remove content from regulated CRSs, forcing intermediaries to connect to multiple aggregators at high cost. In contrast, a third OTA noted that non-regulated B2B platforms are responding to market demand and enhance competition, stating that their presence "provides measurable benefits to both suppliers and consumers." A fourth OTA indicated that they "do not observe any issues with respect to B2B distribution channels," suggesting that competition is functioning effectively in practice. These responses collectively reflect both concern over airlines' increasing control of distribution and differing assessments of whether this creates a distortion of competition.

Two *new content aggregators* also shared contrasting views. One stated that "there is no fair competition between regulated CRSs and any other B2B content aggregators" because "strong transport operators (especially airlines) remove content from regulated CRSs and travel intermediaries are forced to work with multiple B2B content aggregators," which is "at a high cost for travel intermediaries and their customers." A second new content aggregator highlighted the CRS CoC's historical benefits, noting it "delivered significant benefits, proving to be an effective tool in preventing GDSs from removing airlines or engaging in other abusive practices such as biasing," but suggested revisions to address technological developments and unregulated actors like OTAs, while supporting the CoC's core principle across all MDMS platforms.

Most **national authorities,** including the Competition Council of Latvia, Helsinki Region Transport, IMT, and the Norwegian Railway Directorate agreed with Problem 3. The Federal Office of Transport noted that MDMS are a relatively new development in the mobility market and are not yet adequately covered by existing regulations. The Norwegian Railway Directorate pointed out that small airline start-ups face challenges because CRSs tend to favour large carriers, limiting innovation and flexibility for smaller players. The Competition Council of Latvia noted that "while competition should be encouraged", regulatory differences between traditional CRSs and newer B2B platforms risk creating an unlevel playing field, especially in air and long-distance rail sectors. Only one national authority, the Road Transport Administration (Republic of Latvia), who disagreed with the problem elaborated on their response, stating that at the moment, there is "low competition for selling rail operator tickets".

Other stakeholders mostly agreed with the problem. Two stakeholders noted that MDMS distort competition and create barriers to entry for new distribution technologies. FRIGERIO VIAGGI emphasised the lack of fair competition between regulated CRSs and unregulated B2B aggregators, particularly regarding neutral fare display and non-discriminatory access to airline content. Multiple stakeholders argued that the current regulatory framework is outdated, having been designed before the rise of aggregators and airline websites. There was also support, from the EPF, for updating the CoC to reflect technological developments and to ensure consistent consumer access to transparent, unbiased travel information across all modes, not just air.

15.13.3.2 To what extent do you agree that the Problem Drivers (PD1, PD2, PD3 and PD4) of Problem 1 sufficiently identify the causes that lead to this problem?

15.13.3.2.1 To what extent do you agree that PD1 (Limited willingness of indispensable rail operators to provide their full offer on fair terms to MDMS) sufficiently identifies the causes that lead to problem 1 (Limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?

Stakeholders were asked to indicate the extent to which they agree that PD1 sufficiently identifies the causes that lead to problem 1 (see Figure 7). Across all stakeholder groups, 39 of 74 agreed (29 fully, 10 partially), as opposed to 27 who disagreed (24 fully, 3 partially). 4 stakeholders neither agreed nor disagreed and 4 did not know.

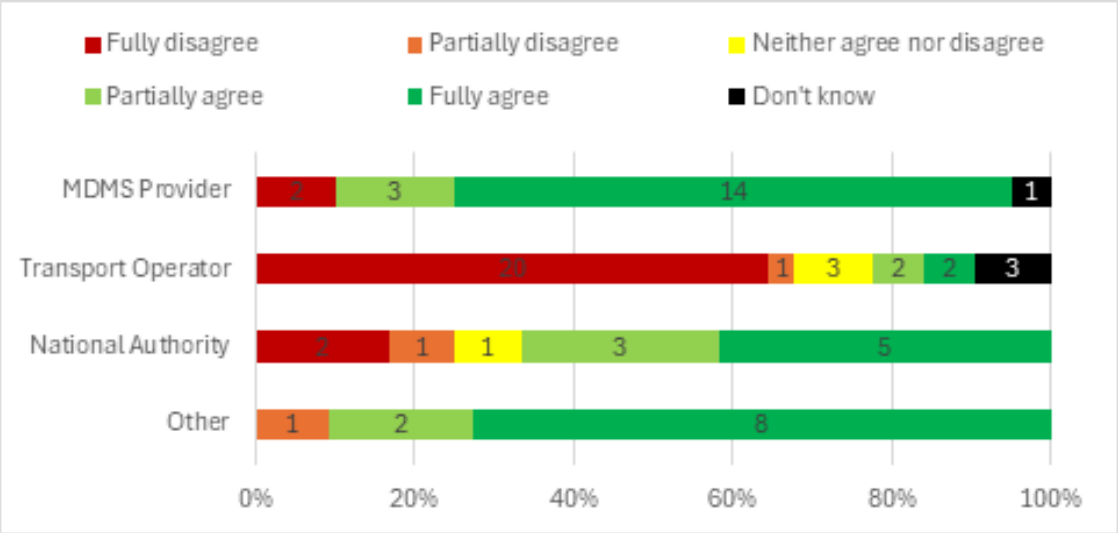
Transport operators were more likely to dissent in relation to PD1, as only 4 of 31 agreed (2 fully, 2 partially), whereas 21 of 31 transport operators disagreed (20 fully, 1 partially). The majority of each of the other stakeholder groups felt that PD1 did sufficiently identify the causes that led to Problem 1. If we focus on new entrant rail operators, the picture is different, with 2 out of 3 agreeing (1 fully, 1 partially) and 1 neither agreeing nor disagreeing.

17 of 20 MDMS providers agreed (14 fully, 3 partially), whereas only 2 providers fully disagreed. When thinking of vertically integrated MDMS providers (classified as transport operators since they tend to be incumbent rail operators), they all fully disagree with the PD1.

Similarly, 8 of 12 national authorities agreed – 5 fully (PT, FI-2, FR, and 2 anonymised) and 3 partially (FI-1, CH and 1 anonymous) – whereas 3 of 12 disagreed - 2 fully (CZ, and 1 other) and 1 partially (NO). The remaining national authority neither agreed nor disagreed.

Of the 'Other' stakeholders, 10 of 11 agreed with the problem driver (8 fully, 2 partially). 1 of 11 partially disagreed.

Figure 15-7 To what extent do you agree that PD1 sufficiently identifies the causes that lead to problem 1?



15.13.3.2.2To what extent do you agree that PD2 (Commercial incentives of MDMS to promote certain operators and/or products) sufficiently identifies the causes that lead to problem 1 (Limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?

Stakeholders were asked to indicate the extent to which they agree that PD2 sufficiently identifies the causes that lead to problem 1 (see Figure 8). Across all stakeholder groups, 44 of 72 agreed (17 fully, 27 partially), whereas 16 disagreed (13 fully, three partially). 6 stakeholders neither agreed nor disagreed and 6 did not know.

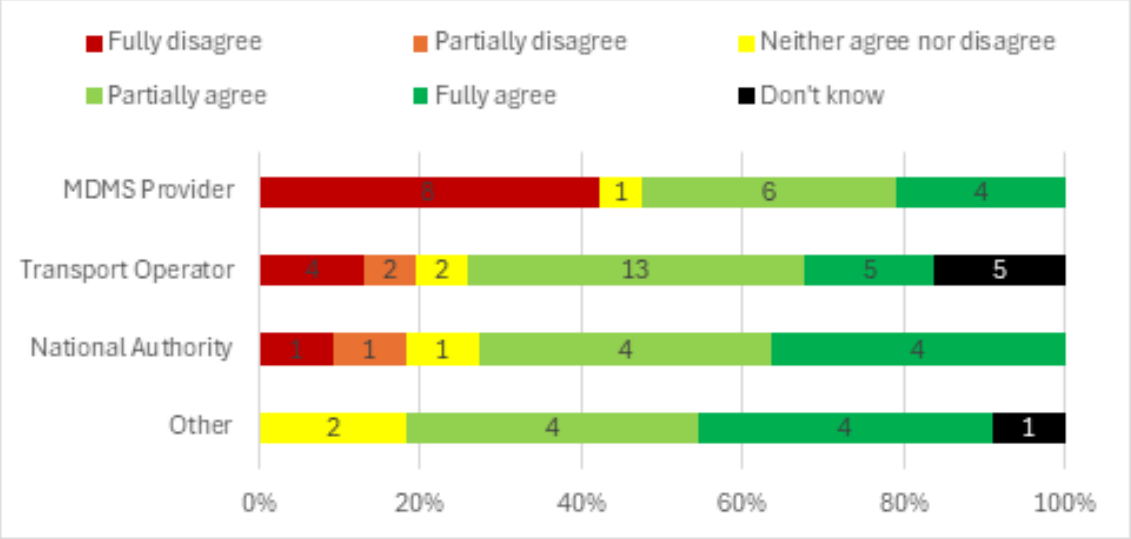
MDMS providers were more likely to disagree in relation to PD2 than other stakeholder groups. 10 of 19 MDMS providers agreed (4 fully, 6 partially), whereas 8 stakeholders fully disagreed. If focusing on vertically integrated MDMS (classified as transport operators, as previously mentioned), 4 out of 5 vertically integrated MDMS providers disagreed (3 fully and 1 partially) and the remaining stakeholder didn't respond.

Transport operators were generally more supportive, as 18 of 31 agreed (5 fully, 13 partially), whereas 6 of 31 stakeholders disagreed (4 fully, 2 partially).

8 of 11 national authorities agreed – 4 fully (PT, FI-2, FR and 1 other) and 4 partially (IE, FI-1, CH, and 1 other). 2 national authorities disagreed with the problem driver, and one was neutral.

8 of 11 'Other' stakeholders agreed (4 fully, 4 partially, in each case), while 8 of 11 national authorities agreed (4 fully, 4 partially) and 2 disagreed (1 fully, 1 partially). If we focus on new entrant rail operators, all 3 of them agreed (1 fully, 2 partially).

Figure 15-8 To what extent do you agree that PD2 (Commercial incentives of MDMS to promote certain operators and/or products) sufficiently identifies the causes that lead to problem 1 (Limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.3.2.3 To what extent do you agree that PD3 (Imbalanced commercial relationships between indispensable MDMS and transport operators) sufficiently identifies the causes that lead to problem 1 (limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?

Stakeholders were asked to indicate the extent to which they agree that PD3 sufficiently identifies the causes that lead to problem 1 (see Figure 9). Across all stakeholder groups, 46 of 72 agreed (18 fully, 28 partially agreed), while 12 disagreed (8 fully, 4 partially). 9 stakeholders neither agreed nor disagreed and 5 did not know.

No stakeholder group stood out in disagreeing with the role of PD3, as the majority from all stakeholder groups agreed that it sufficiently identified the causes that lead to Problem 1.

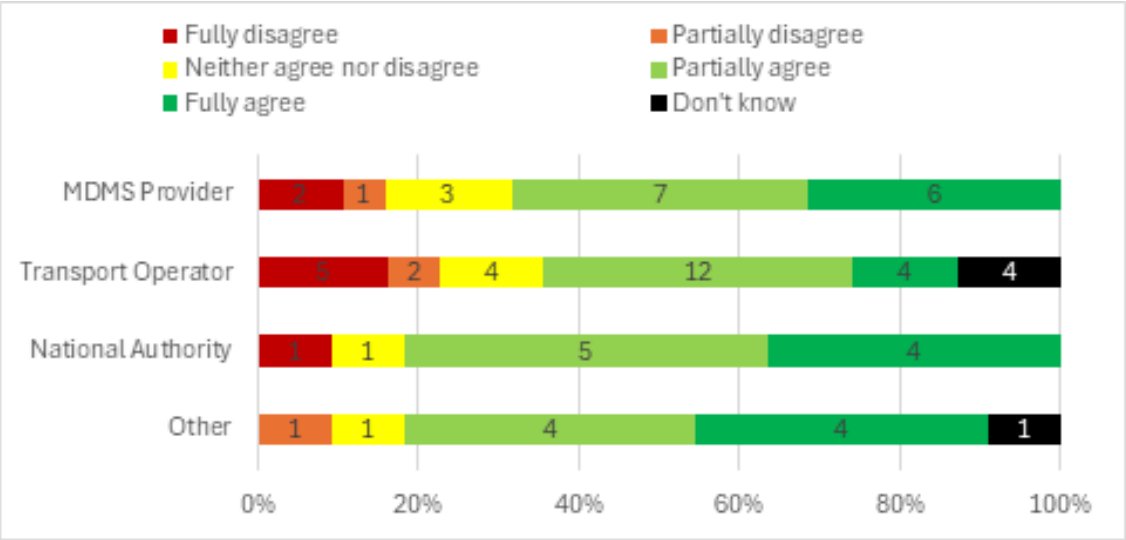
13 of 19 MDMS providers agreed (6 fully, 7 partially), whereas 3 disagreed (2 fully, 1 partially). When focusing on vertically integrated MDMS providers, 4 out of 5 vertically integrated MDMS providers disagreed (3 fully and 1 partially) and the remaining stakeholder didn't respond.

Among transport operators, 16 of 31 agreed (4 fully, 12 partially), while 7 disagreed (5 fully, 2 partially).

9 of 11 national authorities agreed – 4 fully (PT, FI-2, FR) and 5 partially (FI-1, CH, NO), whereas 1 fully disagreed (IE).

Similarly, 8 of 11 'Other' stakeholders agreed (4 fully, 4 partially), while 1 stakeholder partially disagreed. When focusing on railway new entrants, 2 out of 3 agreed (1 fully and 1 partially) and 1 partially disagreed.

Figure 15-9 To what extent do you agree that PD3 (Imbalanced commercial relationships between indispensable MDMS and transport operators) sufficiently identifies the causes that lead to problem 1 (limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.3.2.4 To what extent do you agree that PD4 (vertically integrated MDMS favour their own transport services) sufficiently identifies the causes that lead to problem 1 (limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?

Stakeholders were asked to indicate the extent to which they agree that PD4 sufficiently identifies the causes that lead to problem 1 (see Figure 10). Across all stakeholder groups, 38 of 70 agreed (21 fully, 17 partially), while 21 of 70 stakeholders disagreed (13 fully, 8 partially). 7 stakeholders neither agreed nor disagreed and 4 did not know. When focusing on vertically integrated MDMS providers, 4 out of 5 vertically integrated MDMS providers disagreed (2 fully and 2 partially) and the remaining stakeholder didn't respond.

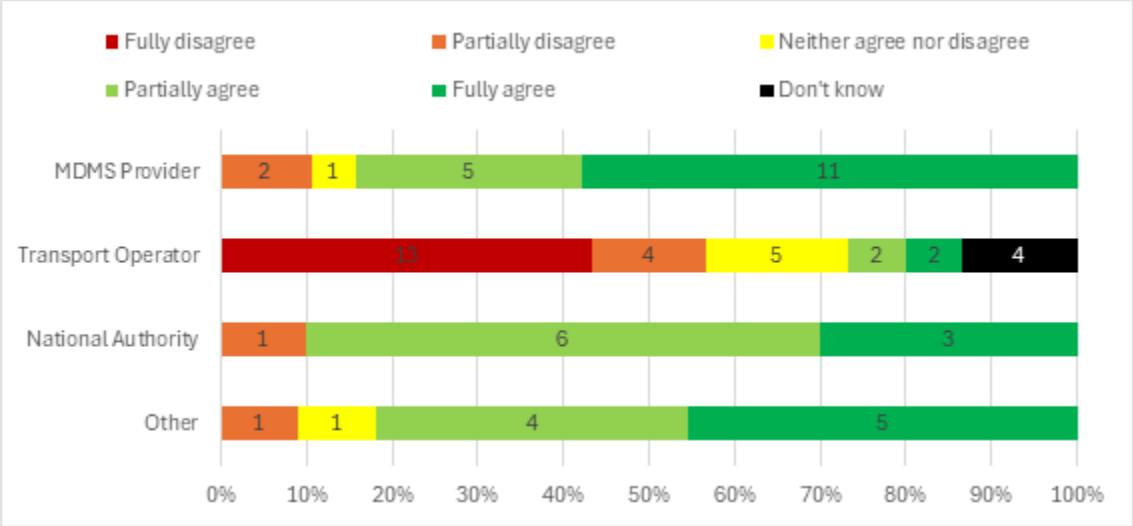
Transport operators were a lot more negative in relation to PD4 than other stakeholder groups, as only 4 of 30 agreed (2 fully, 2 partially), while 17 of 30 transport operators disagreed (13 fully, 4 partially). When focusing on railway new entrants, all the 3 of them agreed (2 fully and 1 partially).

The other groups agreed that PD4 sufficiently identified the causes that led to Problem 1, e.g. 16 of 19 MDMS providers agreed (11 fully, 5 partially), whereas only 2 MDMS stakeholders partially disagreed.

9 of 10 national authorities agreed with this problem driver – 3 fully agreed (FI-2, FR, NO) and 6 partially agreed (PT, FI-1, CH, and 3 others). Only 1 national authority partially disagreed (IE).

and 9 of 11 'Other' stakeholders agreed (3 national authorities and 5 'Other' stakeholders fully agreed, while respectively 6 and 4 partially agreed), whereas 1 national authority and 1 'Other' stakeholder partially disagreed.

Figure 15-10 To what extent do you agree that PD4 (vertically integrated MDMS favour their own transport services) sufficiently identifies the causes that lead to problem 1 (limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.3.2.5 Please explain your views on the extent to which you believe the specified problem drivers sufficiently identify the causes that lead to Problem 1. (Please refer to specific practice by different actors, if you have concrete examples.)

Transport operators stressed that the concept of "indispensable operators" requires a clear and precise definition. Eight operators (all from the air sector), including Airlines for Europe and ERA, emphasised that they operate already in transparent and competitive markets, offering consumers numerous travel options, both direct and with connections. Two airlines, including Lufthansa Group, rejected the idea that there is market failure in intra-EU air travel, noting that no airline holds more than 15% market share and consumers already benefit from ample choice, competition and pricing transparency. Eight airlines and air transport sector stakeholders, including the Airlines for Europe and ERA, opposed any full content mandate. They stressed the need to choose business partners freely and avoid sharing low fares when distribution costs (CRS fees, incentives) outweigh benefits.

Four operators (including Community of European Railway and Infrastructure Companies, Deutsche Bahn, AND SJ AB) rejected claims of limited willingness to share content. EasyJet highlighted its open API and distribution charter, allowing resellers access under fair and equal terms. SNCF Group identified technical and financial barriers as more relevant than unwillingness to share information. They cited a lack of interoperability, high development costs and limited resources.

Thirteen **MDMS providers** (including ADN Mobilites, Dohop, ECTAA, EU Travel Tech, SRF, Skyscanner) emphasised that dominant or incumbent transport operators often restrict access to full content or impose unfair terms on independent MDMS. This includes withholding low fares, applying penalties based on look-to-book ratios, or offering prohibitively low commissions, making it difficult for MDMS to operate viably. Three stakeholders (including ECTAA) cited national examples such as challenges with SNCF, Renfe, and Deutsche Bahn. Five MDMS providers (including EU Travel Tech, FTO, Skyscanner, and Welcome Travel Group SpA) also noted that airlines, not just rail operators, actively shape the ticket distribution market to favour direct sales, further reducing transparency and consumer choice.

CRSs fell within this group. All three CRSs highlighted the limited willingness of transport operators, particularly incumbents, to provide full access to their offers as a key factor in Problem Driver 1. One CRS noted that "the rail operator has the willingness to give information, but [there are] certain (technical) challenges preventing the realization: old propriety interfaces, no standards; data not of good quality; data synchronisation; [and] agreement on how and for what to use the data." A second CRS observed that "many airlines [and rail operators] reserve the lowest fare classes for their own .coms and direct connects, therefore limiting the transparency of fares and ease of booking for the end consumer," pointing to an "unbalanced commercial relationship between MDMS and Operators." A third CRS confirmed that "many transport operators prefer to make their full inventory of offers and prices ('full content') exclusively available on their direct distribution

channels… and provide more limited offers to independent indirect distribution channels," while emphasising that independent MDMS platforms "have the incentive to integrate as many offerings as possible… [which] is precisely the value third-party distribution brings to the whole industry."

Two *new content aggregators* reinforced the view that strong transport operators can restrict access to content. One NCA noted that "especially strong airlines / airline groups remove content from regulated CRSs and push travel intermediaries towards using unregulated aggregators or airline own direct connects… at disadvantageous terms." A second NCA stressed that the concept of "indispensable operators" must be clearly defined, and argued that Full Content mandates could strengthen the dominant position of large players and stifle innovation: "In general, [Full Content] strengthens the dominant position of players… these practices… have both raised the final ticket price for passengers and stifled competition from alternative distribution channels."

A large MDMS provider reported having no commercial incentive to favour specific operators, as their business models rely on comprehensive, unbiased content to serve consumer needs. This applies particularly to B2C metasearch platforms, which prioritise user experience and market coverage. Four stakeholders, including EU Travel Tech and Skyscanner, partially supported PD3, but only if the term "indispensable MDMS" is removed or redefined. They (Skyscanner) considered PD4 to be largely irrelevant in the air sector, though acknowledged it may apply in rail where vertically integrated MDMS exist.

The BEUC suggested that a key missing driver is the lack of regulation for airline-controlled distribution channels, which undermines transparency and fair comparison for consumers.

There were mixed responses from **national authorities**, although they largely agreed with the problem drivers presented. The Finnish Ministry of Transport and Communications stated all four problem drivers are valid, while another confirmed they all occur but to different degrees. The Federal Office of Transport noted the presence of many relevant drivers, though suggested the list may not be comprehensive. Several authorities highlighted PD1 as a key issue. the Norwegian Railway Directorate proposed rewording PD1 to better reflect the broader market challenge, arguing that restricting the scope to rail and "indispensable" MDMS undermines the goal of enabling viable alternatives to car use. Another national authority stated that incumbent railway operators and major players often have no incentive to share data and prefer to preserve access for their own distribution channels, underlining the need for EU-level regulation to ensure mandatory sharing.

Other stakeholders had mixed views on the problem drivers. Five stakeholders, including BEUC, European Passengers' Federation, FRIGERIO VIAGGI, POLIS, Man in Seat 61, agreed that PD1 is important. Six stakeholders, including T&E, BEUC, FRIGERIO VIAGGI, and EPF, and Verbraucherzentrale Bundesverband (German consumer advocacy group), pointed to the limited willingness of transport operators, particularly incumbent companies, to provide full access to their offers on fair terms to MDMS. The Man in Seat 61 noted that even major MDMS platforms like Trainline and Rail Europe lack connections to many national railways, partly due to operator reluctance and technical fragmentation, such as the lack of standard APIs.

Three stakeholders (including EPF and FRIGERIO VIAGGI) considered PD2 and PD3 to be less relevant or perhaps misframed, with real power resting with transport operators, not MDMS platforms. The main problem was considered to be operators' dominant position, not commercial bias by MDMS. The EPF also noted technical and interoperability challenges as key barriers, calling for EU-led standardisation efforts to improve system connectivity.

15.13.3.3 To what extent do you agree that the Problem Drivers (PD2, PD3 and PD4) of Problem 2 sufficiently identify the causes that lead to this problem?

15.13.3.3.1 To what extent do you agree that PD2 (commercial incentives of MDMS to promote certain operators and/or products) sufficiently identifies the causes that lead to problem 2 (Uneven access of operators to indispensable MDMS platforms)?

Stakeholders were asked to indicate the extent to which they agree that PD2 sufficiently identifies the causes that lead to problem 2 (see Figure 11).

Across all stakeholder groups, 38 of 73 fully or partially agreed (14 fully agreed while 24 partially agreed). Furthermore, 23 of 73 stakeholders fully disagreed (19) or partially disagreed (4). Moreover, 12 stakeholders neither agreed nor disagreed (3) or did not know (9).

In relation to MDMS providers, 5 of 20 fully or partially agreed (3 fully agreed while 2 partially agreed). Furthermore, 13 stakeholders fully disagreed (12) or partially disagreed (1). Moreover, 2 stakeholders neither agreed nor disagreed (1) or did not know (1). Focusing on vertically integrated MDMS providers, 4 out of 5

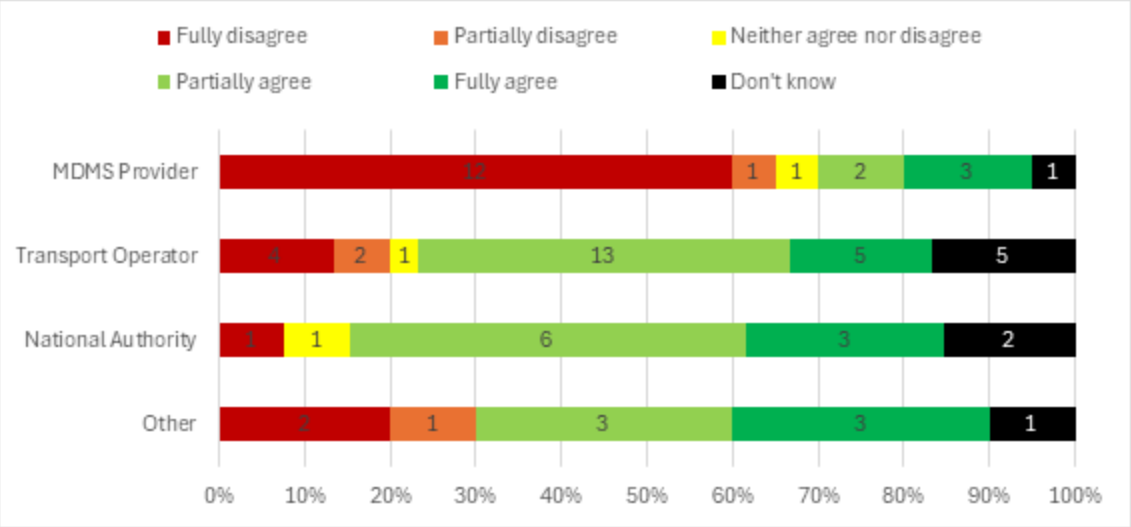
vertically integrated MDMS providers disagree (3 fully and 1 partially), while 1 provider did not provide any response.

In relation to transport operators, 18 of 30 fully or partially agreed (5 fully agreed while 13 partially agreed). Furthermore, six stakeholders fully disagreed (4) or partially disagreed (2). Moreover, 6 stakeholders neither agreed nor disagreed (1) or did not know (5). Focusing on new entrant rail operators, all 3 new entrants agree (1 fully and 2 partially).

In relation to national authorities, 9 of 13 fully or partially agreed – 3 fully agreed (PT, FI-2, FR) while 6 partially agreed (FI-1, CH, LV-2, LV-1, and 2 others. Furthermore, 1 national authority fully disagreed (IE). Moreover, 3 stakeholders neither agreed nor disagreed (1) or did not know (2).

In relation to 'Other' stakeholders, 6 of 10 fully or partially agreed (3 fully agreed while 3 partially agreed). Furthermore, 3 stakeholders fully disagreed (2) or partially disagreed (1). Moreover, 2 stakeholders neither agreed nor disagreed (1) or did not know (1).

Figure 15-11 To what extent do you agree that PD2 sufficiently identifies the causes that lead to problem 2?



15.13.3.3.2To what extent do you agree that PD3 (Imbalanced commercial relationships between indispensable MDMS and transport operators) sufficiently identifies the causes that lead to problem 2 (uneven access of operators to indispensable MDMS platforms)?

Stakeholders were asked to indicate the extent to which they agree that PD3 sufficiently identifies the causes that lead to problem 2 (See Figure 12).

Across all stakeholder groups, 36 of 72 fully or partially agreed (16 fully agreed while 20 partially agreed). Furthermore, 23 stakeholders fully disagreed (20) or partially disagreed (3). Moreover, 13 stakeholders neither agreed nor disagreed (6) or did not know (7).

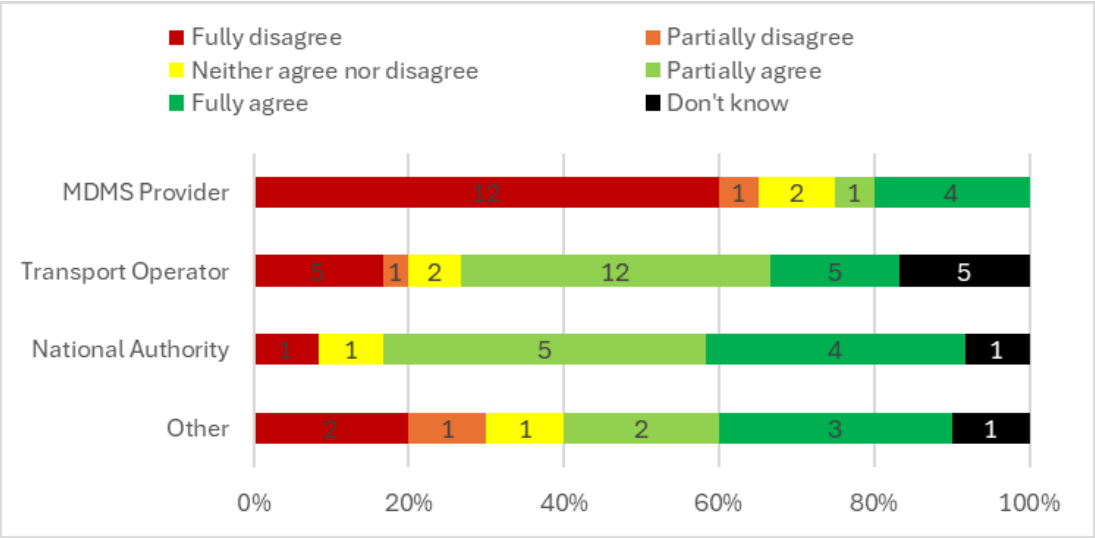
In relation to MDMS providers, 5 of 20 fully or partially agreed (4 fully agreed while 1 partially agreed). Furthermore, 13 stakeholders fully disagreed (12) or partially disagreed (1). Moreover, 2 stakeholders neither agreed nor disagreed. Focusing on vertically integrated MDMS providers, 3 out of 5 vertically integrated MDMS providers fully disagree while 2 providers did not know or did not comment.

In relation to transport operators, 17 of 30 fully or partially agreed (5 fully agreed while 12 partially agreed). Furthermore, 6 of 30 stakeholders fully disagreed (5) or partially disagreed (1). Moreover, 7 stakeholders neither agreed nor disagreed (2) or did not know (5). Focusing on new entrant rail operators, 2 out of 3 new entrants agree (1 fully and 1 partially) and 1 out of 3 new entrants partially disagree.

In relation to national authorities, 9 of 12 fully or partially agreed – 4 fully agreed (PT, FI-2, FR, and 1 other) while 5 partially agreed (FI-1, CH, LV-1, and 2 others). Furthermore, 1 of 12 stakeholder fully disagreed (IE). Moreover, 2 stakeholders neither agreed nor disagreed (1) or did not know (1).

In relation to 'Other' stakeholders, 5 of 10 fully or partially agreed (3 fully agreed while 2 partially agreed). Furthermore, 3 of 10 stakeholders fully disagreed (2) or partially disagreed (1). Moreover, 2 stakeholders neither agreed nor disagreed (1) or did not know (1).

Figure 15-12 To what extent do you agree that PD3 (Imbalanced commercial relationships between indispensable MDMS and transport operators) sufficiently identifies the causes that lead to problem 2 (uneven access of operators to indispensable MDMS platforms)?



15.13.3.3.3To what extent do you agree that PD4 (vertically integrated MDMS favour their own transport services) sufficiently identifies the causes that lead to problem 2 (uneven access of operators to indispensable MDMS platforms) ?

Stakeholders were asked to indicate the extent to which they agree that PD4 sufficiently identifies the causes that lead to problem 2 (See Figure 13).

Across all stakeholder groups, 29 of 72 fully or partially agreed (14 fully, 15 partially). Furthermore, 31 of 72 stakeholders fully disagreed (25) or partially disagreed (5). Moreover, 13 stakeholders neither agreed nor disagreed (6) or did not know (7).

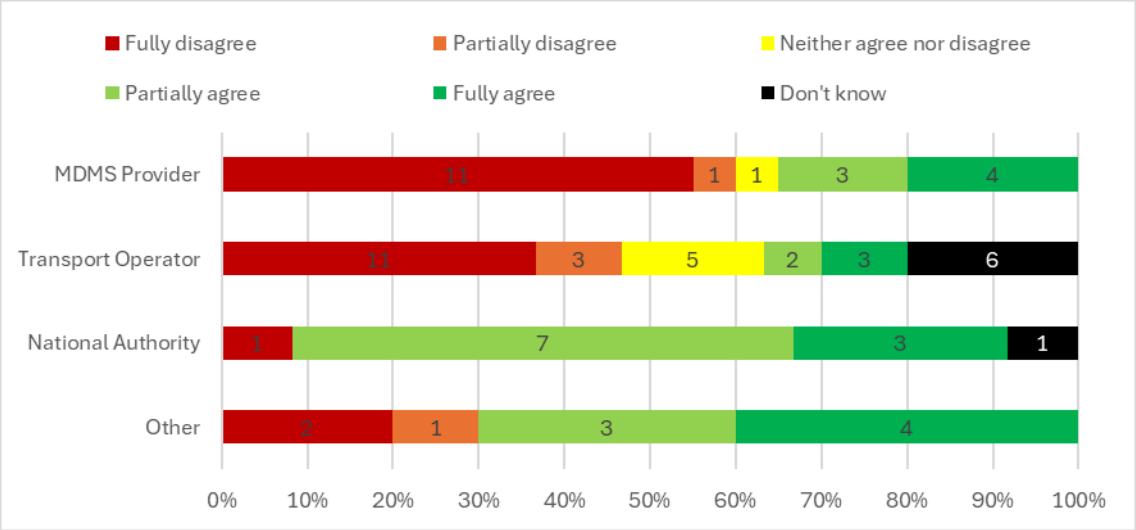
In relation to MDMS providers, 7 of 20 fully or partially agreed (4 fully, 3 partially). Furthermore, 12 stakeholders fully disagreed (11) or partially disagreed (1). Moreover, 1 stakeholder neither agreed nor disagreed. Focusing on vertically integrated MDMS providers, 3 out of 5 vertically integrated MDMS providers disagree (2 fully and 1 partially) while 2 providers did not know or did not comment.

In relation to transport operators, 5 of 30 fully or partially agreed (3 fully, 2 partially). While 14 of 30 either fully or partially disagreed (11 fully, 3 partially) . Moreover, 11 of 30 transport operators neither agreed nor disagreed (5) or did not know (6). Focusing on new entrant rail operators, all 3 new entrants agree (2 fully and 1 partially).

In relation to national authorities there was high levels of agreement with this statement. 10 of 12 fully or partially agreed – 3 fully (FI-2, FR, LV-1) and 7 partially (PT, FI-1, CH, NO and 3 others). 1 Member State fully disagreed (IE), and 1 stakeholder commented they did not know.

In relation to ‘Other’ stakeholders there was also a high degree of agreement. 7 of 10 fully or partially agreed (4 fully, 3 partially). Furthermore, 3 stakeholders fully disagreed (2) or partially disagreed (1).

Figure 15-13 To what extent do you agree that PD4 sufficiently identifies the causes that lead to problem 2?



15.13.3.3.4 Please explain your views on the extent to which you believe the specified problem drivers sufficiently identify the causes that lead to Problem 2. (Please refer to specific practice by different actors, if you have concrete examples.)

Most **MDMS providers** rejected the framing of Problem 2 in general, arguing that it misconstrues market reality. EU Travel Tech and SRF, noted that it is operators, especially large or vertically integrated ones, who limit or control access to content. ECTAA, an association of travel agencies, and FTO, a tourism industry association, reinforced this perspective, noting that independent MDMS, such as OTAs and CRSs, generally provide neutral displays or filter options, and they are not aware of any MDMS that could be considered "indispensable." Both emphasised that the main problem lies with strong transport operators who do not share content fairly with independent MDMS or favour their own vertically integrated platforms.

On PD2, most MDMS providers across transport modes, including Welcome Travel Group SpA (travel agency network), stated that MDMS business models rely on offering comprehensive, neutral content to attract users, not favouring specific operators. They argued that operators are the ones applying restrictions, such as surcharges or withholding the lowest fares.

Regarding PD3, Skyscanner rejected the idea that they hold market power. Instead, they, along with other MDMS providers, described operators leveraging their dominance to impose unfavourable terms, including low commissions for smaller MDMS and preferential treatment for high-volume platforms. For PD4, nine stakeholders (including ECTAA, EU Travel Tech, FTO, SRF, Skyscanner and Welcome Travel Group SpA) agreed that this is a concern, but only in cases where operators run their own MDMS. They noted that these platforms often prioritise their own services and restrict content from competitors. Overall, MDMS providers argued that the problem lies with operator-driven restrictions, not MDMS practices.

Most **transport operators** agreed that the problem drivers sufficiently identify the causes of Problem 2. Three airlines, including one large and two medium-sized, agreed that the CoC has had a positive impact by limiting discriminatory practices in B2B distribution but it needs updating. However, there was some shared concern from the ERA and another air sector association, about bias in rankings, prioritisation and transparency: one large airline noted that "the CoC appears to prioritise the OTA's access to information rather than ensuring that consumers receive as much transparency as possible".

On PD3, airline operators, including Lufthansa Group, said CRSs often incentivise travel agents based on how much they sell or which airline they sell, making it hard for new entrants and reducing competition. These deals can limit innovation and keep the market controlled by a few players. Some airlines are now moving away from these types of agreements to have more control over how they distribute their services. One of these large airlines said large OTAs and metasearch engines do sometimes promote certain operators due to booking fees, incentives, or ranking manipulation, which can mislead customers. They called for stronger rules to ensure transparency and neutrality.

However, transport operators opposed to the drivers, including Deutsche Bahn, Czech Railways, Community of European Railway and Infrastructure Companies, said that operators already have fair access to MDMS platforms, except when it comes to direct competitors, where commercial decisions are normal. The Community of European Railway and Infrastructure Companies, Deutsche Bahn and SJ AB stressed that operators need the freedom to make their own commercial agreements, which help ensure good service and clear responsibilities. Three operators (including CER and Czech Railways) said they aim to show all options fairly and don't recognise the issue of MDMS favouring certain products (PD2). It's important to note that four of these stakeholders are incumbent, vertically integrated rail operators which likely informs their view that current commercial arrangements provide adequate access to MDMS platforms and that there is limited favouring of certain products.

The majority of **national authorities**, including the Federal Office of Transport, agreed with the framing of Problem 2 but acknowledged that there are many problem drivers occurring at varying degrees and the proposed drivers stated are not a comprehensive list. One respondent stated that major actors such as the incumbent railway operators as seen in Sweden and Norway hold the majority of market shares and distort competition. The Autorité de Régulation des Transports (ART) mentioned that one MDMS vertically integrated with an incumbent railway undertaking who has a dominant position in the market and is not sharing this access with others. On the other hand, the National Transport Authority of Ireland did not agree that this specific problem was an issue in Ireland for public transport since as an NTA are not involved in with maritime and air travel.

Other stakeholders had differing views of Problem 2. T&E provided a specific example regarding PD4 in relation to Trenitalia tickets from Paris on the SNCF Connect app despite this app being highly market dominant. Another stakeholder acknowledged that all drivers form a solid base, but they need to be complemented by other issues such as data access frameworks, governance and stakeholder needs. On the other hand, POLIS disagreed with the drivers, stating that whilst these drivers capture challenges with long-distance travel, they do not capture the dynamics of regional travel. Regional services operate within an integrated fare system and should not be included under the scope of this problem.

On PD2, FRIGERIO VIAGGI noted that independent MDMS have neutral filter options and try to provide customers with broader access. Furthermore, whilst acknowledging PD3, they stated that they are not aware of the imbalanced relationship that would lead to uneven access of platforms, only that this impacts access to content and makes it inefficient or expensive for MDMS. On PD4, a B2B travel agency stated that the biggest issue is strong transport operators not sharing their content in a fair and efficient way with independent MDMS.

15.13.3.4 To what extent do you agree that the PD5 (Regulatory framework no longer fit for purpose due to market and technological changes in ticket distribution) of Problem 3 (Potential distortion of competition between regulated CRS and non-regulated B2B distribution channels performing similar functions to CRS) sufficiently identify the causes that lead to this problem?

Stakeholders were asked to indicate the extent to which they agree that Problem Driver (PD5) of Problem 3 sufficiently identify the causes that lead to this problem (See Figure 14).

Across all stakeholder groups, the majority either agreed with the statement or did not know. Of those who responded, 26 of 65 fully or partially agreed (18 fully, 8 partially), 11 of 65 stakeholders partially disagreed and 28 of 65 stakeholders neither agreed nor disagreed (3) or did not know (25).

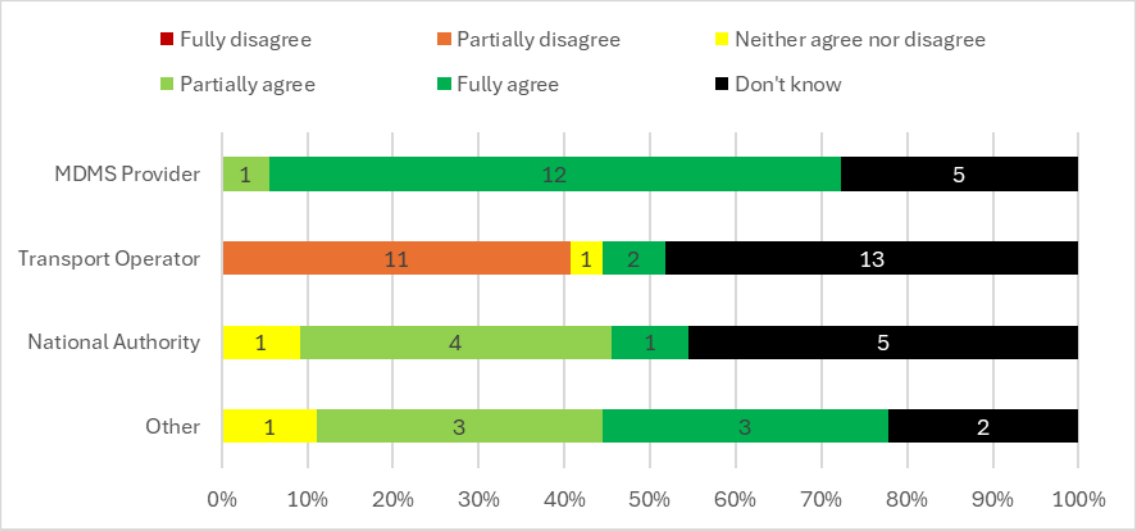
In relation to MDMS providers, 13 of 18 fully or partially agreed (12 fully, 1 partially). 5 of 18 MDMS providers stated they did now know. Focusing on vertically integrated MDMS providers, all 5 vertically integrated MDMS providers replied do not know or did not comment.

In relation to transport operators a large number disagreed with PD5 identifies the causes of problem 3. 2 of 27 fully agreed, while 11 of 27 partially disagreed. Moreover, 14 of 27 stakeholders neither agreed nor disagreed (1) or did not know (13). The large number of 'don't knows' can be explained by the number of transport operators who are not affiliated with the air transport sector. Focusing on new entrant rail operators, all 3 new entrants do not know.

In relation to national authorities, 5 of 11 fully or partially agreed – 1 fully (NO) and 4 partially (PT, FI-1, CH and 1 other). Furthermore, 6 stakeholders neither agreed nor disagreed (1) or did not know (5).

In relation to 'Other' stakeholders, 6 of 9 fully or partially agreed (3 fully, 3 partially). Furthermore, 3 of 9 stakeholders neither agreed nor disagreed (1) or did not know (2).

Figure 15-14 To what extent do you agree that the Problem Driver (PD5) of Problem 3 sufficiently identify the causes that lead to this problem?



15.13.3.5 Please explain your views on the extent to which you believe the specified problem drivers sufficiently identify the causes that lead to Problem 3. (Please refer to specific practice by different actors, if you have concrete examples.)

Within the **transport operators'** group, mainly air sector stakeholders responded to this question**.** Seven airlines and three air transport sector associations (including Airlines for Europe and the ERA)**,** recognise the importance of the CRS CoC, which plays a vital role in protecting airlines from discriminatory practices by CRSs. In any case, several of these stakeholders nonetheless acknowledged that the CRS CoC needs to be revised to extend it further to reflect recent technological advancements and changes in distribution channels, as the Commission intends to do with this initiative. Airlines for Europe, ERA, five airlines and one other industry group advocated for the extension of the CoC's non-discrimination and neutrality provisions to all MDMS platforms, including unregulated actors like OTAs, and emphasise the need for effective enforcement through national authorities, as proposed in the current policy measures. Airlines for Europe as well as five airlines and one industry group raised that revisions should reflect technological advancements and ensure robust compliance mechanisms. While most stakeholders focused on EU-level regulation, one rail operator (SNCF) noted the value of sector-specific rules already adopted in some Member States, such as France's Law on the Orientation of Mobility, to help govern MDMS development and prevent market abuses.

When asked to explain their views, the response from **MDMS providers** was mixed between those agreeing or not knowing. Firstly, four respondents, including EU Travel Tech (a tourism industry association), agreed that the regulatory framework of the CRS, the CRS Code of Conduct (CRS CoC), is outdated and no longer fit for purpose due to market and technological changes to air ticket distribution. EU Travel Tech elaborated on their response indicating that the original rationale of the CRS CoC, i.e., to prevent self-preferencing by airline-owned CRSs, no longer applies, and that the neutral display obligations are now largely ineffective in ensuring fair competition or consumer choice in today's distribution landscape.

Among *CRSs*, three stakeholders offered differing views. One CRS highlighted a regulatory imbalance, noting that "GDSs must follow rules on how to display offers without bias, while OTAs (MDMS) are not bound by these rules," warning that "an MDMS could choose to display only the provider that pays the highest commission." It also pointed to the lack of standardised business frameworks in the rail sector and the "need for standardising business relationships." Another CRS questioned "the need to regulate MDMSs," arguing that the CRS Code is "no longer fit for purpose" and that regulation currently creates "a very uneven playing field," since only CRSs are subject to restrictions while aggregators are not. A third CRS agreed that "the existing regulatory framework is obsolete," saying that neutral display rules "act as a barrier to entry, expansion and innovation" because they are enforced only on a few regulated players while large digital competitors are exempt. It argued that neutrality rules should, if maintained, "apply to all MDMSs" and be limited to "general principles that are future-proof and ensure transparency and choice for consumers."

Responses from new content aggregators were mixed. One new content aggregator highlighted that "Reg. 80/2009 (CRS Code of Conduct) discriminates between regulated CRS and unregulated aggregators / systems controlled by strong transport operators that fulfil the same or similar tasks as the regulated CRS". Another new content aggregator emphasised that the CoC "provides very tangible benefit" and that "the non-discrimination and non-bias provisions of the CoC should be maintained," adding that "effective enforcement of the CoC clauses is crucial" and that revisions should "account for technological developments in the field and strengthen [enforcement] particularly concerning currently unregulated actors such as OTAs".

Three respondents (including the National Transport Authority of Ireland and Autorité de régulation des transports (ART)), didn't know due to their lack of knowledge regulator frameworks, or lack of awareness of any issues regarding B2B platforms.

Generally, the **national authorities,** including the Competition Council of Latvia, agree that the current regulation is outdated which leads to distorted competition that favours larger airlines. However, there is a view from the Federal Office of Transport that the problem outlined isn't the only issue as a result of market and technological changes.

Other stakeholders mostly agree with the problem. The EPF noted that whilst the current framework plays a fundamental role, it does require adjustment. A European organisation indicated that whilst reform is needed, the problem doesn't identify the root cause and further focus is needed that considers building trust, legal clarity and provide technical safeguards. Examples of some causes provided to strengthen analysis included cybersecurity requirements, lack of certification schemes, limited user control and the lack of a governance body.

15.13.3.6 What practices of MDMS providers are you aware of, if any, that give a preferential treatment to offer/products of specific operators via their platform? Please elaborate on your answer.

Transport operators pointed to a range of practices that give preferential treatment to specific operators across transport sectors.

In the airline sector, nine stakeholders from the aviation sector including Airlines for Europe and Lufthansa Group, pointed to abusive practices undertaken by OTAs such as selling tickets below cost in order to acquire business or support specific operators, discriminating and displaying first airlines that are paying the highest fees, the manipulation of price comparison by listing multiple brands from the same corporate group, and non-transparent fees added selectively by OTAs to certain carriers and/or routes, which may mislead consumers. They claimed that these actions distort competition and limit consumer choice.

In the rail sector, three stakeholders (ALLRAIL, the Community of European Railway and Infrastructure Companies (rail industry association), and SJ AB) noted that MDMS providers give preferential treatment in some cases to some operators.

SJ AB, a vertically integrated incumbent rail operator, acknowledged that its own MDMS platform may give preferential treatment to its own offerings, noting that "SJ's offerings are sourced directly from our CRS, unlike those of other operators," which allows the platform to provide more features and information for its own services. They compared this practice to historical patterns in the airline industry, where operators similarly prioritised their own products. CER, a rail industry association, observed a similar pattern in the airline sector, stating that "Lufthansa, Air France show offers only from their partner companies… If airlines are excluded from this obligation this will create another barrier for railways to compete with aviation." ALLRAIL, another rail association, described the issue as "widespread and systemic across the EU," highlighting practices such as hiding competitors behind multiple clicks, default filters excluding non-incumbent options, and platforms using interface tricks to nudge consumers toward in-house operators. Other stakeholders, including Metropolitano de Lisboa, Czech Railways, and SNCF Group, reported they were not aware of any preferential treatment.

Nine transport operators mentioned to some extent that the selective or irregular display of competitor offers undermines competition, including six airlines, and three rail operators (one incumbent and two new entrants). In addition, two airline associations and one rail industry association (ALLRAIL) highlighted similar concerns. The airlines and airline associations focused on selective or non-transparent practices by OTAs and metasearch engines that can distort competition, while the rail operators and ALLRAIL emphasised biased display of competitor offerings on digital platforms.

Finally, an international trade association noted that preferential treatment may also occur between modes of transport, where certain MDMS platforms may display rail offers and prices before that of alternative modes of transport, such as coach journeys to the same destinations.

MDMS providers' general view was that independent MDMS providers typically do not engage in preferential treatment, with any observed or potential bias being largely associated with vertically integrated platforms or operator-run MDMS.

The three *CRSs* reported limited awareness of preferential treatment by MDMS providers. One CRS noted that preferential treatment occurs as part of business agreements and is common across the market, helping fund business cases and reduce barriers. Another CRS stated they are "unaware of any such practices" and emphasised that any differentiation typically arises from operators themselves through direct connections or revenue management. The third CRS confirmed they have "not seen any evidence" of restrictions by independent MDMS, but noted that MDMS controlled by incumbent transport operators can self-preference their own offers.

Similarly, *OTAs* generally reported limited awareness of preferential treatment on their own platforms, but highlighted potential issues with vertically integrated MDMS. One OTA stated they are "not aware of any practices that provide preferential treatment of any transport operators" and emphasised their interest in making all offers visible. Another OTA noted that independent MDMS typically have neutral filter options, though preferential treatment could exist on operator-run MDMS. A third OTA highlighted that vertically integrated platforms, such as SNCF Connect, can favour their own products and give themselves an advantage, citing examples where promotions from other operators are communicated too late for OTAs to effectively promote them. Finally, a fourth OTA similarly noted that independent MDMS aim to provide wide selection and fair conditions, but vertical integration can lead operators to promote their own services more prominently, though any advertising or sponsored features are transparent and regulated.

Three *B2C MDMS providers* (including Dohop and Skyscanner) shared their views on such potential preferential treatment. Dohop acknowledged that "it is possible for certain MDMS to give preferential treatment based on commercial terms," such as top placement for products with higher commissions or paid 'Sponsored' rankings. Another B2C MDMS provider stated that independent MDMS typically use neutral filters, while operator-run MDMS might provide preferential treatment. Skyscanner indicated they are "not aware of any such practices by non-vertically integrated MDMS in the air sector" and emphasised that their rankings are consumer-driven and that EU regulations already address any potential preferential commercial treatment.

Nine *MDMS-related associations and networks* provided input on preferential treatment by MDMS providers. Seven tourism industry associations (SRF, FTO, Welcome Travel Group, ECTAA, BT4Europe, ADN Mobilites, and EU Travel Tech) stated they were not aware of such practices on independent MDMS, emphasising that independent providers typically use neutral filters and have no incentive to favour specific operators. Two associations noted that vertically integrated MDMS may prioritise their own bundled offerings or additional services, and highlighted the role of public authorities in ensuring equal access to propositions across all MDMS platforms.

Two **national authorities,** namely Helsinki Region Transport and National Transport Authority of Ireland indicated they were unaware of any preferential treatment given to specific transport operators. However, Autorité de régulation des transports (ART), Ministry of Transport of the Czech Republic, and the Norwegian Railway Directorate, indicated that vertically integrated MDMS platforms may give preferential treatment to offerings by their own transport operators.

In the **'other stakeholders'** category**,** POLIS commented that metropolitan or regional public authority owned MDMS platforms may prioritise services that align with the sustainable mobility goals of the authority (as defined in SUMP). Whereas stakeholders such as, one consumer organisation and EPF, echoed comments made by other stakeholders, stating that vertically integrated MDMS platforms may favour their own services in rail transport putting third-party and other operators at a disadvantage.

15.13.3.7 What practices of specific MDMS are you aware of, if any, that have the potential to, or currently limit or make it more difficult for, certain transport operators to access and use MDMS platforms? Please elaborate on your answer.

Transport operators identified a range of discriminatory practices by MDMS platforms that limit or complicate access for certain operators. These include the refusal of dominant MDMS platforms to onboard competitors, the application of prohibitive fees or restrictive parity clauses, and the use of technical or economic barriers such as high integration costs or limited support for smaller operators.

In the rail sector, operators like FlixTrain cited filtering practices on platforms such as Deutsche Bahn Navigator, which hide cheaper or competing options through default settings or selective display tactics,

misleading users and distorting competition. Similar concerns were raised by a coach operator who flagged that MDMS platforms like Trainline reportedly removed price indicators for coach services, making them less visible than the train options. ALLRAIL stressed that such practices, coupled with a lack of mandatory access obligations, systematically exclude new entrants and hinder liberalisation, calling for regulatory action to ensure fair, transparent, and non-discriminatory access to MDMS platforms.

In the air travel sector, several respondents, including major airlines and Airlines for Europe (airline industry association), highlight that prohibitive fees and unworkable clauses (e.g., parity requirements) can make collaboration with MDMS platforms counterproductive, as these terms affect broader airline-platform relationships. One major airline raised concerns about biased practices by CRSs, OTAs, and MSEs, warning that unchecked market power, especially without Code of Conduct protections, could impair access and harm consumers. Lufthansa Group noted that while access is generally possible with agreed commercial terms, smaller operators may face prioritisation issues, though not necessarily full barriers to entry. One airline highlighted misleading information on services like baggage and the potential coercion to accept full content obligations. Two other airlines flagged biased displays favouring partner carriers and unworkable parity clauses.

MDMS providers largely denied engaging in discriminatory practices, particularly among independent platforms, which emphasised their commercial incentive to include as many transport operators as possible to maximise consumer value.

One CRS highlighted specific examples, noting that “Lufthansa, Air France show offers only from their partner companies” and that GDSs such as Amadeus charge carriers to be part of their dominant platforms. The second CRS reported that they are not aware of any such limitations, emphasising that CRSs have invested in technology, including multiple APIs and NDC integration, to ensure broad access for airlines and travel agents. The third CRS confirmed they have “no evidence” of independent MDMS refusing to integrate transport operator content, noting that any isolated gaps are typically due to lack of commercial incentives rather than deliberate exclusion.

Thirteen MDMS providers and related stakeholders agreed that they are not aware of any independent MDMS refusing access or engaging in exclusionary behaviour, noting that such actions would run counter to their business model (noted by ADN Mobilites (tourism industry association) ECTAA (tourism industry association), EU Travel Tech (tourism industry association), SRF, Welcome Travel Group SpA (a travel agency network), Skyscanner, two other tourism industry associations, four OTAs, and a B2C MDMS provider).

Dohop, a B2C MDMS provider, noted that “in house MDMS such as SNCF Connect clearly self preference SNCF products and do not sell competing offers from e.g. Trenitalia France”. Some providers highlighted broader industry issues, such as the desire of MaaS platforms to retain customer control within their own digital environments, often limiting interoperability.

Few **national authorities** commented on the existence of exclusionary MDMS practices. The Finnish Ministry of Transport and Communications mentioned that new MDMS providers might not have an equal position on negotiations on re-selling terms. Additionally, they may also have reduced access and availability to necessary APIs and data that are crucial for digital services. The Norwegian Railway Directorate stated that CRS/MDMS platforms may force small transport operators into already supported product mechanisms that may limit their ability for innovation and competition.

Other stakeholders such as one independent transport commentator and a European organisation, commented on the discriminatory data access conditions of large operators and vertically integrated MDMS platforms that prevents smaller service providers from developing competitive services. This also takes place through the use of non-transparent APIs or interfaces and selective data sharing rules that make it difficult for third parties to integrate reducing the strategic position of new entrants and other competitors.

15.13.3.8 What practices of specific incumbent vertically integrated B2C MDMS are you aware of, if any, that currently, or have the potential to, restrict competition between incumbent vertically integrated B2C MDMS and independent B2C MDMS? Please elaborate on your answer.

Transport operators expressed a range of views on whether vertically integrated B2C MDMS platforms restrict competition with independent platforms.

Responses from rail and public transport operators (and associated stakeholders including associations) highlighted a mix of current practices and potential risks. Deutsche Bahn raised concerns that imposing requirements for vertically integrated MDMS to sell competitor services might reduce the unique value

proposition of independent platforms, potentially diminishing innovation and consumer choice. They, along with others in the industry, warned that future regulatory obligations could inadvertently erode the competitive edge of independents. An incumbent, vertically integrated rail operator warned that mandating incumbent MDMS to offer competitors' services could "stifle competition and curtail innovation" by diminishing the unique value proposition of independent platforms. Czech Railways highlighted practical barriers, noting that independent MDMS "risk limiting competition by not offering all destinations," which can affect consumer awareness and perceived accessibility. SNCF Group stated that they "consider there is no practice with the potential to restrict competition in France," citing commitments to the French Competition Authority.

ALLRAIL noted that incumbent B2C MDMS "often provide exclusive access to their own long-distance or open access services, and refuse to integrate competing operators—or do so under restrictive, non-negotiable terms," systematically prioritising their own services and creating network effects that lock consumers into incumbent ecosystems, while independent MDMS face fragmented or delayed content, limiting their ability to compete on equal terms.

Only a limited number of operators directly identified exclusionary practices (e.g., self-preferencing or restricted access) but where they did, they highlighted issues like biased search results, branding that misleads users into assuming neutrality, and structural gatekeeping. These concerns were underscored by calls for regulatory safeguards to ensure fair competition, especially as new entrants struggle to gain visibility against dominant in-house platforms.

Four stakeholders, including Airlines for Europe, ERA (airline associations), Deutsche Bahn, and SNCF, , argued that maintaining direct consumer interfaces is a basic commercial right and essential for providing product transparency, ancillaries, and customer service, not a restriction on competition

MDMS providers expressed a range of concerns about whether vertically integrated B2C MDMS platforms restrict competition with independent platforms.

Three *CRSs* provided differing perspectives on potential restrictions to competition between vertically integrated and independent B2C MDMS. One CRS reported that some vertically integrated operators have increasingly restricted distribution by withdrawing access for intermediaries, noting that "larger volume agents… are now forced to have a direct contract with the carrier instead of being sold by other railways." The same respondent cautioned that policy measures requiring incumbent MDMS to sell competitors' services could inadvertently strengthen dominant platforms and reduce competition. Another CRS stated that "some operators are reserving specific content for their own vertically integrated platforms," observing that both air and rail operators have withdrawn or withheld content, imposed surcharges, and applied restrictive technical and marketing conditions – practices that "limit consumer choice and access to fair and transparent information." The third CRS indicated that it was "not aware of any" such practices.

Three *OTAs* reported that vertically integrated B2C MDMS platforms operated by incumbent transport providers may disadvantage independent competitors by withholding content, offering preferential technical or commercial terms to their own channels, and reducing transparency. One OTA noted that strong airline-operated platforms aggregate offers from entire groups while removing content from neutral channels, making it "costly and more difficult for independent B2C MDMS to compete at similar prices." Another highlighted SNCF's practices, including delayed communication of technical requirements and selective access to discounts, which "raise questions about fairness and equal access." A third OTA observed that such restrictions "stem from the behaviour of the transport operator," who ensures their own channels benefit from better data and economics, worsened by the "lack of clear unbundling rules and enforcement."

Two *new content aggregators* responded with contrasting views: One noted that strong airline-owned platforms disadvantage independent B2C MDMS by limiting content access and price competitiveness, while another argued that an airline's own website is not a vertically integrated B2C MDMS and maintaining direct consumer interfaces is a basic commercial right, not a restriction on competition.

Two *B2C MDMS providers* (including Dohop) reported that vertically integrated, carrier-branded MDMS platforms disadvantage independent competitors through preferential treatment of their own sales channels. Dohop identified several mechanisms by which incumbents can "restrict competition and favour [their] own channel," including preferential commercial terms, incomplete data access for independent MDMS, exclusive marketing support for in-house platforms, and limiting feature availability. Another B2C MDMS provider similarly highlighted that strong airline-operated platforms covering entire groups or alliances while removing content from neutral channels make it "costly and more difficult for independent B2C MDMS to compete at similar prices."

Nine *industry associations and networks* responded. Four of these stakeholders argued that strong airline-operated platforms disadvantage independent MDMS by removing content from neutral channels, limiting price competition (SRF, FTO, Welcome Travel Group, ECTAA). One stakeholder highlighted that vertically integrated MDMS benefit from preferential economic conditions, data access, and ability to "cross-subsidise", restricting competition (ADN Mobilites). One tourism industry association detailed extensive anti-competitive practices by NS in the Dutch market, including discriminatory wholesale pricing, restricted product access, and use of PSO funding to support its MDMS. One stakeholder noted that long-distance rail and aviation remain "closed environments," limiting integration and competition across modes (MaaS Alliance). BT4Europe stated the question was not applicable to its B2B focus.

National authorities stated they either did not know or that there were no restrictive practices. No further detail was provided.

Other stakeholders such as BEUC and T&E, commented on a few practices that restricted competition of independent B2C MDMS. Their responses highlighted issues with pricing, such as railway companies not providing the same best price tickets to third parties as they do to state railway companies, or incumbent railway operators paying low fees to independent MDMS platforms to sell their tickets, making it very difficult for the platforms to be profitable. These practices make it difficult for independent MDMS to compete with vertically integrated B2C MDMS.

15.13.3.9 What practices of specific B2B non-regulated distribution channels are you aware of, if any, that currently, or have the potential to, restrict competition between regulated CRS and non-regulated B2B distribution channels that perform similar functions to CRS? Please elaborate on your answer.

Transport operators from the aviation industry, presented two different perspectives. One group of stakeholders, who form part of star alliance, stated that while some start-ups in the digital travel management companies have emerged, i.e., Navan or Spotnana, these non-regulated distribution channels are very small in revenue in comparison to regulated channels and do not have the potential to restrict competition. Other stakeholders presented a more concerned outlook on the role of non-regulated B2B platforms due to the fact that they fall outside of the CRS CoC. They commented that this meant non-regulated platforms did not need to abide by the same rules (e.g., neutral display requirements) that could give them a competitive advantage. However, the stakeholders did not cite any current examples where this is the case, instead taking a more forward-looking stance stating that this could become an issue if non-regulated B2B actors were to grow in market power.

MDMS providers and other relevant MDMS stakeholders expressed a range of perspectives on whether specific practices of non-regulated B2B distribution channels restrict competition with regulated CRS.

B2C MDMS providers presented mixed views on competition between regulated CRSs and non-regulated B2B distribution channels. One B2C MDMS provider highlighted that non-regulated channels "are not bound by neutral display requirements" and that this, combined with "the removal of content by strong airlines from such neutral regulated B2B distribution channels," has the potential to restrict competition. In contrast, Dohop reported "no evidence or knowledge" of such practices, while Skyscanner stated that they "have not seen, nor do we see an imminent risk of, a distortion of competition between B2B non-regulated distribution channels and regulated CRS," arguing that the real competition concerns lie with airlines' refusal to distribute all fares through regulated CRSs and the unfair conditions imposed.

OTA responses highlighted concerns over content differentiation between regulated CRSs and non-regulated B2B distribution channels. One OTA noted that airlines "distributing different content through regulated and non-regulated channels… stifles competition among distribution channels," negatively affecting both intra- and interbrand competition. Another OTA similarly observed that non-regulated channels "are not bound by neutral display requirements" and argued that this, combined with "the removal of content by strong airlines from such neutral regulated B2B distribution channels," has the potential to restrict competition. One final OTA who responded to this question, by contrast, stated that they are "not aware of any" such practices.

Three *CRSs* indicated that non-regulated B2B distribution channels have advantages over regulated CRSs because they are not bound by neutral display rules and can prioritise offers for commercial reasons. One CRS stakeholder noted that "Transport service providers may want MDMS to present a representative offer to customers, avoiding cherry-picking of high-margin products only," suggesting that regulation requiring the full range of services could mitigate this. A second CRS highlighted that non-regulated channels "may preference 'best' options as they see fit – including for commercial reasons," while the final CRS added that these players

"can use the lack of regulation and the resulting leverage to negotiate better terms and conditions with transport operators, especially to receive better content compared to regulated players," and that they are free to rank results according to opaque criteria, giving them additional competitive flexibility.

New content aggregators expressed differing views: one new content aggregator highlighted that non-regulated B2B distribution channels are not bound by neutral display requirements, whereas regulated channels such as CRS are, and that this, combined with the removal of content by strong airlines from neutral regulated channels, has the potential to restrict competition; in contrast, another new content aggregator considered that non-regulated channels are very small in revenue compared to regulated channels and do not have the potential to restrict competition, noting that innovative start-ups and major B2C operators entering the B2B space are unlikely to negatively affect market competition.

National authorities stated they either did not know or that there were no restrictive practices by non-regulated distribution channels. No further detail was provided.

No **other stakeholders** commented on this question.

15.13.3.10 What practices of specific transport operators are you aware of, if any, that have the potential to limit the integration of their transport offerings into MDMS platforms? Please elaborate on your response, indicating also if these apply to specific types of MDMS providers or transport operators, or specifically to vertically integrated MDMS or not.

A number of **transport operators** did not comment on this question or stated they were not aware of any instances where operators deliberately withheld offerings from MDMS platforms. However, a major ferry operator cited system limitations that make it difficult to provide full transport offerings to MDMS platforms and the costs involved in establishing a cooperation sometimes outweigh the benefits gained, especially if the platform is quite new. A major airline commented on the need for third party distributors to adhere to airline policies and the agent code of conduct, including accurately representing the brand, displaying the full range of product offers and additional service fees.

MDMS providers cited a number of practices used by transport operators that limit the integration into MDMS platforms. Some of the common practices across transport modes included the refusal to collaborate with independent MDMS platforms, the imposition of unfair commercial terms (i.e. very low commissions), the withholding or limiting access to essential content, and forcing users to redirect to operator websites preventing full MDMS integration.

Two *CRSs* provided responses regarding practices by transport operators that may limit MDMS integration. One CRS noted that "Eurostar uses their carrier position to strengthen their MDMS distributor role…certain features are only available via a new own proprietary API…this own proprietary API also comes with a higher commission for the distributor." The second CRS highlighted that content withholding, surcharges, marketing restrictions, and strict technical requirements "merely serve to limit consumer choice and limit access to proper fair and transparent information relating to fares and ancillaries," adding that some airlines refuse to enable NDC content via MDMS unless commercial terms are accepted.

Four *OTAs* noted several practices by transport operators that could limit the integration of their offerings into independent MDMS. All four reported content withdrawal or withholding and high surcharges, two mentioned restrictions on marketing and low look-to-book (L2B) ratios, and two noted that tickets must be sold on the operator's own platform rather than through the MDMS. They further highlighted unfair commercial conditions, including restrictive commissions and limited access to fares or features, which can hinder independent MDMS from providing full end-to-end services and limit consumer choice.

Three *B2C MDMS providers* noted that large airlines can limit the integration of their offerings into MDMS platforms through restrictive practices. All three (including Dohop and Skyscanner) observed that operators may refuse to work with independent MDMS, limit content or functionality, and impose uneconomic commercial terms. Two respondents highlighted that airlines withdraw content from neutral channels or add high surcharges, reducing the competitiveness of independent B2C MDMS. Skyscanner emphasised that some operators, notably Ryanair, apply highly restrictive conditions, such as preventing the display of competing OTA options, which "reduces competitive constraints on airlines" and limits consumers' ability to compare fares and combine routes.

Nine *MDMS-related associations and networks* generally considered large transport operators to be employing practices that can limit the integration of their offerings into independent MDMS platforms. Five respondents (SRF, FTO, Welcome Travel Group, ECTAA, and EU Travel Tech) highlighted that airlines withdraw or

withhold content, impose high surcharges, and enforce restrictions on marketing, making it more difficult for independent MDMS to provide comprehensive offers and compete fairly. Three respondents (including EU Travel Tech and ADN Mobilites) emphasised that rail operators impose unreasonably low commission rates, technical restrictions such as low look-to-book ratios, and limited access to content, which undermines the commercial viability of independent MDMS. As one respondent explained, airlines and railways "withdraw and withhold content from independent MDMS…ensuring that already dominant airlines can maintain their position by keeping customers in their ecosystem and foreclosing fair comparison with other operators." Overall, these respondents noted that these practices disadvantage independent MDMS, reduce transparency and consumer choice, and reinforce the market power of vertically integrated operators.

Some **national authorities** (NO, PT, AT) also referred to the way that some transport operators will favour their own sales channels to retain access and manage sales, for example when selling through direct sale transport operators can utilise demand-based pricing and/or discount pay-in-advance. Furthermore, sales directly through their transport platforms means they can retain personal consumer information for their own analytics and market data.

Other stakeholders, such as one European organisation and European Passenger Federation, identified a number of practices by dominant transport operators, particularly large airline groups (e.g. Lufthansa Group, IAG, Air France/KLM, Ryanair) and national rail incumbents (e.g. Deutsche Bahn, SNCF, Trenitalia), that limit the integration of their services into MDMS platforms. These include refusal to share full fare content, imposition of high surcharges on bookings via intermediaries, restrictive or proprietary APIs, and they do not cooperate with all third-party platforms. They mentioned that operators often favour their own digital channels by withholding real-time data, discount schemes (e.g. Deutsche Bahn's BahnCard), or best-price offers, making it difficult for independent or cross-border MDMS, especially SMEs, to deliver comprehensive, multimodal travel solutions. These behaviours were said to be compounded by technical fragmentation, such as lack of adherence to open standards, and by refusals to share key timetable or fare data (e.g. NS not reselling European Sleeper tickets or certain regional timetables being omitted from MERITS).

15.13.3.11 Are there circumstances in which a transport operator would not make content available to a specific MDMS? Please elaborate on your answer, indicating also if these apply to specific types of MDMS providers or transport operators, or specifically to vertically integrated MDMS or not.

Transport operators expressed different views to this question depending both on their transport sector, and whether they were an incumbent or non-incumbent operator.

Rail and public transport operators generally indicated that content may be restricted under certain circumstances, most commonly due to commercial agreements, technical limitations, or concerns over the MDMS's trustworthiness. Of the eight operators responding, five explicitly noted that content could be withheld or limited in some way (including SJ AB [incumbent], Metropolitano de Lisboa EPE [urban operator], SNCF Group [incumbent], one other incumbent rail operator and a new entrant bus and rail operator), while three indicated either no restrictions or only technical/system-related limitations (including Deutsche Bahn AG [incumbent], Czech Railways [incumbent] and another incumbent waterborne transport operator). A new entrant bus and rail operator highlighted the impact of commercial disagreements, noting that "sometimes agreements cannot be reached due to irreconcilable positions on commercial conditions," which can prevent content from being shared with MDMS platforms.

Among vertically integrated operators, they mentioned that content availability is primarily determined by commercial agreements. Deutsche Bahn AG indicated that they provide offers on "fair terms to MDMS platforms in case there is added value and based on bilateral commercial contracts." Another incumbent, vertically integrated rail operator stressed that access depends on mutually agreed commercial terms, including service quality requirements for the MDMS. SNCF Group clarified that content is withheld for specific commercial purposes, such as employee or military fares, rather than for discriminatory reasons.

Rail and public transport *associations* generally indicated that content availability on MDMS platforms depends on trust, commercial incentives, and operational fairness, with stronger restrictions often associated with dominant or vertically integrated operators. A road transport association noted that "transport operators without market power should not be obliged to collaborate with an MDMS platform," highlighting that many small bus and coach operators lack the resources to meet mandatory integration requirements. UITP noted that operators may withhold content if the MDMS "is not trustworthy… or if the terms and conditions are not fair (e.g. commission charges are too high, data-sharing is too restrictive, the standard of the MDMS platform too

cumbersome to use).” CER aisbl reiterated that operators generally provide equal access, except where commercial incentives with direct competitors shape content availability. ALLRAIL highlighted systemic restrictions from dominant incumbents, particularly vertically integrated operators, including “complete non-cooperation,” “selective sharing,” and “de facto exclusion,” citing examples such as FlixTrain and WESTbahn being blocked from DB’s MDMS, and Snälltåget excluded from major platforms despite operating in relevant markets.

Airlines generally reported that content availability on MDMS platforms is guided by commercial discretion and fair business practices rather than routine exclusion. One airline noted that “rip-off charges… prevent airline operators to make all fares available in GDS.” A second, smaller airline stressed that airlines “must remain free to choose… without being forced to provide full content to MDMS platforms,” warning that full content obligations can disadvantage smaller carriers. A third airline stated that content is rarely withheld, but partners failing to follow fair business practices “can result in customer experience issues that prompt us to intervene.”

Similarly, airline *associations* emphasised that content availability on MDMS platforms should reflect airlines’ commercial freedom while still ensuring fair business practices. One airline association noted that airlines may limit content based on quality of service and economic viability, highlighting that some fares “should be available only on their websites” due to high distribution costs. Airlines for Europe stressed that it is rare for content to be withheld, except in cases of persistent non-compliance with airline policies or unfair practices. ERA highlighted that full content obligations can undermine competition, stating that “airlines must remain free to choose… without being forced to provide full content to MDMS platforms,” while also supporting neutral display rules to ensure equitable treatment for all operators.

MDMS providers gave different examples of instances where content may not be made available to MDMS platforms. Like transport operators, they cited lack of commercial agreement between MDMS and transport operators as a reason. Operators limiting their service offering was also cited by Dohop as common practice, for instance, withholding access to youth sale tickets, flexible pricing, or combined offers for groups or families. Three *CRSs* highlighted that transport operators may withhold content from MDMS primarily due to commercial strategy, compensation disagreements, or limited service provision. One CRS noted withholding can occur when MDMS “cherry-picks” products or offers only partial services. Another CRS emphasised “direct-only” models and reluctance to share content with competitor-owned MDMS.

OTAs reported that transport operators, particularly large or vertically integrated ones, sometimes restrict or withdraw content from independent MDMS platforms, creating barriers to access and limiting competition. One OTA noted that airlines such as Ryanair often refuse to work with both B2B and B2C MDMS. Another OTA highlighted cases where operators impose strict control over how inventory is shared, including monitoring sub-distributors, setting turnover thresholds, or renegotiating contractual terms, effectively privileging vertically integrated MDMS. A third OTA added that access restrictions often affect real-time schedule data, special fares, promotions, journey continuation options, and ancillary services like bike reservations, making it difficult for independent OTAs to provide full service to consumers.

National authorities commented very little on this question. The Competition Council of Latvia echoed transport operators and MDMS providers in stating that commercial and competitive interests, commercial agreements and high integration costs may act as barriers to content availability with some MDMS platforms.

Only one **other stakeholder** responded to this question. A European organisation commented on the way in which incumbent rail, bus and air carriers will employ practices that hinder integration into MDMS platforms such as restricting access to data (such as real-time schedules, fares, seat availability etc.). Without open data feeds MDMS platforms cannot offer reliable or complete itineraries. They also commented that transport operators may favour their own apps or ticketing systems or sign exclusive distribution deals with selected MDMS or OTA platforms, excluding competitors.

15.13.3.12 Looking ahead, how would you expect the specified problems to evolve without further EU action specific to addressing these problems?

15.13.3.12.1 Looking ahead, how would you expect Problem 1 to evolve without further EU action specific to addressing this problem?

Stakeholders were asked to indicate how they would expect Problem 1 to evolve without further EU action specific to addressing this problem (see Figure 15).

Across all stakeholder groups, 18 of 67 expected significant or somewhat improvement (9 significant improvement, 9 improve somewhat) Furthermore, 24 of 67 stakeholders expected significant deterioration (14) or some deterioration (10). Finally, 25 of 67 stakeholders expected no change (20) or did not know (5).

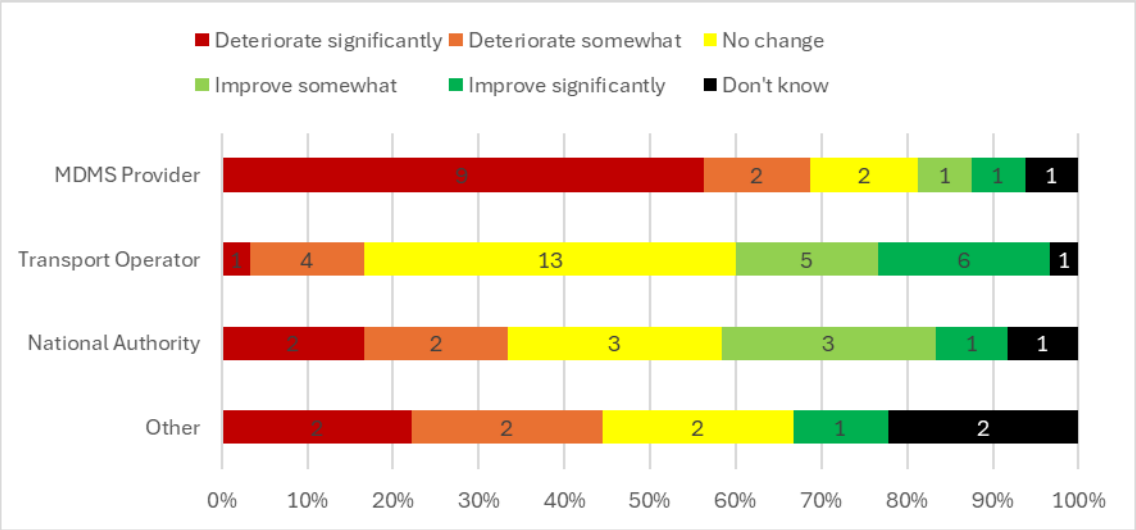
In relation to MDMS providers, 2 of 16 expected improvement (1 significant, 1 some improvement). 11 of 16 MDMS providers expected the problem to deteriorate (9 significantly, 2 somewhat). 3 of 16 did not expect any change (2) or did not know (1). Focusing on vertically integrated MDMS, 4 out of 5 vertically integrated MDMS providers expect the specified problem to improve significantly, while 1 did not respond.

Transport operators expressed mixed views on the evolution of the problem. 11 of 30 expected improvement (6 significant, 5 somewhat), while 5 of 30 expected the problem to deteriorate (1 significant, 4 somewhat). Finally, a large number of transport operators stated they expected no change (13 of 30), and 1 stated they did not know. Focusing on rail new entrants, 2 out of 3 expect a deterioration of the situation (1 significant deterioration, 1 somewhat deterioration), while 1 operator stated they did not know.

In relation to national authorities, they were split evenly between improvement and deterioration. 4 of 12 expected improvement – 1 significant (LV-2) and 3 somewhat (IE, PT, FI-1) – while another 4 expected the problem to deteriorate – 1 significantly (LV-1) and 2 somewhat (FR and 1 other). Finally, four stakeholders from national authorities stated they either did not know (3 of 12) or did not know (1 of 12).

In relation to 'Other' stakeholders, 1 of 9 expected significant improvement, 4 of 9 stakeholders expected the problem to deteriorate (2 significantly, 2 somewhat). Finally, 4 Member States stated they either expected no change (2 of 10) or that they did not know (2 of 10).

Figure 15-15 Looking ahead, how would you expect Problem 1 to evolve without further EU action specific to addressing this problem?



15.13.3.12.2 Looking ahead, how would you expect Problem 2 to evolve without further EU action specific to addressing this problem?

Stakeholders were asked to indicate how they would expect Problem 2 to evolve without further EU action specific to addressing this problem (see Figure 16).

Across all stakeholder groups, 17 of 66 expected significant or somewhat improvement (8 significant improvement, 9 somewhat improvement). Furthermore, 26 of 66 stakeholders expected significant deterioration (3) or somewhat deterioration (23). Finally, 23 of 66 stakeholders expected no change (16) or did not know (7).

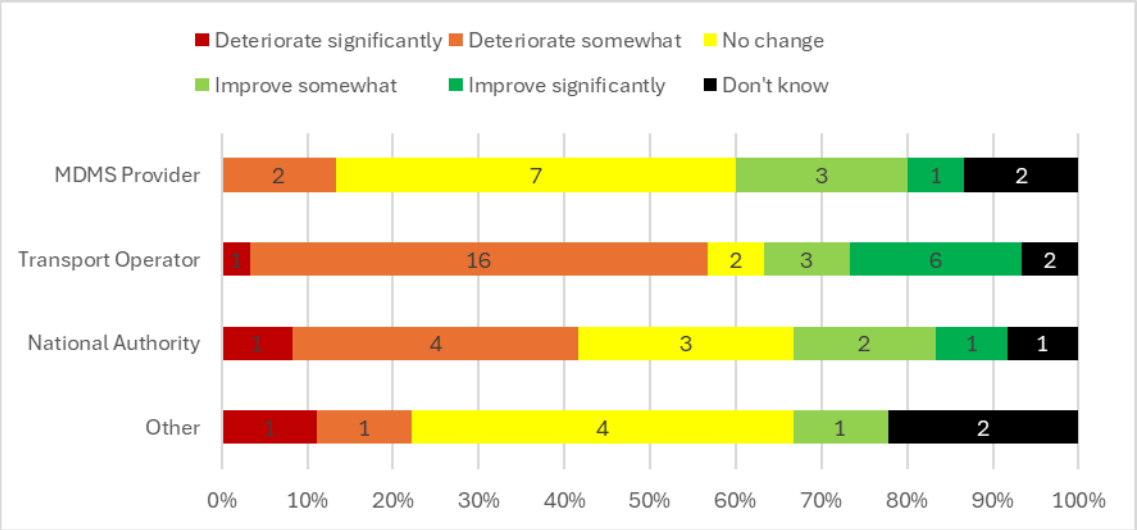
In relation to MDMS providers, 4 of 15 expected improvement (1 significant, 3 somewhat). 2 of 15 stakeholders expected somewhat deterioration. Finally, 9 of 15 stakeholders expected no change (7) or did not know (2). Focusing on vertically integrated MDMS, 4 out of 5 vertically integrated MDMS providers expect the specified problem to improve significantly, while 1 did not respond.

In relation to transport operators, 9 of 30 expected improvement (6 significant, 3 somewhat). 17 of 30 stakeholders expected deterioration (1 significant, 16 somewhat). Finally, 4 of 30 stakeholders expected no change (2) or did not know (2). Focusing on new entrant rail operators, 2 out of 3 expect a deterioration of the situation (1 significant deterioration, 1 somewhat deterioration), while 1 operator stated they did not know.

In relation to national authorities, 3 of 12 expected improvement – 1 significant (LV-2) and 2 somewhat (IE, FI-1). 5 of 12 stakeholders expected deterioration – 1 significant and 4 somewhat (PT, FR, LV-1). Finally, 4 of 12 stakeholders expected no change (3) or did not know (1).

In relation to 'Other' stakeholders, 1 of 12 expected somewhat improvement. 2 of 12 stakeholders expected deterioration (1 significant, 1 somewhat). Finally, 6 of 12 stakeholders expected no change (4) or did not know (2).

Figure 15-16 Looking ahead, how would you expect Problem 2 to evolve without further EU action specific to addressing this problem?



15.13.3.12.3 Looking ahead, how would you expect Problem 3 to evolve without further EU action specific to addressing this problem?

Across all stakeholder groups, 9 of 65 expected significant or somewhat improvement (4 significant improvement, 5 somewhat improvement). Furthermore, 22 of 65 stakeholders expected deterioration (5 significant, 17 somewhat). Finally, 34 of 65 stakeholders expected no change (7) or did not know (27).

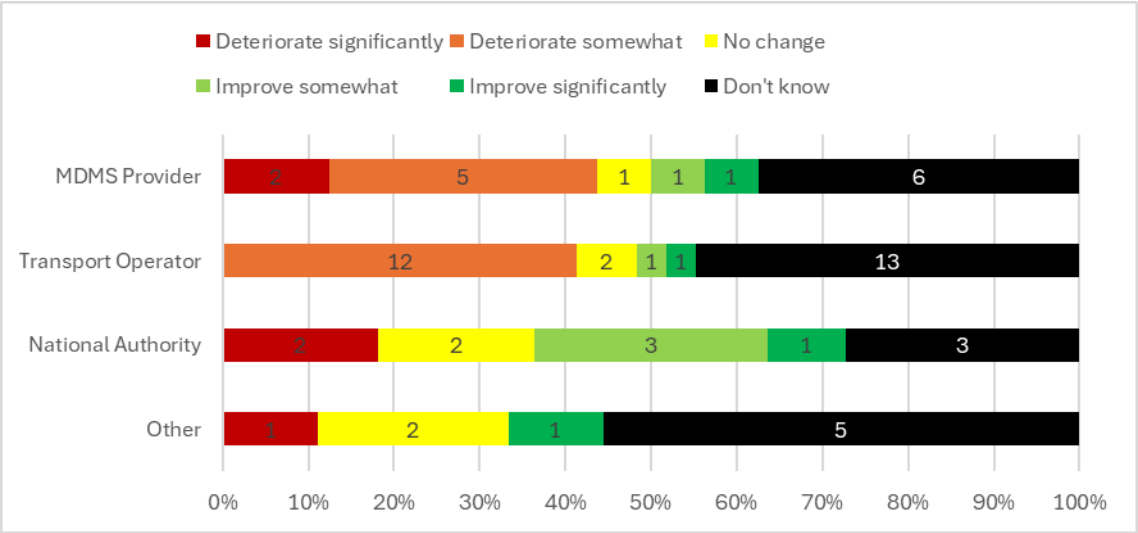
In relation to MDMS providers, 2 of 16 expected improvement (1 significant, 1 somewhat). 7 of 16 stakeholders expected deterioration (2 significant, 5 somewhat). Finally, 7 of 16 stakeholders expected no change (1) or did not know (6). Focusing on vertically integrated MDMS, 1 out of 5 vertically integrated MDMS providers expect the specified problem to improve significantly, while 4 did not know or did not respond.

In relation to transport operators, 2 of 29 expected improvement (1 significant, 1 somewhat). 12 of 29 stakeholders expected somewhat deterioration. Finally, 15 of 29 stakeholders expected no change (2) or did not know (13). Focusing on new entrant rail operators, all 3 of new entrant rail operators replied don't know or did not answered.

In relation to national authorities, 4 of 11 expected improvement – 1 significant (LV-2) and 3 somewhat (PT, FI-1, NO). 2 of 11 stakeholders expected significant deterioration (LV-1 and 1 other). Finally, 5 of 11 stakeholders expected no change (2) or did not know (3).

In relation to 'Other' stakeholders, 1 of 9 expected significant improvement. 1 of 9 stakeholders expected significant deterioration. The majority of 'Other' stakeholders, 7 of 9, expected no change (2) or did not know (5).

Figure 15-17 Looking ahead, how would you expect Problem 3 to evolve without further EU action specific to addressing this problem?



15.13.3.13 Based on experience within your country, or that you are aware of in other countries, are there any other issues or considerations that we should take into account in our study in relation to the development of MDMS for long-distance passenger travel? Please explain your answer.

National authorities provided a range of responses highlighting that many challenges associated with MDMS for long-distance passenger travel are either not applicable or less relevant in their national contexts. The National Transport Authority of Ireland noted the absence of cross-border travel and a monopoly rail operator, limiting the applicability of certain MDMS concerns. The Finnish Ministry of Transport and Communications emphasised the need for legislation to mandate API access and resale agreements to foster cooperation between private and public operators, which otherwise would not develop organically. They also stressed the importance of FRAND (Fair, Reasonable, and Non-Discriminatory) terms to ensure a level playing field and scalability across the EU. Norway pointed out that the real need for MDMS lies in local and regional transport rather than long-distance travel, as this is where the most significant potential for reducing car use and promoting sustainable mobility exists. The Federal Public Service Mobility and Transport (Belgium) pointed to the reluctance of some transport operators to integrate, technological and financial burdens, unclear added value for providers, and low consumer willingness to pay as key issues related to the development of MDMS.

15.13.3.14 Please explain your views on the potential evolution of the specified problems without further EU action specific to addressing these problems.

- General

Transport operators gave a range of views on how the specified problems would evolve without further EU action. A small group of rail transport operators such as NS, SJ AB and SNCF Group argued that further EU regulation could hinder progress rather than facilitate it as overregulation may increase costs, create uncertainty and divert resource from innovation to compliance.

National authorities stated that without EU action, it is possible that the development of digital MDMS would be focused only in cities where these services are already available, while cross-border services and multimodal services improving efficiency of the transport system would be stagnated (FI).

- Problem 1

Transport operator views on Problem 1 are mixed.

Airlines generally viewed Problem 1 as not problematic in their current market. Three airlines emphasised that airlines operate in a highly transparent and competitive market, providing consumers with a range of travel options across multiple channels. One of these airlines stated that “operators must have the choice of content distribution. Consumers will always have access to all content through today’s technology”.

This view is reinforced by airline *associations*. One airline association highlighted that OTAs and meta-search engines are increasingly dominant players but did not frame Problem 1 itself as a current issue, noting that "in the future, very few will have the capacity to compete and process even higher amounts of data." Airlines for Europe similarly stated that airlines "operate in highly transparent and competitive markets, offering many travel options to consumers through different channels," and that there is no significant Problem 1 that risks worsening in the future. ERA also confirmed that "this is not a problem in the current distribution market," emphasising that airlines provide consumers with a broad choice across direct sales, OTAs, and meta-search engines.

Among *incumbent rail and public transport operators*, 6 out of 8 (including Deutsche Bahn, SJ AB, Czech Railways and SNCF Group) indicated that Problem 1 is not currently a major issue, largely because industry-led initiatives like the CER Ticketing Roadmap and OSDM implementation are already addressing cross-border ticketing and integration. For example, SJ AB noted that "any discussion about regulation primarily delays important progress," while NS argued that allowing sector-driven initiatives to develop organically "offers the best opportunity for these efforts to yield tangible benefits." Czech Railways cautioned that future regulation might delay OSDM deployment, and SNCF Group stressed that "imposing legal and commercial obligations on operators and their platforms will not solve the issue of international ticketing."

In contrast, two *new entrants* highlighted real challenges, particularly visibility and market access. One new entrant bus and rail operator stated that "passengers are not necessarily aware that new rail services exist and in most cases, they just go to their national incumbent website to buy tickets," illustrating structural barriers for newcomers. Public transport operators like VDV and Metropolitano de Lisboa noted that while MDMS integration is improving with digitalisation, fragmentation persists, and smaller operators could struggle to achieve visibility. Overall, incumbents largely view Problem 1 as being addressed by ongoing initiatives, whereas new entrants and smaller operators continue to face barriers that may limit market participation and consumer access.

Rail and public transport *associations* generally see progress in MDMS development and digitalisation, but note remaining challenges. VDV and UITP highlight ongoing improvements in integrating transport offers locally, nationally, and internationally, while the Finnish Public Transport Association adds that better data and technology will gradually make cooperation easier, though adoption takes time. One other road transport association warned that small operators may struggle against dominant players and face unfair modal competition. Among rail industry associations, CER pointed to the CER Ticketing Roadmap and OSDM as solutions that will improve cross-border ticketing before new legislation is needed. ALLRAIL stressed that ticketing fragmentation and limited access for new entrants remain significant issues, requiring EU-wide legislative action.

MDMS providers and other MDMS-related stakeholders expressed strong concerns that Problem 1 would significantly worsen without EU intervention.

CRSs noted that Problem 1 is an important issue that could benefit from regulatory or technical support. One CRS noted that "the rail sector is now actively investing in IT protocol standardisation via OSDM, allowing for cheaper technical connections, which will make it more financially viable to include more operators as MDMS," and suggests that EU-mandated standards would further improve inclusion of new entrants. A second CRS highlighted that airlines' strategies favouring their own direct channels distort consumer access and predicts that Problem 1 "will continue to be more and more problematic," arguing that EU intervention is needed to ensure fair access. A third CRS called for an update to the CRS Code of Conduct to establish a level playing field suited to the current market context.

OTAs shared the view that Problem 1 will remain a concern and is likely to persist or worsen without EU action. One OTA noted that "incumbent railways continue to enjoy entrenched strong market positions and pursue similar disintermediation strategies," with airlines also restricting access to independent ticket channels. Another OTA highlighted that "national train companies…still have a big advantage and are trying to cut out the middleman, likely causing problems to persist and grow without EU action," while acknowledging that national competition regulators can only address this locally, not EU-wide. A third OTA similarly stresses that "EU intervention is the only possible solution to achieve long term stability for Problem 1," pointing out that dominant operators' practices continue to limit independent vendors and consumer choice.

B2C MDMS providers also expressed concern that Problem 1 will persist or worsen without EU intervention. Dohop noted that "without regulatory intervention, there is a clear likelihood that MDMS, and in particular independent MDMS, will continue to suffer from incomplete offers, due to lack of data provision by transport

operators," emphasising the impact on consumers' ability to access all options. Skyscanner highlighted that airlines' market power allows them to impose restrictive terms or deny access to MDMS platforms, which can reduce competition and limit consumer choice.

One *new content aggregator* indicated that Problem 1 is not a significant concern in the airline sector. They noted that airlines operate in transparent and competitive markets, and they do not see this issue worsening in the future.

Responses from six *MDMS-related industry associations and networks* indicated that Problem 1 is a growing concern without EU intervention. SRF highlighted a trend where "suppliers try to control distribution". Verenigde Innovatieve Mobiliteitsdienstverleners indicated that "independent MDMS in the B2C market could disappear entirely from the Dutch market within the next year," projecting that the B2B2C segment could fall below 10% of the total market by 2030 if fair access rules are not enforced. EU Travel Tech noted that in air travel, "the largest airlines are pursuing disintermediation strategies to diminish the role of indirect distribution," and in rail, incumbents maintain entrenched positions that prevent new entrants from achieving visibility, concluding that Problem 1 "will persist and grow without EU action." BT4Europe observed that airlines are "trying to cut out middlemen by selling tickets only through their own websites," while national railways retain considerable market power, limiting access for independent platforms. ADN Mobilites emphasised that, without legislative intervention, "independent vendors will continue to struggle and ultimately leave the European market," leading to reduced consumer choice, particularly for cross-border and multimodal travel.

National authorities gave limited input on Problem 1. However, authorities from Latvia stated that lack of action would result in continued incomplete, biased and restricted travel options, particularly in rail and long-distance transport, while major operators may continue to withhold ticketing data and/or impose unfavourable conditions on MDMS providers.

Other stakeholders shared the view that Problem 1 would likely worsen or stay the same without intervention. Two stakeholders stated that train services and booking systems have worsened overtime, not improved, and that the lack of integration is likely to continue to get worse as more operators try to enter the sector. One stakeholder, representing a network of European cities, commented that problems 1 and 2 reflect the challenges in long-distance multimodal transport but are out of scope for regional transport.

- Problem 2

There is some concern among **transport operators** that dominant digital platforms, such as OTAs, MSEs and incumbent MDMS platforms, will limit access for smaller or new operators, particularly in rail. A concern among non-incumbent rail operators is that without regulation new entrants will continue to lack visibility and bargaining power which will allow the market to continue favouring incumbents and worsen discrimination and limit consumer choice. Several operators highlighted that past failures of new rail services were partly due to their inability to access dominant sales platforms.

Two *airlines* both noted that Problem 2 concerns the risk of discrimination by dominant intermediaries (GDSs, OTAs, metasearch engines) rather than operators restricting access to MDMS. One airline stated that large GDSs, OTAs and metasearch engines may prioritise or disadvantage certain airlines based on their own financial interests, thereby limiting consumer choice. The second airline similarly noted that OTAs and metasearch engines increasingly dominate distribution and may engage in discriminatory, biased or misleading practices that particularly harm smaller airlines. Both stakeholders predicted that these risks will worsen without EU action and call for regulation ensuring fair, transparent and non-discriminatory treatment, including extending neutrality and transparency rules to these digital intermediaries, which they view as the real source of Problem 2.

Airline associations broadly support and expand on the concerns raised by individual airlines regarding Problem 2, emphasising that the main risks relate to the growing influence of large OTAs and metasearch engines. Airlines for Europe argues that OTAs with significant market power increasingly promote certain operators or products based on their own commercial interests, and that such practices are likely to worsen without regulation preventing discrimination, bias and misleading behaviour. ERA shared the same view, warning that dominant digital intermediaries may disadvantage smaller airlines and reduce consumer choice unless EU rules ensure fair competition and transparency. A third airline association also highlighted the increasing concentration among OTAs and metasearch platforms, noting that only a small number of very large players are likely to control the market in the future due to their data-processing capacity. Overall, the associations agree that, without EU action, Problem 2 is likely to get worse and that regulatory intervention should focus primarily on addressing the rising power and practices of major OTAs and metasearch engines.

MDMS providers had mixed views on the evolution of Problem 2.

One *CRS* did not consider Problem 2 to be a problem. An OTA agreed, indicating that they do not see this problem statement to reflect the market reality. Another OTA acknowledged links between Problem 1 and 2, stating that "Problem 2 can actually be addressed by solving Problem 1… with a healthy and diverse offer of independent platforms, consumers will be able to find smaller operators and circumvent any block from dominant carriers." EU Travel Tech and ADN Mobilites (tourism industry associations), agreed, stating that they do not believe that this is an issue on and therefore, they do not expect it to change with or without EU action. ADN Mobilites elaborated on this point indicating that "the policy options proposed… in the context of Problem 2 would actually harm the independent sector, making vertically integrated platforms even more dominant and possibly killing independent vendors completely".

One *new content aggregator* commented on Problem 2, stating that "there is a growing trend of OTAs with significant market share promoting certain operators or products based on their interest and in a manner, which cannot be considered as normal competition". They suggested that, to address this issue, "OTAs should be regulated to prevent discrimination, bias and misleading practices". They warned that, without such regulation, the problem is likely.to worsen over time.

In contrast, another *CRS* flagged that Problem 2 may be partly self-correcting but will not be fully resolved without EU action. They argue that operator access to MDMS is currently limited mainly by commercial incentives and high technical integration costs. Thery acknowledged ongoing rail sector standardisation efforts (OSDM) making inclusion of more operators cheaper and more feasible, particularly for new entrants, and making this standard mandatory at EU level would further improve access. They also noted that EU competition law cases are beginning to establish minimum access and compensation principles but cannot keep pace with market developments. Overall, they believe these developments would solve around 60% of the issue, while remaining problems, such as cherry-picking of operators and MDMS bias, would still require targeted regulation similar to existing rules in the air sector.

Only one **national authority**, from Latvia, commented on Problem 2. They stated that self-prefacing by MDMS providers would intensify, giving unfair advantages to affiliated transport services if not EU action is taken.

Other stakeholders emphasised that without EU action, consumers will continue to face fragmented offers as independent platforms would struggle to make a business case to large transport operators, reducing choice for consumers, while new market operators will continue to have difficulties being sold on incumbent platforms.

- Problem 3

Airlines warn that powerful digital intermediaries (OTAs, CRSs, MSEs) increasingly control distribution and could use this dominance to discriminate against certain operators. As these intermediaries are not currently subject to the CoC, over time this could result in biased displays and reduced consumer choice. Airlines called for updates to the regulation, including neutral display obligations and fair data access rules for all digital intermediaries.

MDMS providers did not comment on how Problem 3 would develop without EU intervention.

Only one **national authority**, from Latvia, commented on Problem 3. They commented that a lack of EU action could result in MDMS platforms exploiting data-driven pricing models, favouring high-margin transport providers while making smaller competitors unviable.

Other stakeholders, including the BEUC, commented only briefly on Problem 3, stating that unfair competition will continue to occur without regulation. To counteract this, airline carriers will reduce their offer on independent platforms to favour their own distribution channels.

15.13.3.15 In your opinion, to what extent does EU regulation (such as Regulation (EC) No 80/2009), and or/Member States authorities, address the market barriers established either by indispensable MDMS or vertically integrated MDMS (owned by transport operators)? How suitable are these interventions to fully address this problem?

Transport operators in the aviation sector, including Lufthansa Group and another major international airline, stated that current legislation, such as Regulation (EC) No 80/2009 and the CRS Code of Conduct, only partially address the market barriers posed by indispensable or vertically integrated MDMS and new intermediaries in air-ticketing distribution channels. They highlighted that while the CRS Code of Conduct has been effective in curbing discriminatory behaviour among CRS, its protections should be expanded to cover new distribution channels to prevent consumer harm and possible discriminatory behaviour. Regulation

80/2009 is viewed as limited in scope by the UITP, primarily applying to air transport and outdated in terms of technological realities and the rise of multimodal and rail services. UITP noted persistent gaps, especially concerning regional and local rail, and argue that non-discrimination rules should be extended to include rail, bus, and multimodal services. They suggest drawing from other sectors, such as the Payment Services Directive (PSD2) in finance, to compel standardised third-party access to MDMS platforms, which would help ease integration and reduce barriers. ALLRAIL noted that, at the Member State level, the regulatory landscape is fragmented. For example, the highlighted that Germany has legal obligations forcing Deutsche Bahn's MDMS platform to display competing rail services, but not to sell them, while in France, no such obligations exist.

MDMS providers and MDMS-related stakeholders had mixed views on the suitability of current EU regulation.

One *CRS* noted that elements of Regulation (EC) No 80/2009, such as non-discriminatory display and fair competition provisions, could in principle help address issues like commercially driven bias or unequal commission structures, but they noted that the more important barrier is ensuring operators can be sold by MDMS in the first place. Another CRS argues that the CRS Code does not address current rail-market barriers or the uneven treatment between regulated and unregulated MDMS, and that the main challenges now stem from new technology and operator disintermediation rather than from CRS behaviour. A third CRS rejects the premise that B2B aggregators are "indispensable platforms," emphasising that they do not meet DMA-level thresholds, and argued that there is no market failure justifying specific CRS regulation. They considered the CRS Code to be outdated, restricting innovation, and should be repealed, with existing EU legislation.

OTAs also generally argued that the existing EU Regulation does not adequately address the main barriers they face. One OTA mentioned that independent MDMS do not create market barriers and that the current digital environment already ensures transparency and strong consumer choice. A second OTA similarly states that "indispensable MDMS" are not the problem; instead, they point to vertically integrated operators' direct channels as the main source of unequal conditions for independent MDMS. A third OTA argued that no EU legislation meaningfully tackles the core issue of unbalanced commercial conditions between operators and independent vendors. They note that while measures such as the Rail Passenger Rights Regulation and some antitrust actions have helped to a limited extent, enforcement is inconsistent and sector-specific legislation (including the Fourth Railway Package) has not addressed distribution. Overall, OTAs present a consistent message that barriers stem primarily from transport operators' control over distribution, rather than from independent MDMS, and that current EU rules are insufficient to address these problems.

MDMS related associations and networks agreed that the regulation only partially addresses the challenges posed by vertically integrated MDMS and dominant transport operators. EU Travel Tech noted that independent MDMS themselves do not create significant barriers, but that direct sales by dominant operators increasingly limit competition and market access for smaller providers. BT4Europe and ADN Mobilites focus on the impact on B2B and consumer choice, highlighting that vertically integrated MDMS create an uneven playing field, reduce neutral comparison options, and restrict the ability of smaller operators to compete.

Few **national authorities** commented on this. Of those who did, the views were that the current EU regulation does not currently solve the issue of market barriers appropriately. The Finnish Ministry of Transport and Communications commented that access to necessary data and ticketing and payment APIs in fair, reasonable and non-discriminatory terms across the EU is crucial to develop basics for digital ticketing and development of sustainable personalised mobility services. The suggested the aim should be at ensuring a level playing field for all actors where public and private service providers are acting as equal market players when offering similar digital services. The Norwegian Railway Directorate commented that current legislation makes it difficult for small operators to be innovative and that current legislation is too limited to properly address this.

Only one **other stakeholder** provided comment on this question. The EPF highlighted that the CRS CoC does not apply to all modes of transport or all distribution channels, limiting the scope. However, they commented that the principles underlying the CRS CoC should be integrated into future legislation, such as the need for transparency and neutral display. Furthermore, they pointed to some national legislation at the Member State level, such as in Finland and France, that does not allow commercial conditions to be refused unless either party can demonstrate the agreement is not FRAND compliant. Other national initiatives such as multimodal national tickets that allow users to travel using all available public transport were also recognised as effective policies. They point to the need for legislation that both properly mandates and enforces data sharing.

15.13.3.16 Do the problems specified, along with their associated problem drivers, cover the challenges that you face in your country? Please explain your answer.

Few **national authorities** commented on whether the problem drivers cover the challenges in their Member States. Authorities from Belgium pointed to key barriers such as the reluctance of some transport operators to be integrated into MDMS platforms, the high technological and financial costs of integrating numerous operators, and limited consumer willingness to pay for MDMS services. They note that, so far, there is little evidence that existing MDMS platforms have driven modal shift or widespread consumer engagement.

Authorities from Finland stress that legal obligations, such as mandatory API access and resale agreements, are essential to drive cooperation between public and private actors, which has not materialised voluntarily. They cite national legislative efforts aiming to enhance interoperability and data access, particularly for single-ticket systems, noting that broader oversight of competition and data access is also needed. However, they warn that without clear rules-based FRAND terms, scalable solutions will remain difficult, and MDMS development risks being confined to local or regional contexts rather than achieving EU-wide impact.

Finally, Norway notes that current regulatory efforts often overlook local transport, which is where the greatest potential lies for sustainable travel and reducing car use. In Norway, most train journeys occur within local transport areas, with cross-border travel being negligible. In their view, more focus should be placed on local mobility rather than long-distance or cross-border travel to be meaningful and effective at a national level.

15.13.4 Potential policy measures

15.13.4.1 In your view, how effective do you expect the policy measures identified in Table 3 to be in tackling Problem 1 (Limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?

15.13.4.1.1 Policy measure 1: Obligation for all MDMS to apply the CRS Code of Conduct's neutral display obligations. Neutral display ranking criteria and display rules are updated. For transport operators (in all modes): obligation to apply data accuracy rules

Stakeholders were asked to indicate how effective they expect Policy Measure 1 to be in tackling Problem 1 (see Figure 18).

Across all stakeholder groups, 29 of 72 expected it to be very or somewhat effective (13 very effective, 16 somewhat effective). Furthermore, 11 of 72 stakeholders expected it to be very or somewhat ineffective (6 very ineffective, 5 somewhat ineffective). Moreover, 32 of 72 stakeholders were neutral (26) or did not know (6).

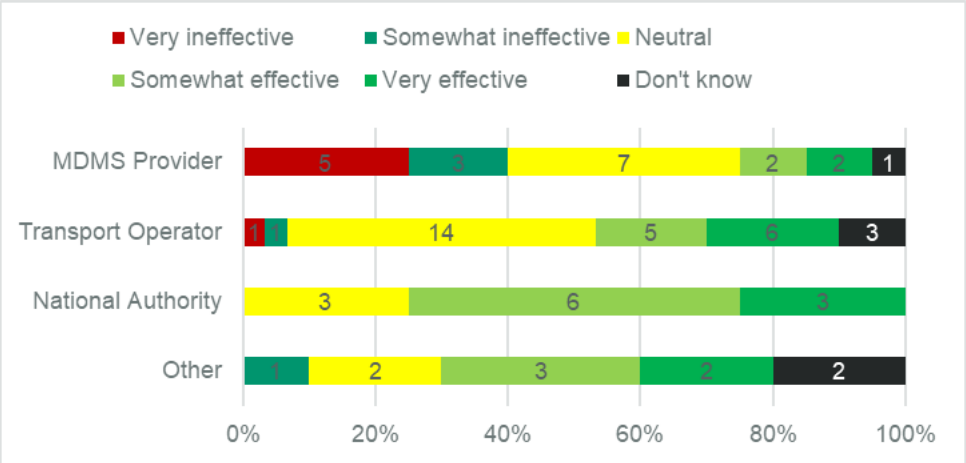
In relation to MDMS providers, 4 of 20 expected it to be very or somewhat effective (2 very effective, 2 somewhat effective). Furthermore, 8 of 20 stakeholders expected it to be very or somewhat ineffective (5 very ineffective, 3 somewhat ineffective). Moreover, 8 of 20 stakeholders were neutral (7) or did not know (1). Focusing on vertically integrated MDMS, 1 out of 5 consider it effective, 1 out of 5 consider it neutral, 1 out of 5 consider it very ineffective, and 2 do not know or provided no answer.

In relation to transport operators, 11 of 30 expected it to be very or somewhat effective (6 very effective, 5 somewhat effective). Furthermore, 2 of 30 stakeholders expected it to be very or somewhat ineffective (1 very ineffective, 1 somewhat ineffective). Moreover, 17 of 30 stakeholders were neutral (14) or did not know (3). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it somewhat effective while 2 out of 3 replied don't know or did not answer.

In relation to national authorities, 9 of 12 expected it to be very or somewhat effective – 3 very effective (FR, LV-1, NO) and 6 somewhat effective (IE, PT, CH, LV-2 and 2 others). Furthermore, 3 of 12 stakeholders were neutral.

In relation to 'Other' stakeholders, 5 of 10 expected it to be very or somewhat effective (2 very effective, 3 somewhat effective). Furthermore, 1 of 10 stakeholder expected it to be somewhat ineffective. Moreover, 4 of 10 stakeholders were neutral (2) or did not know (2).

Figure 18 In your view, how effective do you expect policy measure 1 to be in tackling Problem 1 (i.e., limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.4.1.2 Policy measure 2: Obligation for all MDMS to apply the CRS Code of Conduct's rules on fair treatment of transport operators limited to load and process data provided with equal care and timelines

Stakeholders were asked to indicate how effective they expect Policy Measure 2 to be in tackling Problem 1 (see Figure 29).

Across all stakeholder groups, 27 of 72 expected it to be very or somewhat effective (10 very effective, 17 somewhat effective). Furthermore, 24 of 72 stakeholders expected it to be very or somewhat ineffective (12 very ineffective, 12 somewhat ineffective). Moreover, 21 of 72 stakeholders were neutral (12) or did not know (9).

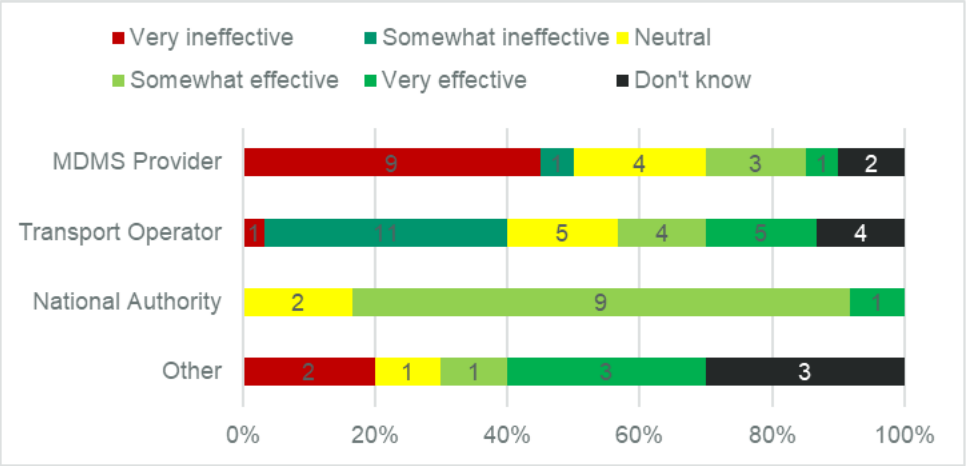
In relation to MDMS providers, 4 of 20 expected it to be very or somewhat effective (1 very effective, 3 somewhat effective). Furthermore, 10 of 20 stakeholders expected it to be very or somewhat ineffective (9 very ineffective, 1 somewhat ineffective). Moreover, 6 of 20 stakeholders were neutral (4) or did not know (2). Focusing on vertically integrated MDMS, 1 out of 5 consider it somewhat ineffective, 2 out of 5 consider it neutral, and 2 do not know or provided no answer.

In relation to transport operators, 9 of 30 expected it to be very or somewhat effective (5 very effective, 4 somewhat effective). Furthermore, 12 of 30 stakeholders expected it to be very or somewhat ineffective (1 very ineffective, 11 somewhat ineffective). Moreover, 9 of 30 stakeholders were neutral (5) or did not know (4). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it neutral while 2 out of 3 replied don't know or did not answer.

In relation to national authorities, 10 of 12 expected it to be very or somewhat effective – 1 very effective (FR) and 9 somewhat effective (IE, PT, CH, LV-2, LV-1, and NO). Furthermore, 2 of 12 stakeholders were neutral.

In relation to 'Other' stakeholders, 4 of 10 expected it to be very or somewhat effective (3 very effective, 1 somewhat effective). Furthermore, 2 of 10 stakeholders expected it to be very ineffective. Moreover, 4 of 10 stakeholders were neutral (1) or did not know (3).

Figure 15-18 In your view, how effective do you expect policy measure 2 to be in tackling Problem 1 (i.e., limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.4.1.3 Policy measure 3: Obligation for all MDMS to apply the CRS Code of Conduct's rules on marketing and booking data

Stakeholders were asked to indicate how effective they expect Policy Measure 3 to be in tackling Problem 1 (see Figure 30).

Across all stakeholder groups, 19 of 69 expected it to be very or somewhat effective (8 very effective, 11 somewhat effective). Furthermore, 25 of 69 stakeholders expected it to be very or somewhat ineffective (14 very ineffective, 11 somewhat ineffective). Moreover, 25 of 69 stakeholders were neutral (13) or did not know (12).

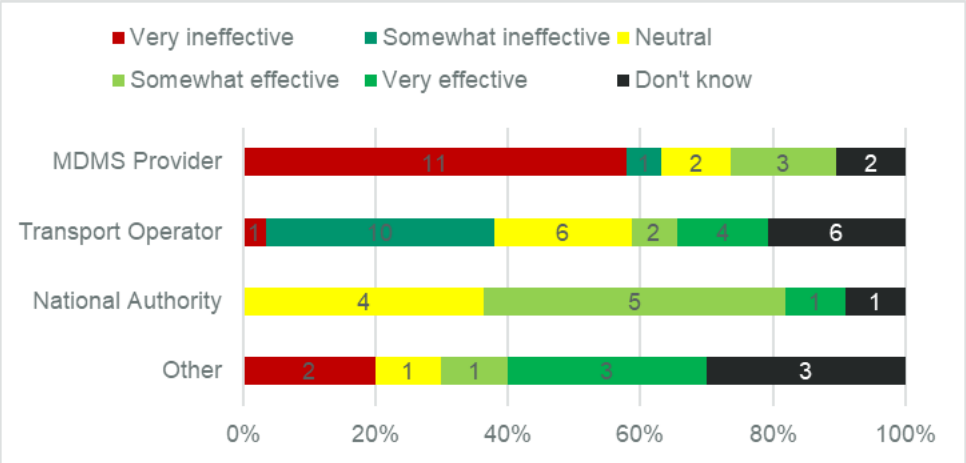
In relation to MDMS providers, 3 of 19 expected it to be somewhat effective. Furthermore, 12 of 19 stakeholders expected it to be very or somewhat ineffective (11 very ineffective, 1 somewhat ineffective). Moreover, 4 of 19 stakeholders were neutral (2) or did not know (2). Focusing on vertically integrated MDMS, 1 out of 5 consider it somewhat effective, 3 out of 5 consider it neutral, and 1 do not know or provided no answer.

In relation to transport operators, 6 of 29 expected it to be very or somewhat effective (4 very effective, 2 somewhat effective). Furthermore, 11 of 29 stakeholders expected it to be very or somewhat ineffective (1 very ineffective, 10 somewhat ineffective). Moreover, 12 of 29 stakeholders were neutral (6) or did not know (6). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it neutral while 2 out of 3 replied don't know or did not answer.

In relation to national authorities, 6 of 11 expected it to be very or somewhat effective – 1 very effective (FR) and 5 somewhat effective (IE, PT, CH, LV-1, NO). Furthermore, 5 of 11 stakeholders were neutral (4) or did not know (1).

In relation to 'Other' stakeholders, 4 of 10 expected it to be very or somewhat effective (3 very effective, 1 somewhat effective). Furthermore, 2 of 10 stakeholders expected it to be very ineffective. Moreover, 4 of 10 stakeholders were neutral (1) or did not know (3).

Figure 15-19 In your view, how effective do you expect policy measure 3 to be in tackling Problem 1 (i.e., limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.4.1.4 Policy measure 6: Obligation for Member States to appoint a national authority to settle disputes between parties.

Stakeholders were asked to indicate how effective they expect Policy Measure 6 to be in tackling Problem 1 (see Figure 31).

Across all stakeholder groups, 36 of 71 expected it to be very or somewhat effective (19 very effective, 17 somewhat effective). Furthermore, 14 of 71 stakeholders expected it to be ineffective (11 very ineffective, 3 somewhat ineffective). Finally, 21 of 71 stakeholders were neutral (14) or did not know (7).

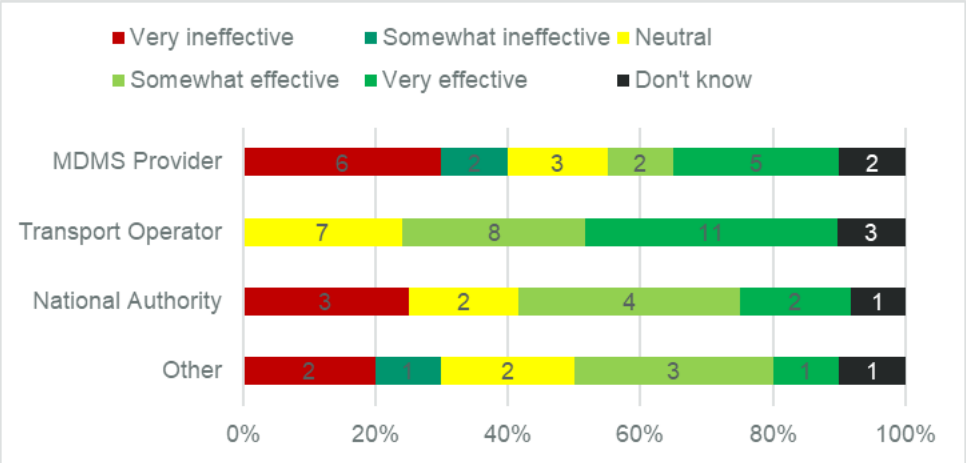
In relation to MDMS providers, 7 of 20 expected it to be very or somewhat effective (5 very effective, 2 somewhat effective). Furthermore, 8 of 20 stakeholders expected it to be ineffective (6 very ineffective, 2 somewhat ineffective). Finally, 5 of 20 stakeholders were neutral (3) or did not know (2). Focusing on vertically integrated MDMS, 1 out of 5 consider it somewhat effective, 3 out of 5 consider it neutral, and 1 do not know or provided no answer.

In relation to transport operators, 19 of 29 expected it to be very or somewhat effective (11 very effective, 8 somewhat effective). Finally, 10 of 29 stakeholders were neutral (7) or did not know (3). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it neutral while 2 out of 3 replied don't know or did not answer.

In relation to national authorities, 6 of 12 expected it to be very or somewhat effective – 2 very effective (IE, FR) and 4 somewhat effective (FI-1, CH, LV-2, NO). Furthermore, 3 of 12 stakeholders expected it to be very ineffective (PT, FI-2). Finally, 3 of 12 stakeholders were neutral (2) or did not know (1).

In relation to 'Other' stakeholders, 4 of 10 expected it to be very or somewhat effective (1 very effective, 3 somewhat effective). Furthermore, 3 of 10 stakeholders expected it to be ineffective (2 very ineffective, 1 somewhat ineffective). Finally, 3 of 10 stakeholders were neutral (2) or did not know (1).

Figure 15-20 In your view, how effective do you expect Policy Measure 6 to be in tackling Problem 1 (i.e., limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.4.1.5 Policy Measure 7: Obligation for all B2C MDMS to share non-personal data for mobility management with public authorities

Stakeholders were asked to indicate how effective they expect Policy Measure 7 to be in tackling Problem 1 (see Figure 32).

Across all stakeholder groups, there is little support for the policy measure. Only 15 of 71 expected it to be very or somewhat effective (3 very effective, 12 somewhat effective). While 20 of 71 stakeholders expected it to be ineffective (16 very ineffective, 4 somewhat ineffective). However, the largest number of stakeholders were neutral (27 of 71) about the effects of the policy measure. Lastly, 9 of 27 did not know.

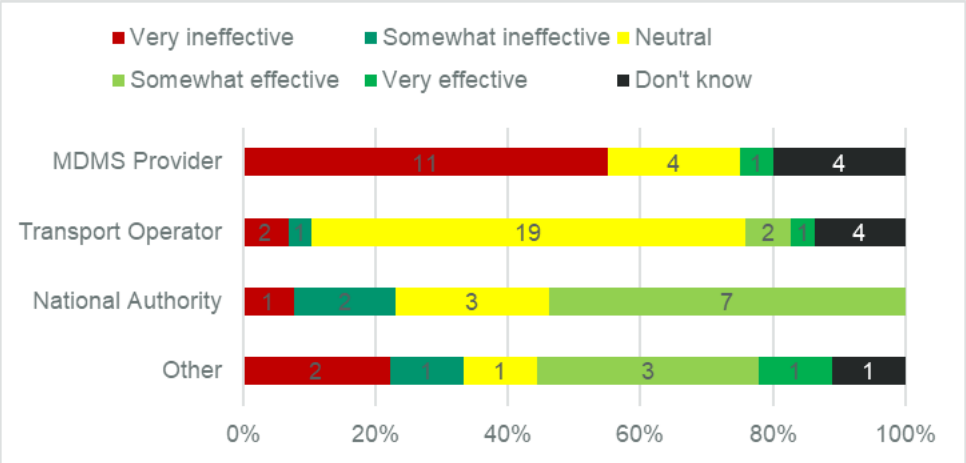
In relation to MDMS providers, only 1 of 20 expected it to be very effective, while 11 of 20 expected it to be very ineffective. Finally, 8 of 20 MDMS providers were neutral (4) or did not know (4). Focusing on vertically integrated MDMS, 1 out of 5 consider it somewhat effective, 2 out of 5 consider it neutral, 1 out of 5 consider it somewhat ineffective and 1 do not know or provided no answer.

In relation to transport operators, 3 of 29 expected it to be very or somewhat effective (1 very effective, 2 somewhat effective). Furthermore, 3 of 29 transport operators expected it to be ineffective (2 very ineffective, 1 somewhat ineffective). Finally, 23 of 29 transport operators were neutral (19) or did not know (4). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it somewhat effective while 2 out of 3 replied don't know or did not answer.

In relation to national authorities, 7 of 13 expected it to be somewhat effective (PT, FI-1, CH, LV-2 and 3 others). Furthermore, 3 of 13 national authorities expected it to be ineffective – 1 very ineffective (FI-2) and 2 somewhat ineffective (IE, NO). Finally, 3 of 13 national authorities were neutral.

In relation to 'Other' stakeholders, 4 of 9 expected it to be very or somewhat effective (1 very effective, 3 somewhat effective). Furthermore, 3 of 9 stakeholders expected it to be ineffective (2 very ineffective, 1 somewhat ineffective). Finally, 2 of 9 stakeholders were neutral (1) or did not know (1).

Figure 15-21 In your view, how effective do you expect Policy Measure 7 to be in tackling Problem 1 (i.e., limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.4.1.6 Policy measure 8: Obligation for all B2B and B2C MDMS to display information on GHG emissions of trips - only when the data is provided by the operators.

Stakeholders were asked to indicate how effective they expect Policy Measure 8 to be in tackling Problem 1 (see Figure 33).

Across all stakeholder groups, 28 of 71 expected it to be very or somewhat effective (10 very effective, 18 somewhat effective). Furthermore, 25 of 71 expected it to be very ineffective (23) or somewhat ineffective (2). Moreover, 18 of 71 were neutral (16) or did not know (2).

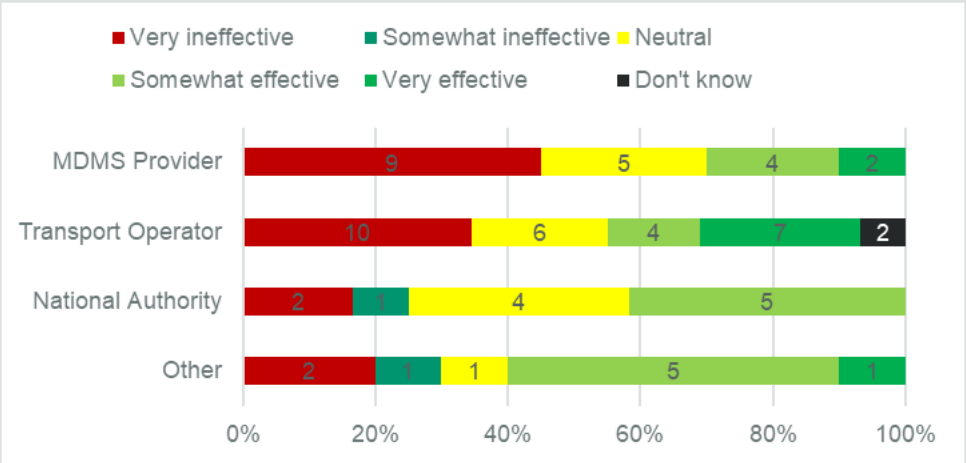
In relation to MDMS providers, 6 of 20 expected it to be very or somewhat effective (2 very effective, 4 somewhat effective). Furthermore, 9 of 20 MDMS providers expected it to be very ineffective. Moreover, 5 of 20 MDMS providers were neutral. Focusing on vertically integrated MDMS, 1 out of 5 consider it somewhat effective, 2 out of 5 consider it neutral, 4 out of 5 consider it ineffective (3 very and 1 somewhat), and 1 do not know or provided no answer.

In relation to transport operators, 11 of 29 expected it to be very or somewhat effective (7 very effective, 4 somewhat effective). Furthermore, 10 of 29 transport operators expected it to be very ineffective. Moreover, 8 of 29 transport operators were neutral (6) or did not know (2). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it neutral while 2 out of 3 replied very ineffective.

In relation to national authorities, 5 of 12 expected it to be somewhat effective (PT, FI-2, CH , FR). Furthermore, 3 of 12 national authorities expected it to be very ineffective (2 – NO and 1 other) or somewhat ineffective (1 – FI-1). Moreover, 4 of 12 national authorities were neutral.

In relation to ‘Other’ stakeholders, 6 of 10 expected it to be very or somewhat effective (1 very effective, 5 somewhat effective). Furthermore, 3 of 10 ‘Other’ stakeholders expected it to be very ineffective (2) or somewhat ineffective (1). Moreover, 1 of 10 ‘Other’ stakeholders was neutral.

Figure 15-22 In your view, how effective do you expect policy measure 8 to be in tackling Problem 1 (i.e., limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.4.1.7 Policy Measure 9: Legislation sets thresholds to identify MDMS and rail operators in scope (see details above)

Stakeholders were asked to indicate how effective they expect policy measure 9 to be in tackling Problem 1 (see Figure 34).

Across all stakeholder groups, 15 of 71 expected it to be very or somewhat effective (3 very effective, 12 somewhat effective). Furthermore, 19 of 71 expected it to be very ineffective (9) or somewhat ineffective (10). Moreover, 37 of 71 were neutral (17) or did not know (20).

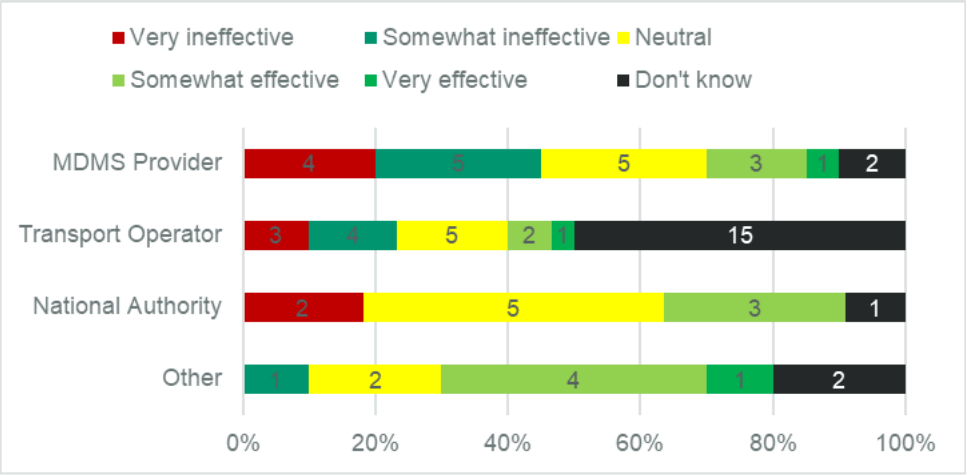
In relation to MDMS providers, 4 of 20 expected it to be very or somewhat effective (1 very effective, 3 somewhat effective). Furthermore, 9 of 20 MDMS providers expected it to be very ineffective (4) or somewhat ineffective (5). Moreover, 7 of 20 MDMS providers were neutral (5) or did not know (2). Focusing on vertically integrated MDMS, 4 out of 5 consider it ineffective (2 very and 2 somewhat), and 1 do not know or provided no answer.

In relation to transport operators, 3 of 30 expected it to be very or somewhat effective (1 very effective, 2 somewhat effective). Furthermore, 7 of 30 transport operators expected it to be very ineffective (3) or somewhat ineffective (4). Moreover, 20 of 30 transport operators were neutral (5) or did not know (15). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it neutral, while 1 out of 3 replied very effective and 1 does not know.

In relation to national authorities, 3 of 11 expected it to be somewhat effective (CH, FR, LV-1). Furthermore, 2 of 11 national authorities expected it to be very ineffective (IE, NO). Moreover, 6 of 11 national authorities were neutral (5) or did not know (1).

In relation to 'Other' stakeholders, 5 of 10 expected it to be very or somewhat effective (1 very effective, 4 somewhat effective). Furthermore, 1 of 10 'Other' stakeholders expected it to be somewhat ineffective. Moreover, 4 of 10 'Other' stakeholders were neutral (2) or did not know (2).

Figure 15-23 In your view, how effective do you expect Policy Measure 9 to be in tackling Problem 1 (i.e., limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.4.1.8 Policy Measure 10: EC adopts Decisions to designate indispensable MDMS (B2C with significant market power) and rail operators with significant market power at EU and national levels

Stakeholders were asked to indicate how effective they expect policy measure 10 to be in tackling Problem 1 (see Figure 35).

Across all stakeholder groups, 15 of 70 expected it to be very or somewhat effective (5 very effective, 10 somewhat effective). Furthermore, 18 of 70 expected it to be very ineffective (10) or somewhat ineffective (8). Moreover, 37 of 70 were neutral (17) or did not know (20).

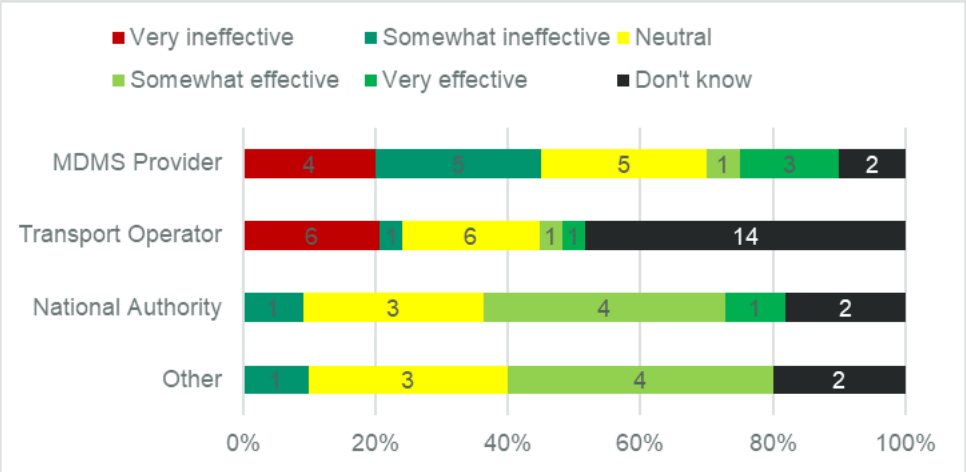
In relation to MDMS providers, 4 of 20 expected it to be very or somewhat effective (3 very effective, 1 somewhat effective). Furthermore, 9 of 20 MDMS providers expected it to be very ineffective (4) or somewhat ineffective (5). Moreover, 7 of 20 MDMS providers were neutral (5) or did not know (2). Focusing on vertically integrated MDMS, 4 out of 5 consider it very ineffective, and 1 do not know or provided no answer.

In relation to transport operators, 2 of 29 expected it to be very or somewhat effective (1 very effective, 1 somewhat effective). Furthermore, 7 of 29 transport operators expected it to be very ineffective (6) or somewhat ineffective (1). Moreover, 20 of 29 transport operators were neutral (6) or did not know (14). Focusing on new entrant rail operators, 2 out of 3 of new entrant rail operators considered it neutral, while does not know.

In relation to national authorities, 5 of 11 expected it to be very or somewhat effective – 1 very effective (FR) and 4 somewhat effective (FI-1, CH, LV-2, LV-1). Furthermore, 1 of 11 national authorities expected it to be somewhat ineffective (NO). Moreover, 5 of 11 national authorities were neutral (3) or did not know (2).

In relation to 'Other' stakeholders, 4 of 10 expected it to be somewhat effective. Furthermore, 1 of 10 'Other' stakeholders expected it to be somewhat ineffective. Moreover, 5 of 10 'Other' stakeholders were neutral (3) or did not know (2).

Figure 15-24 In your view, how effective do you expect Policy Measure 10 to be in tackling Problem 1 (i.e., limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.4.1.9 Policy Measure 11: EC adopts Decisions to designate indispensable MDMS (vertically integrated and B2C with significant market power) and rail operators with significant market power) at EU and national levels

Stakeholders were asked to indicate how effective they expect policy measure 11 to be in tackling Problem 1 (see Figure 36).

Across all stakeholder groups, 18 of 69 expected it to be very or somewhat effective (6 very effective, 12 somewhat effective). Furthermore, 16 of 69 expected it to be very ineffective (10) or somewhat ineffective (6). Moreover, 35 of 69 were neutral (14) or did not know (21).

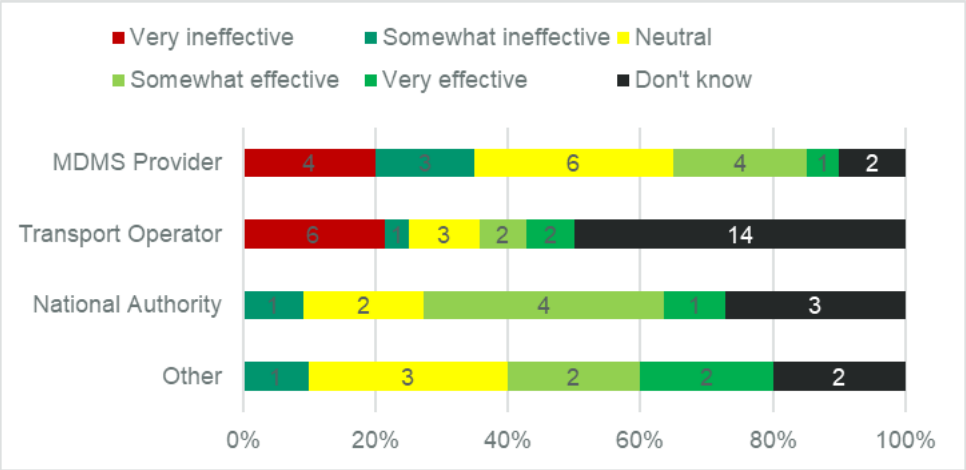
In relation to MDMS providers, 5 of 20 expected it to be very or somewhat effective (1 very effective, 4 somewhat effective). Furthermore, 7 of 20 MDMS providers expected it to be very ineffective (4) or somewhat ineffective (3). Moreover, 8 of 20 MDMS providers were neutral (6) or did not know (2). Focusing on vertically integrated MDMS, 4 out of 5 consider it very ineffective, and 1 do not know or provided no answer.

In relation to transport operators, 4 of 28 expected it to be very or somewhat effective (2 very effective, 2 somewhat effective). Furthermore, 7 of 28 transport operators expected it to be very ineffective (6) or somewhat ineffective (1). Moreover, 17 of 28 transport operators were neutral (3) or did not know (14). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it very effective, while 2 do not know.

In relation to national authorities, 5 of 11 expected it to be very or somewhat effective – 1 very effective (FR) and 4 somewhat effective (FI-1, CH, LV-2, LV-1). Furthermore, 1 of 11 national authorities expected it to be somewhat ineffective (NO). Moreover, 5 of 11 national authorities were neutral (2) or did not know (3).

In relation to 'Other' stakeholders, 4 of 10 expected it to be very or somewhat effective (2 very effective, 2 somewhat effective). Furthermore, 1 of 10 'Other' stakeholders expected it to be somewhat ineffective. Moreover, 5 of 10 'Other' stakeholders were neutral (3) or did not know (2).

Figure 15-25 In your view, how effective do you expect Policy Measure 11 to be in tackling Problem 1 (i.e., limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.4.1.10 Policy Measure 14: Applies to all rail operators with significant market power and to all other rail operators in relation to PSO and cross-border services: respecting the principles on distribution fees and without imposing highly restrictive clauses (exclusivity clauses, marketing clauses and other technical restrictions) when entering into commercial agreements with MDMS

Stakeholders were asked to indicate how effective they expect policy measure 14 to be in tackling Problem 1 (see Figure 37).

Across all stakeholder groups, 19 of 69 expected it to be very or somewhat effective (5 very effective, 14 somewhat effective). Furthermore, 14 of 69 stakeholders expected it to be very ineffective (11) or somewhat ineffective (3). Moreover, 36 of 69 stakeholders were neutral (16) or did not know (20).

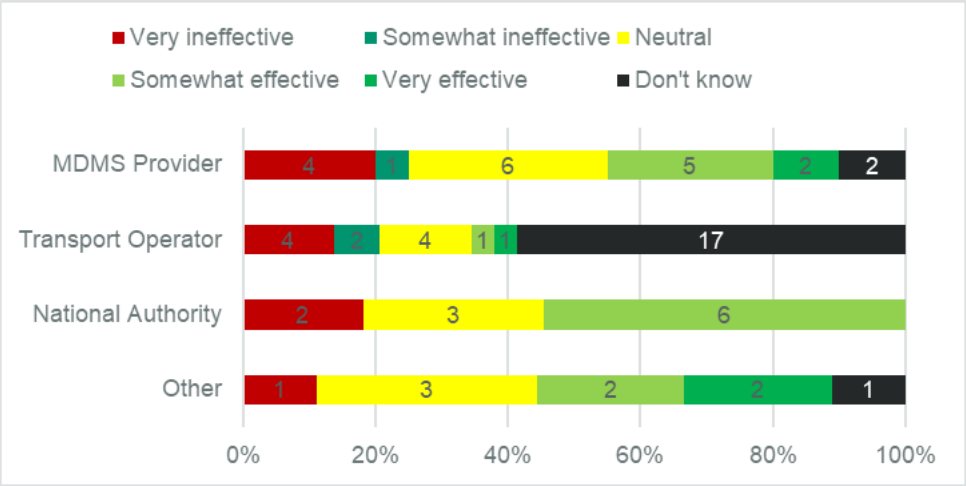
In relation to MDMS providers, 7 of 20 expected it to be very or somewhat effective (2 very effective, 5 somewhat effective). Furthermore, 5 of 20 MDMS providers expected it to be very ineffective (4) or somewhat ineffective (1). Moreover, 8 of 20 MDMS providers were neutral (6) or did not know (2). Focusing on vertically integrated MDMS, 3 out of 5 consider it ineffective (2 very and 1 somewhat), and 1 do not know or provided no answer.

In relation to transport operators, 2 of 29 expected it to be very or somewhat effective (1 very effective, 1 somewhat effective). Furthermore, 6 of 29 transport operators expected it to be very ineffective (4) or somewhat ineffective (2). Moreover, 21 of 29 transport operators were neutral (4) or did not know (17). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it very effective, 1 out of 3 consider it neutral, while 1 does not know.

In relation to national authorities, 6 of 11 expected it to be somewhat effective (PT, FI-1, CH, LV-2, LV-1 and NO). Furthermore, 2 of 11 national authorities expected it to be very ineffective (IE). Moreover, 3 of 11 national authorities were neutral.

In relation to ‘Other’ stakeholders, 4 of 9 expected it to be very or somewhat effective (2 very effective, 2 somewhat effective). Furthermore, 1 of 9 ‘Other’ stakeholders expected it to be very ineffective. Moreover, 4 of 9 ‘Other’ stakeholders were neutral (3) or did not know (1).

Figure 15-26 In your view, how effective do you expect Policy Measure 14 to be in tackling Problem 1 (i.e., limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.4.1.11 Policy Measure 15: Applies to all rail operators: respecting the principles on distribution fees and without imposing highly restrictive clauses (exclusivity clauses, marketing clauses and other technical restrictions) when entering into commercial agreements with MDMS

Stakeholders were asked to indicate how effective they expect policy measure 15 to be in tackling Problem 1 (see Figure 38).

Across all stakeholder groups, 21 of 70 expected it to be very or somewhat effective (6 very effective, 15 somewhat effective). Furthermore, 13 of 70 stakeholders expected it to be very ineffective (11) or somewhat ineffective (2). Moreover, 36 of 70 stakeholders were neutral (18) or did not know (18).

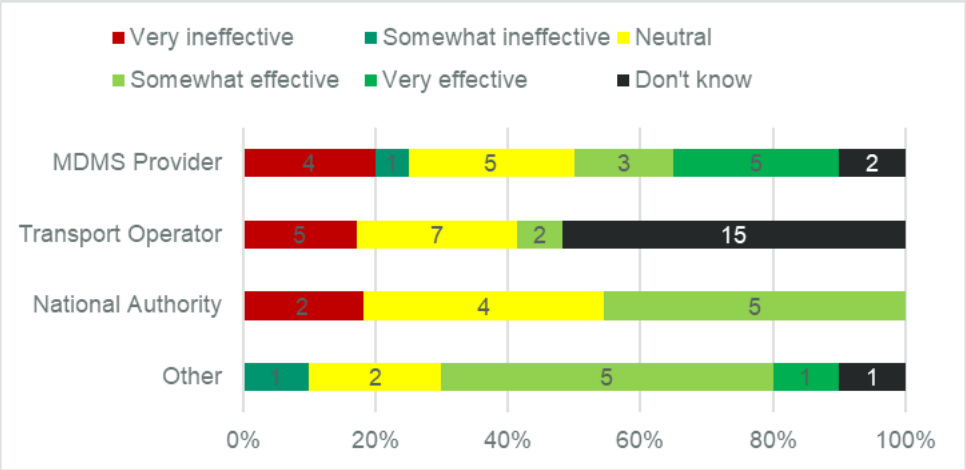
In relation to MDMS providers, 8 of 20 expected it to be very or somewhat effective (5 very effective, 3 somewhat effective). Furthermore, 5 of 20 MDMS providers expected it to be very ineffective (4) or somewhat ineffective (1). Moreover, 7 of 20 MDMS providers were neutral (5) or did not know (2). Focusing on vertically integrated MDMS, 2 out of 5 consider it very ineffective, and 2 consider it neutral and 1 provided no answer.

In relation to transport operators, 2 of 29 expected it to be somewhat effective. Furthermore, 5 of 29 transport operators expected it to be very ineffective. Moreover, 22 of 29 transport operators were neutral (7) or did not know (15). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it very effective, 2 out of 3 consider it neutral.

In relation to national authorities, 5 of 11 expected it to be somewhat effective (PT, FI-1, CH, LV-1, NO). Furthermore, 2 of 11 national authorities expected it to be very ineffective (IE). Moreover, 4 of 11 national authorities were neutral.

In relation to 'Other' stakeholders, 6 of 10 expected it to be very or somewhat effective (1 very effective, 5 somewhat effective). Furthermore, 1 of 10 'Other' stakeholders expected it to be somewhat ineffective. Moreover, 3 of 10 'Other' stakeholders were neutral (2) or did not know (1).

Figure 15-27 In your view, how effective do you expect Policy Measure 15 to be in tackling Problem 1 (i.e., limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.4.1.12 Policy measure 17: Applies to all rail operators with significant market power and to all other rail operators in relation to PSO and cross-border services: obligation to enter into commercial agreements with willing MDMS to enable the sale of tickets

Stakeholders were asked to indicate how effective they expect policy measure 17 to be in tackling Problem 1 (see Figure 39).

Across all stakeholder groups, 22 of 70 expected it to be very or somewhat effective (8 very effective, 14 somewhat effective). Furthermore, 14 of 70 stakeholders expected it to be very ineffective (10) or somewhat ineffective (4). Moreover, 34 of 70 stakeholders were neutral (13) or did not know (21).

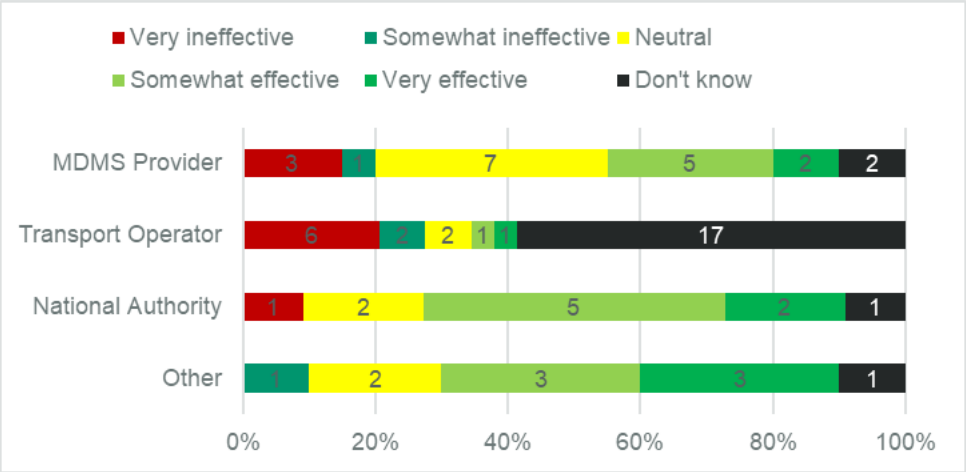
In relation to MDMS providers, 7 of 20 expected it to be very or somewhat effective (2 very effective, 5 somewhat effective). Furthermore, 4 of 20 MDMS providers expected it to be very ineffective (3) or somewhat ineffective (1). Moreover, 9 of 20 MDMS providers were neutral (7) or did not know (2). Focusing on vertically integrated MDMS, 3 out of 5 considered it very ineffective, 1 considered it neutral and 1 provided no answer.

In relation to transport operators, 2 of 29 expected it to be very or somewhat effective (1 very effective, 1 somewhat effective). Furthermore, 8 of 29 transport operators expected it to be very ineffective (6) or somewhat ineffective (2). Moreover, 19 of 29 transport operators were neutral (2) or did not know (17). Focusing on new entrant rail operators, 2 out of 3 of new entrant rail operators considered it very ineffective, 1 out of 3 considered it neutral.

In relation to national authorities, 7 of 11 expected it to be very or somewhat effective – 2 very effective (LV-1, FR) and 5 somewhat effective (PT, FI-1, CH, LV-1, NO). Furthermore, 1 of 11 national authorities expected it to be very ineffective (IE). Moreover, 3 of 11 national authorities were neutral (2) or did not know (1).

In relation to ‘Other’ stakeholders, 6 of 10 expected it to be very or somewhat effective (3 very effective, 3 somewhat effective). Furthermore, 1 of 10 ‘Other’ stakeholders expected it to be somewhat ineffective. Moreover, 3 of 10 ‘Other’ stakeholders were neutral (2) or did not know (1).

Figure 15-28 In your view, how effective do you expect Policy Measure 17 to be in tackling Problem 1 (i.e., limited and distorted information and access to tickets for consumers on MDMS, in particular for rail)?



15.13.4.1.13 Please elaborate on your responses to the effectiveness of the policy measures identified in Table 3 in tackling Problem 1

Transport operators had mixed views on the effectiveness of the policy measures in relation to Problem 1.

Three vertically integrated, incumbent *rail operators* (including Deutsche Bahn and SJ AB) expressed concerns about the proposed measures, arguing that mandatory obligations would infringe on their commercial freedom, create administrative burdens and potentially increase ticket prices. One vertically integrated new entrant rail operator added that clarity is essential for consumers, warning that limiting obligations to specific modes could distort the information that is available. A new entrant bus and rail operator supported measures that would require dominant MDMS to display new entrants, noting that this would benefit passengers by providing more options and affordable tickets. Czech Railways commented on potential “excessive market regulation” and that “centralisation of decision making [by the European Commission] may lead to inefficient market functioning and a reduction in natural competition”. Finally, SNCF Group, another incumbent rail operator, highlighted that existing national regulation already ensures access to MDMS platforms and fair distribution, and that additional EU measures are unlikely to improve ticket availability for consumers while risking higher costs.

Rail and public transport associations highlighted the importance of national and regulatory oversight to ensure fair access to MDMS platforms while safeguarding the governance tole of public transport authorities. Two associations (including CER) highlighted that obligations such as appointing national authorities for dispute resolution could be useful if implemented efficiently. UITP and the Finnish Public Transport Association underlined that neutral display and data-sharing obligations should respect PTAs’ ability to manage mobility ecosystems, fare structures, and ticketing conditions. ALLRAIL stressed that thresholds and designations of indispensable MDMS and rail operators are crucial to ensure consumers can access complete and non-distorted information, particularly for cross-border travel and PSO services, and that third-party platforms bring additional consumer choice and revenue opportunities. A road transport association also noted the importance of equal treatment across modes and transparency in GHG emissions to allow informed consumer choices.

Airlines generally indicated that Problem 1 does not apply to their sector. Air France-KLM stated: "Given the existence of a highly competitive and transparent ticketing system in the EU air transport market, there is no need for intervention as there exists no limited willingness by so-called indispensable operators to provide the full offer on fair terms to MDMS." Similarly, Finnair noted: "European air carriers currently operate in a highly transparent and competitive market while offering many travel options to consumers, either directly or with a connection. Given this, there is no need for intervention as there exists no limited willingness by so-called indispensable operators to provide the full offer on fair terms to MDMS." Another airline added that “without more information… these measures do not seem to address issues with limited or distorted access to information for consumers," reflecting scepticism about the relevance of the measures for airlines’ own ticket distribution.

MDMS providers presented mixed views on the proposed policy measures to tackle Problem 1. Seven respondents, including EU Travel Tech and Dohop, claimed that the advantages of the measures appear

unclear and ineffective, although they noted that some measures, such as PMs 1, 6, 9, and 18, could prove useful if combined with other obligations, potentially fostering fairer competition on the distribution side. Five respondents (including ADN Mobilites) discussed the importance of creating a level playing field, noting that all transport operators, including air operators, should be included within the scope of PMs 9, 10, 14, 15, and 17 to ensure full and fair access to MDMS platforms. They claimed that the unwillingness of large operators to grant full access in a fair and efficient way is a key issue they face.

Three independent B2C platforms (Skyscanner) as well as a B2C platform and a trade association all argued that the main issue is airline control over content and data, not MDMS behaviour. A couple within this group opposed blanket neutrality rules, saying they harm innovation and are only justified for MDMS owned by transport operators. They rejected Policy Measure 3, calling it unrelated and unfair, especially for platforms without booking data. They supported sustainability info (Measure 8) but stressed operators must provide standardised emissions data. Overall, both said regulation should target dominant transport operators, not independent MDMS lacking market power.

Regarding PM 8, four respondents, including EU Travel Tech and Skyscanner, supported the obligation for requiring both B2B and B2C MDMS platforms to display information on GHG emissions of trips. These MDMS providers emphasised the need for standardised methods of GHG data reporting and calculation to ensure consistency with the existing EU framework, thereby simplifying compliance and reducing confusion for consumers. However, one MDMS provider noted that while PM 8 relates to environmental transparency, it has little effect on access dynamics or the market position of small MDMS providers. B2B and B2C platforms also supported the establishment of national dispute settlement bodies under PM 6, but only if these bodies are extended to the obligations of transport operators as well.

Furthermore, EU Travel Tech (a tourism industry association), argued that the CRS CoC is an outdated regulatory framework; they viewed the extension of its transparency obligations under PM 2 as likely to introduce unnecessary complications for MDMS – it should be noted, however, that the neutral display rules being considered are not a simple transposition of the ones present in the CRS CoC, and they have been updated to reflect the needs of the multimodal market. These two stakeholders also claimed that the neutral display obligation under PM 1 would not resolve the core issue of limited and distorted information and access to tickets for consumers on MDMS platforms. Additionally, the same respondents noted the CRS CoC's rules on marketing and booking data under PM 3 are outdated,

National authorities' responses suggests that while the proposed measures could be beneficial, additional incentives may be necessary to ensure full participation and increased ticket availability. One respondent stated that the policies to promote fairness and transparency represent key steps towards establishing a more open and transparent mobility market. Another respondent argued that the obligations under PM 7 should not lie solely with B2C MDMS platforms but also with transport operators, and that the GHG data obligation under PM 8 should be mandatory for both transport operators and MDMS platforms to display. Regarding PM 9, 10 and 11, a respondent stressed that the limited scope of these measures undermines their effectiveness, emphasising that the policies must include all transport operators, not just those currently dominating the market, to be truly impactful.

Other stakeholders such as EPF supports the CRS CoC and the principle of a 'neutral display' under PM 1, viewing it as essential for providing passengers with a comprehensive, reliable, and unbiased overview of available travel options. However, a respondent claimed that the CRS CoC obligations under PMs 2 and 3 may require revision to reflect the broader application. The respondent also stressed the need to clearly define the thresholds for operators and MDMS platforms under PMs 9, 10, and 11, and advocated for the introduction of the FRAND principles across all modes of transport and MDMS platforms. Three respondents (including BEUC and T&E) agreed with the display of GHG emissions data as a tool to promote sustainable consumer travel choices, assist public authorities in mobility management, and provide insight into the overall environmental impact of transport. T&E added that PM 8 should mandate MDMS platforms to display GHG emissions data for trips, even in cases where transport operators do not provide the data. This stakeholder highlighted the importance of using a standardised methodology to enable like-for-like comparisons and to avoid greenwashing. Additionally, two respondents (EPF and T&E) stressed the need to expand the scope of the proposed policy measures to ensure they apply to all MDMS platforms, all transport operators, and all modes of transport.

15.13.4.2 *In your view, how effective do you expect the policy measures identified in Table 3 to be in tackling Problem 2 (i.e., uneven access of operators to indispensable MDMS platforms)?*

15.13.4.2.1 Policy measure 2: Obligation for all MDMS to apply the CRS Code of Conduct's rules on fair treatment of transport operators limited to load and process data provided with equal care and timelines

Stakeholders were asked to indicate how effective they expect Policy Measure 2 to be in tackling Problem 2 (see Figure 18).

Across all stakeholder groups, 24 of 68 expected it to be very or somewhat effective (11 very effective, 13 somewhat effective). Furthermore, 25 of 68 stakeholders expected it to be ineffective (20 very ineffective, 5 somewhat ineffective). Finally, 19 of 68 stakeholders were neutral (8) or did not know (11).

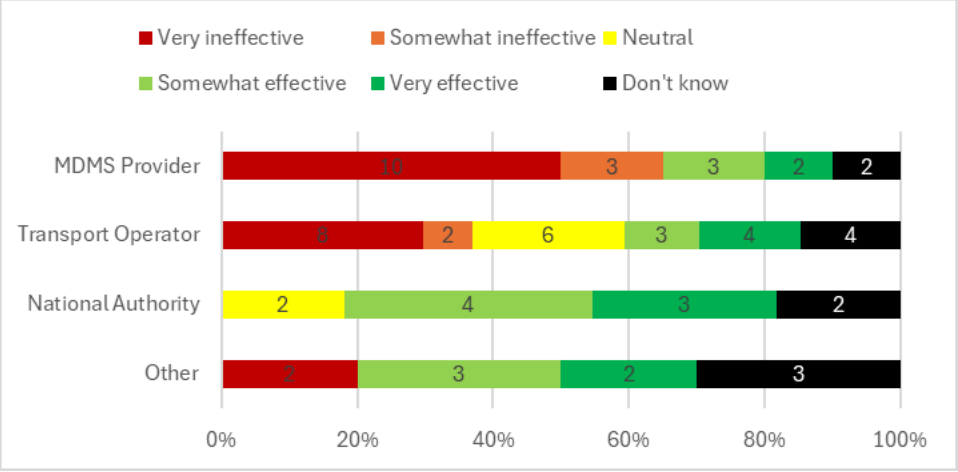
In relation to MDMS providers, 5 of 20 expected the measure to be effective (2 very effective, 3 somewhat effective). 13 of 20 stakeholders expected it to be ineffective (10 very ineffective, 3 somewhat ineffective). Finally, 2 of 20 stakeholders did not know. Focusing on vertically integrated MDMS, 2 out of 5 consider it ineffective (1 very ineffective and 1 somewhat ineffective), 1 consider it neutral and 2 do not know or provided no answer.

In relation to transport operators, 7 of 27 expected the measure to be effective (4 very effective, 3 somewhat effective). 10 of 27 stakeholders expected it to be ineffective (8 very ineffective, 2 somewhat ineffective). Finally, 10 of 27 stakeholders were neutral (6) or did not know (4). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it somewhat effective while 2 out of 3 replied don't know or did not answer.

In relation to national authorities, 7 of 11 expected the measure to be effective – 3 very effective (FR, LV-1, NO) and 4 somewhat effective (IE, PT, CH, LV-2). 4 of 11 stakeholders were neutral (2) or did not know (2).

In relation to 'Other' stakeholders, 5 of 10 expected the measure to be effective (2 very effective, 3 somewhat effective). 2 of 10 stakeholders expected it to be very ineffective. Finally, 3 of 10 stakeholders did not know.

Figure 15-29 In your view, how effective do you expect policy measure 2 to be in tackling Problem 2 (i.e., uneven access of operators to indispensable MDMS platforms)?



15.13.4.2.2 Policy measure 3: Obligation for all MDMS to apply the CRS Code of Conduct's rules on marketing and booking data

Stakeholders were asked to indicate how they effective they expect policy measure 3 to be in tackling Problem 2 (see Figure 19).

Across all stakeholder groups, 18 of 68 expected the measure to be very or somewhat effective (7 very effective, 11 somewhat effective). Furthermore, 27 of 68 stakeholders expected it to be ineffective (23 very ineffective, 4 somewhat ineffective). Finally, 23 of 68 stakeholders were neutral (11) or did not know (12).

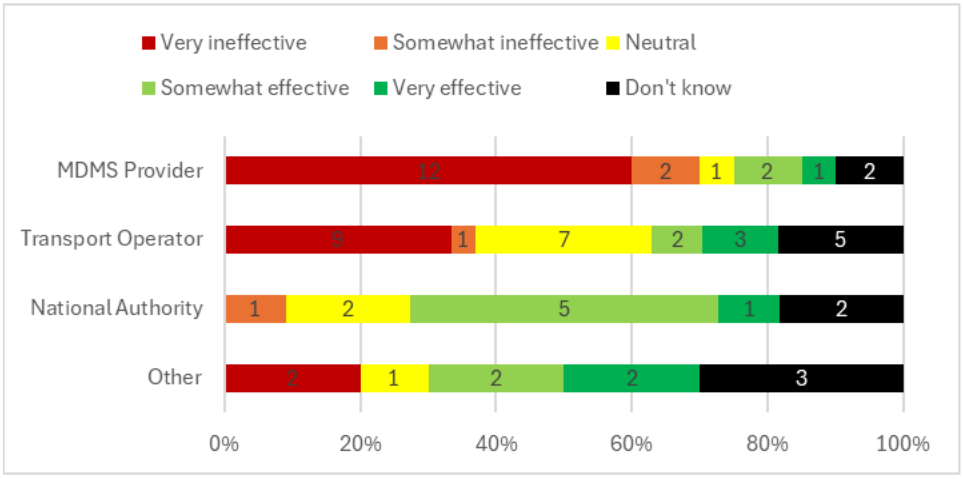
In relation to MDMS providers, 3 of 20 expected the measure to be effective (1 very effective, 2 somewhat effective). 14 of 20 stakeholders expected it to be ineffective (12 very ineffective, 2 somewhat ineffective). Finally, 3 of 20 stakeholders were neutral (1) or did not know (2). Focusing on vertically integrated MDMS, 2 out of 5 consider it very ineffective, 1 consider it neutral and 2 do not know or provided no answer.

In relation to transport operators, 5 of 27 expected the measure to be effective (3 very effective, 2 somewhat effective). 10 of 27 stakeholders expected it to be ineffective (9 very ineffective, 1 somewhat ineffective). Finally, 12 of 27 stakeholders were neutral (7) or did not know (5). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it somewhat effective while 2 out of 3 replied don't know or did not answer.

In relation to national authorities, 6 of 11 expected the measure to be effective – 1 very effective (FR) and 5 somewhat effective (PT, FI-1, CH, LV-1, NO). 1 of 11 stakeholder expected it to be ineffective (IE). Finally, 4 of 11 stakeholders were neutral (2) or did not know (2).

In relation to 'Other' stakeholders, 4 of 10 expected the measure to be effective (2 very effective, 2 somewhat effective). 2 of 10 stakeholders expected it to be very ineffective. Finally, 4 of 10 stakeholders were neutral (1) or did not know (3).

Figure 15-30 In your view, how effective do you expect Policy Measure 3 to be in tackling Problem 2 (i.e., uneven access of operators to indispensable MDMS platforms)?



15.13.4.2.3 Policy Measure 6: Obligation for Member States to appoint a national authority to settle disputes between parties.

Stakeholders were asked to indicate how effective they expect Policy Measure 6 to be in tackling Problem 2 (see Figure 20).

Across all stakeholder groups, 17 of 56 expected it to be somewhat effective. Furthermore, 12 of 56 stakeholders expected it to be ineffective (10 very ineffective, 2 somewhat ineffective). Finally, 27 of 56 stakeholders were neutral (19) or did not know (8).

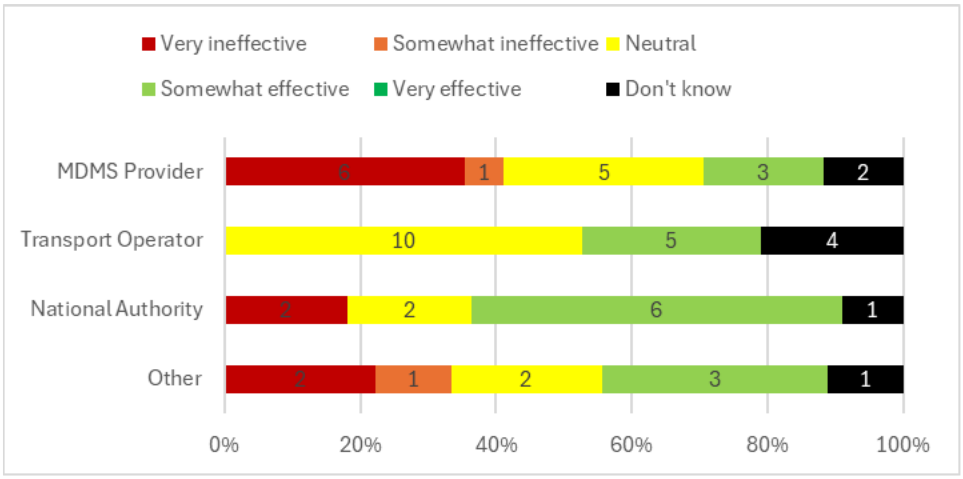
In relation to MDMS providers, 3 of 17 expected the measure to be somewhat effective. 7 of 17 stakeholders expected it to be ineffective (6 very ineffective, 1 somewhat ineffective). Finally, 7 of 17 stakeholders were neutral (5) or did not know (2). Focusing on vertically integrated MDMS, 1 out of 5 considered it somewhat effective, 3 considered it neutral and 1 do not know or provided no answer.

In relation to transport operators, 5 of 19 expected the measure to be somewhat effective. 14 of 19 stakeholders were neutral (10) or did not know (4). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it neutral while 2 out of 3 replied don't know or did not answer.

In relation to national authorities, 6 of 11 expected the measure to be somewhat effective (IE, FI-1, FI-2, CH, LV-2, NO). 2 of 11 stakeholders expected it to be very ineffective (PT and 1 other). Finally, 3 of 11 stakeholders were neutral (2) or did not know (1).

In relation to 'Other' stakeholders, 3 of 9 expected the measure to be somewhat effective. 3 of 9 stakeholders expected it to be ineffective (2 very ineffective, 1 somewhat ineffective). Finally, 3 of 9 stakeholders were neutral (2) or did not know (1).

Figure 15-31 In your view, how effective do you expect policy measure 6 to be in tackling Problem 2 (i.e., uneven access of operators to indispensable MDMS platforms)?



15.13.4.2.4 Policy Measure 9: Legislation sets thresholds to identify MDMS and rail operators in scope (see details above)

Stakeholders were asked to indicate how they effective they expect Policy Measure 9 to be in tackling Problem 2 (see Figure 21).

Across all stakeholder groups, 14 of 67 expected the measure to be very or somewhat effective (6 very effective, 8 somewhat effective). Furthermore, 15 of 67 stakeholders expected it to be ineffective (11 very ineffective, 4 somewhat ineffective). Finally, 38 of 67 stakeholders were neutral (17) or did not know (21).

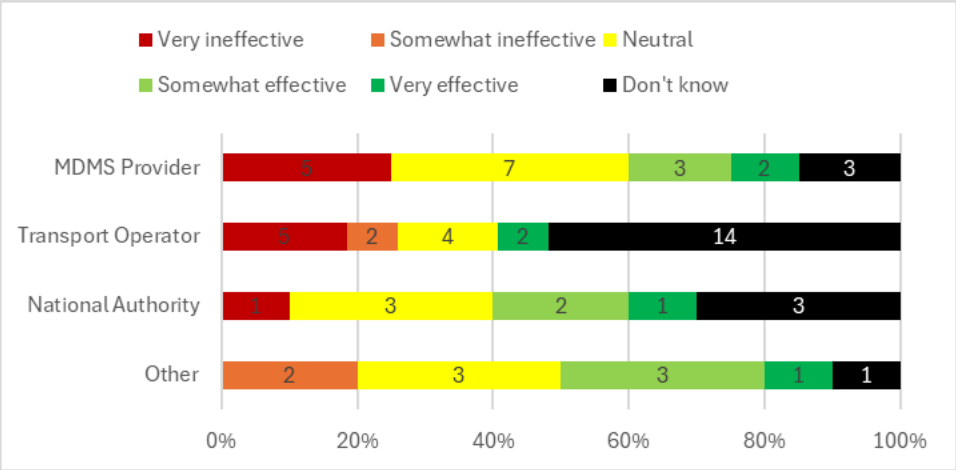
In relation to MDMS providers, 5 of 20 expected the measure to be effective (2 very effective, 3 somewhat effective). 5 of 20 stakeholders expected it to be very ineffective. Finally, 10 of 20 stakeholders were neutral (7) or did not know (3). Focusing on vertically integrated MDMS, 4 out of 5 considered it very effective, and 1 do not know or provided no answer.

In relation to transport operators, 2 of 27 expected the measure to be very effective. 7 of 27 stakeholders expected it to be ineffective (5 very ineffective, 2 somewhat ineffective). Finally, 18 of 27 stakeholders were neutral (4) or did not know (14). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it very effective while 2 out of 3 replied don't know or did not answer.

In relation to national authorities, 3 of 10 expected the measure to be effective – 1 very effective (FR) and 2 somewhat effective (CH, LV-1). 1 of 10 stakeholder expected it to be very ineffective (NO). Finally, 6 of 10 stakeholders were neutral (3) or did not know (3).

In relation to 'Other' stakeholders, 4 of 10 expected the measure to be effective (1 very effective, 3 somewhat effective). 2 of 10 stakeholders expected it to be somewhat ineffective. Finally, 4 of 10 stakeholders were neutral (3) or did not know (1).

Figure 15-32 In your view, how effective do you expect policy measure 9 to be in tackling Problem 2 (i.e., uneven access of operators to indispensable MDMS platforms)?



15.13.4.2.5 Policy measure 10: EC adopts Decisions to designate indispensable MDMS (B2C with significant market power) and rail operators with significant market power at EU and national levels

Stakeholders were asked to indicate how effective they expect Policy Measure 10 to be in tackling Problem 2 (see Figure 22).

Across all stakeholder groups, 16 of 67 expected the measure to be very or somewhat effective (3 very effective, 13 somewhat effective). Furthermore, 19 of 67 stakeholders expected it to be ineffective (12 very ineffective, 7 somewhat ineffective). Finally, 32 of 67 stakeholders were neutral (14) or did not know (18).

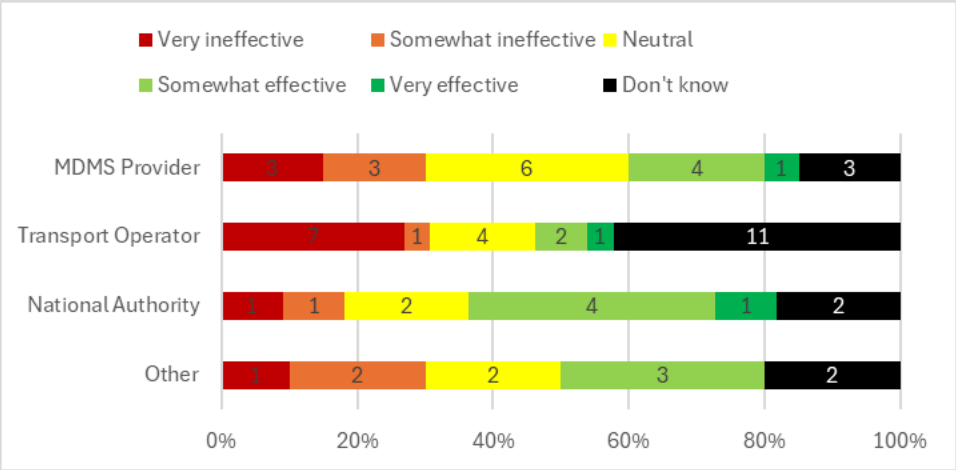
In relation to MDMS providers, 5 of 20 expected the measure to be effective (1 very effective, 4 somewhat effective). 6 of 20 stakeholders expected it to be ineffective (3 very ineffective, 3 somewhat ineffective). Finally, 9 of 20 stakeholders were neutral (6) or did not know (3). Focusing on vertically integrated MDMS, 4 out of 5 considered it very ineffective, and 1 do not know or provided no answer.

In relation to transport operators, 3 of 26 expected the measure to be effective (1 very effective, 2 somewhat effective). 8 of 26 stakeholders expected it to be ineffective (7 very ineffective, 1 somewhat ineffective). Finally, 15 of 26 stakeholders were neutral (4) or did not know (11). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it neutral while 2 out of 3 replied don't know or did not answer.

In relation to national authorities, 5 of 11 expected the measure to be effective – 1 very effective (FR) and 4 somewhat effective (IE, CH, LV-2, LV-1). 2 of 11 stakeholders expected it to be ineffective – 1 very ineffective and 1 somewhat ineffective (NO). Finally, 4 of 11 stakeholders were neutral (2) or did not know (2).

In relation to 'Other' stakeholders, 3 of 10 expected the measure to be somewhat effective. 3 of 10 stakeholders expected it to be ineffective (1 very ineffective, 2 somewhat ineffective). Finally, 4 of 10 stakeholders were neutral (2) or did not know (2).

Figure 15-33 In your view, how effective do you expect Policy Measure 10 to be in tackling Problem 2 (i.e., uneven access of operators to indispensable MDMS platforms)?



15.13.4.2.6 Policy measure 11: EC adopts Decisions to designate indispensable MDMS (vertically integrated and B2C with significant market power) and rail operators with significant market power) at EU and national levels

Stakeholders were asked to indicate how effective they expect Policy Measure 11 to be in tackling Problem 2 (see Figure 23).

Across all stakeholder groups, 16 of 67 expected the measure to be very or somewhat effective (4 very effective, 12 somewhat effective). Furthermore, 18 of 67 stakeholders expected it to be ineffective (9 very ineffective, 9 somewhat ineffective). Finally, 33 of 67 stakeholders were neutral (12) or did not know (21).

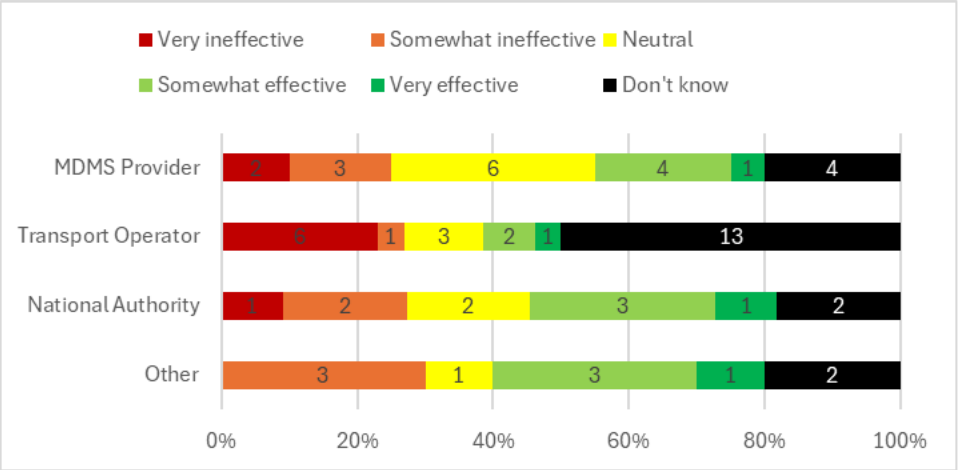
In relation to MDMS providers, 5 of 20 expected the measure to be effective (1 very effective, 4 somewhat effective). 5 of 20 stakeholders expected it to be ineffective (2 very ineffective, 3 somewhat ineffective). Finally, 10 of 20 stakeholders were neutral (6) or did not know (4). Focusing on vertically integrated MDMS, 4 out of 5 considered it very ineffective, and 1 do not know or provided no answer.

In relation to transport operators, 3 of 26 expected the measure to be effective (1 very effective, 2 somewhat effective). 7 of 26 stakeholders expected it to be ineffective (6 very ineffective, 1 somewhat ineffective). Finally, 16 of 26 stakeholders were neutral (3) or did not know (13). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it very effective while 2 out of 3 replied don't know or did not answer.

In relation to national authorities, 4 of 11 expected the measure to be effective – 1 very effective (FR) and 3 somewhat effective (CH, LV-2 and LV-1). 3 of 11 stakeholders expected it to be ineffective (1 very ineffective, 2 somewhat ineffective). Finally, 4 of 11 stakeholders were neutral (2) or did not know (2).

In relation to 'Other' stakeholders, 4 of 10 expected the measure to be effective (1 very effective, 3 somewhat effective). 3 of 10 stakeholders expected it to be somewhat ineffective. Finally, 3 of 10 stakeholders were neutral (1) or did not know (2).

Figure 15-34 In your view, how effective do you expect policy measure 11 to be in tackling Problem 2 (i.e., uneven access of operators to indispensable MDMS platforms)?



15.13.4.2.7 Policy measure 12: Applies to B2B MDMS and B2C MDMS with significant market power: respect principles on distribution fees and cannot impose highly restrictive clauses (exclusivity clauses, unfair and unjustified conditions, marketing clauses and other technical restrictions) when entering into commercial agreements with transport operators

Stakeholders were asked to indicate how effective they expect Policy Measure 12 to be in tackling Problem 2 (see Figure 24).

Across all stakeholder groups, 31 of 69 expected the measure to be very or somewhat effective (6 very effective, 25 somewhat effective). Furthermore, 20 of 69 stakeholders expected it to be ineffective (15 very ineffective, 5 somewhat ineffective). Finally, 18 of 69 stakeholders were neutral (9) or did not know (9).

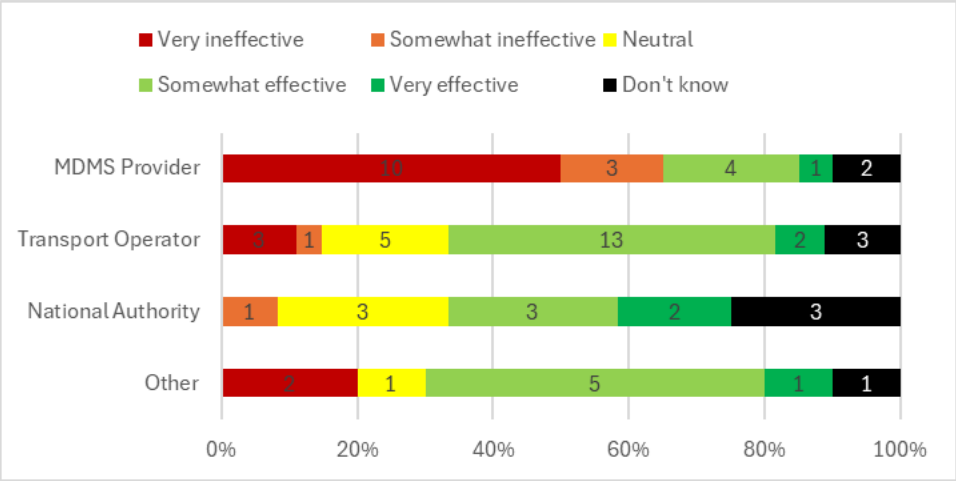
In relation to MDMS providers, 5 of 20 expected the measure to be effective (1 very effective, 4 somewhat effective). 13 of 20 stakeholders expected it to be ineffective (10 very ineffective, 3 somewhat ineffective). Finally, 2 of 20 did not know. Focusing on vertically integrated MDMS providers, 1 out of 5 of vertically integrated MDMS providers considered it somewhat effective, 1 out of 5 considered it neutral, 2 out of 5 considered it very ineffective, while 1 out of 5 replied don't know or did not answer.

In relation to transport operators, 15 of 27 expected the measure to be effective (2 very effective, 13 somewhat effective). 4 of 27 stakeholders expected it to be ineffective (3 very ineffective, 1 somewhat ineffective). Finally, 8 of 27 stakeholders were neutral (5) or did not know (3). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it somewhat effective, 1 considered it somewhat ineffective, while 1 out of 3 replied don't know or did not answer.

In relation to national authorities, 5 of 12 expected the measure to be effective – 2 very effective (FR, LV-1) and 3 somewhat effective (CH and 2 others). 1 of 12 stakeholders expected it to be somewhat ineffective (IE). Finally, 6 of 12 stakeholders were neutral (3) or did not know (3).

In relation to 'Other' stakeholders, 6 of 10 expected the measure to be effective (1 very effective, 5 somewhat effective). 2 of 10 stakeholders expected it to be very ineffective. Finally, 2 of 10 stakeholders were neutral (1) or did not know (1).

Figure 15-35 In your view, how effective do you expect policy measure 12 to be in tackling Problem 2 (i.e., uneven access of operators to indispensable MDMS platforms)?



15.13.4.2.8 Policy Measure 13: Applies to all MDMS: respect principles on distribution fees and cannot impose highly restrictive clauses (exclusivity clauses, marketing clauses and other technical restrictions) when entering into commercial agreements with transport operators

Stakeholders were asked to indicate how effective they expect Policy Measure 13 to be in tackling Problem 2 (see Figure 25).

Across all stakeholder groups, 34 of 69 expected the measure to be very or somewhat effective (16 very effective, 18 somewhat effective). Furthermore, 22 of 69 stakeholders expected it to be ineffective (17 very ineffective, 5 somewhat ineffective). Finally, 13 of 69 stakeholders were neutral (5) or did not know (8).

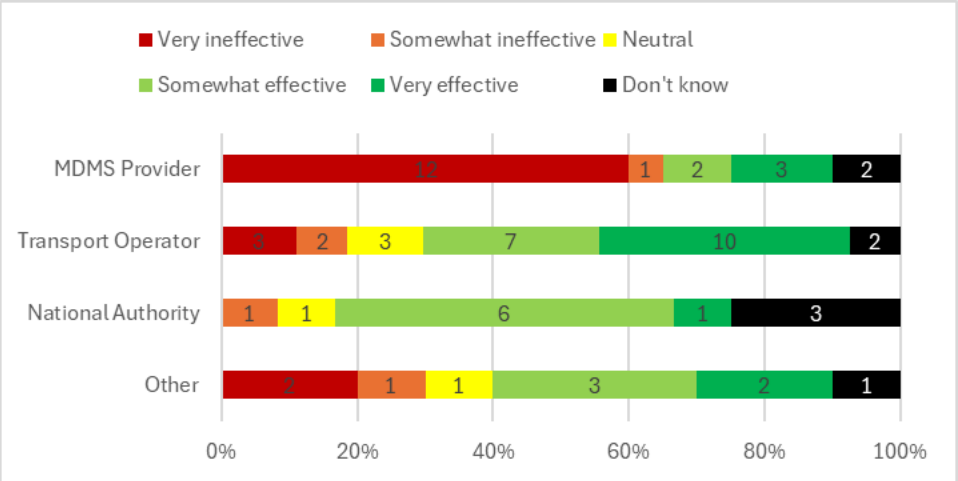
In relation to MDMS providers, 5 of 20 expected the measure to be effective (3 very effective, 2 somewhat effective). 13 of 20 stakeholders expected it to be ineffective (12 very ineffective, 1 somewhat ineffective). Finally, 2 of 20 did not know. Focusing on vertically integrated MDMS providers, 1 out of 5 of vertically integrated MDMS considered it somewhat effective,1 out of 5 considered it neutral, 2 out of 5 considered it very ineffective, while 1 out of 5 replied don't know or did not answer.

In relation to transport operators, 17 of 27 expected the measure to be effective (10 very effective, 7 somewhat effective). 5 of 27 stakeholders expected it to be ineffective (3 very ineffective, 2 somewhat ineffective). Finally, 5 of 27 stakeholders were neutral (3) or did not know (2). Focusing on new entrant rail operators, 1 out of 3 of new entrant rail operators considered it somewhat effective, 1 out of 3 considered it somewhat ineffective, while 1 out of 3 replied don't know or did not answer.

In relation to national authorities, 7 of 12 expected the measure to be effective – 1 very effective (FR) and 6 somewhat effective (PT, CH, LV-2, LV-1, and NO). 1 of 12 stakeholder expected it to be somewhat ineffective (IE). Finally, 4 of 12 stakeholders were neutral (1) or did not know (3).

In relation to 'Other' stakeholders, 5 of 10 expected the measure to be effective (2 very effective, 3 somewhat effective). 3 of 10 stakeholders expected it to be ineffective (2 very ineffective, 1 somewhat ineffective). Finally, 2 of 10 stakeholders were neutral (1) or did not know (1).

Figure 15-36 In your view, how effective do you expect policy measure 13 to be in tackling Problem 2 (i.e., uneven access of operators to indispensable MDMS platforms)?



15.13.4.2.9 Policy Measure 16: Applies to all vertically integrated MDMS with significant market power: obligation to enter into commercial agreements with willing transport operators (active within the geographical and modal scope covered by the MDMS) to enable re-linking and/or the sale of tickets (extension of the parent carrier provisions)

Stakeholders were asked to indicate how effective they expect Policy Measure 16 to be in tackling Problem 2 (see Figure 26).

Across all stakeholder groups, 22 of 68 expected it to be very or somewhat effective (10 very effective, 12 somewhat effective). Furthermore, 20 of 68 stakeholders expected it to be ineffective (19 very ineffective, 1 somewhat ineffective). Finally, 26 of 68 stakeholders were neutral (17) or did not know (9).

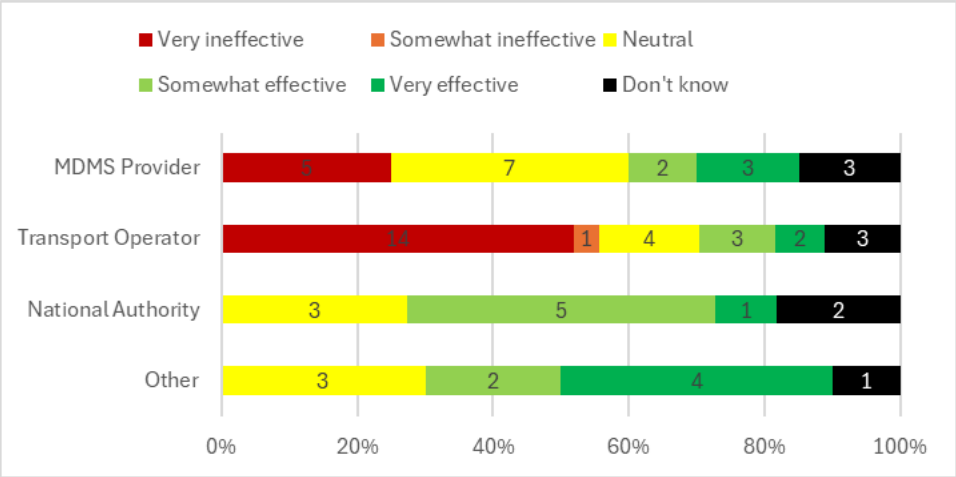
In relation to MDMS providers, 5 of 20 expected it to be very or somewhat effective (3 very effective, 2 somewhat effective). 5 of 20 stakeholders expected it to be very ineffective. Finally, 10 of 20 stakeholders were neutral (7) or did not know (3). Focusing on vertically integrated MDMS providers, 4 out of 5 vertically integrated MDMS providers considered it very ineffective, while 1 out of 5 replied don't know or did not answer.

In relation to transport operators, 5 of 27 expected it to be very or somewhat effective (2 very effective, 3 somewhat effective). 15 of 27 stakeholders expected it to be ineffective (14 very ineffective, 1 somewhat ineffective). Finally, 7 of 27 stakeholders were neutral (4) or did not know (3). Focusing on new entrant rail operators, 2 out of 3 of new entrant rail operators considered it somewhat ineffective, while 1 out of 3 replied don't know or did not answer.

In relation to national authorities, 6 of 11 expected it to be very or somewhat effective – 1 very effective (FR) and 5 somewhat effective (CH, LV-2, LV-1, NO). 5 of 11 stakeholders were neutral (3) or did not know (2).

In relation to 'Other' stakeholders, 6 of 10 expected it to be very or somewhat effective (4 very effective, 2 somewhat effective). 4 of 10 stakeholders were neutral (3) or did not know (1).

Figure 15-37 In your view, how effective do you expect policy measure 16 to be in tackling Problem 2 (i.e., uneven access of operators to indispensable MDMS platforms)?



15.13.4.2.10 Policy Measure 18: Applies to all vertically integrated MDMS with significant market power: obligation to unbundle its distribution system from the systems of its parent operator

Stakeholders were asked to indicate how effective they expect Policy Measure 18 to be in tackling Problem 2 (see Figure 27).

Across all stakeholder groups, 22 of 69 expected it to be very or somewhat effective (10 very effective, 12 somewhat effective). Furthermore, 20 of 69 stakeholders expected it to be ineffective (19 very ineffective, 1 somewhat ineffective). Finally, 26 of 69 stakeholders were neutral (17) or did not know (9).

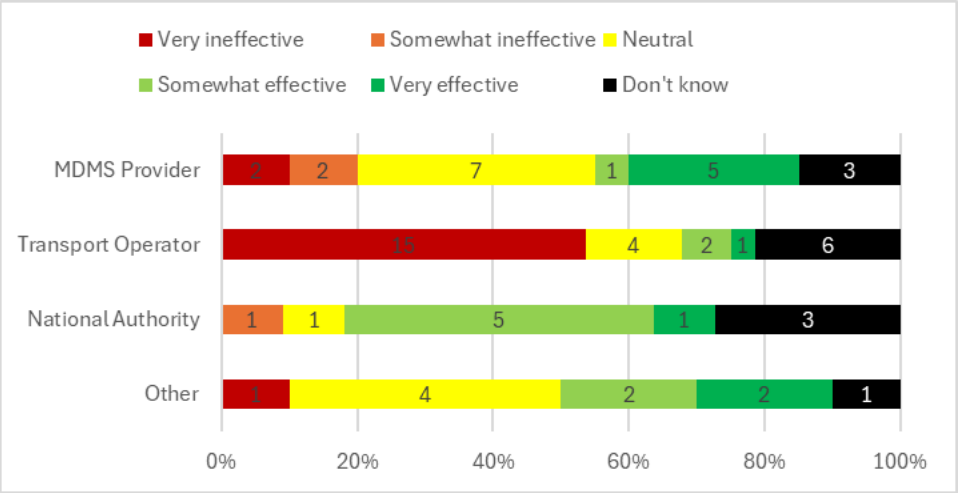
In relation to MDMS providers, 6 of 20 expected it to be very or somewhat effective (5 very effective, 1 somewhat effective). 4 of 20 stakeholders expected it to be ineffective (2 very ineffective, 2 somewhat ineffective). Finally, 10 of 20 stakeholders were neutral (7) or did not know (3). Focusing on verticlly integrated MDMS providers, 4 out of 5 vertically integrated MDMS providers considered it very ineffective, while 1 out of 5 replied don't know or did not answer.

In relation to transport operators, 3 of 28 expected it to be very or somewhat effective (1 very effective, 2 somewhat effective). 15 of 28 stakeholders expected it to be very ineffective. Finally, 10 of 28 stakeholders were neutral (4) or did not know (6). Focusing on new entrant rail operators, 2 out of 3 of new entrant rail operators considered it somewhat ineffective, while 1 out of 3 replied don't know or did not answer.

In relation to national authorities, 6 of 11 expected it to be very or somewhat effective – 1 very effective (FR) and 5 somewhat effective (PT, CH, LV-2, LV-1 and NO). 1 of 11 stakeholder expected it to be somewhat ineffective. Finally, 4 of 11 stakeholders were neutral (1) or did not know (3).

In relation to 'Other' stakeholders, 4 of 10 expected it to be very or somewhat effective (2 very effective, 2 somewhat effective). 1 of 10 stakeholder expected it to be very ineffective. Finally, 5 of 10 stakeholders were neutral (4) or did not know (1).

In your view, how effective do you expect policy measure 18 to be in tackling Problem 2 (i.e., uneven access of operators to indispensable MDMS platforms)?



15.13.4.2.11 Please elaborate on your responses to the effectiveness of the policy measures identified in Table 3 in tackling Problem 2.

Transport operators largely had criticisms around the relevance and effectiveness of the policy measures in addressing Problem 2.

Airlines generally doubted the effectiveness of the proposed policy measures in addressing Problem 2. Five airlines (including Lufthansa Group), noted that the measures are difficult to assess without more detail and seem to be insufficient to resolve the core problem. One airline added that extending the CoC is "the best approach to avoid situations of distorted information" but wanted that obliging airlines to provide full content could be detrimental to airlines. Another airline called for preserving and extending the CRS code protections and stressed the importance of strong enforcement via national authorities. Another airline noted that the extension of CRS CoC neutral display obligation and fair treatment of transport operators to dominant B2C MDMS is "mandatory".

Airline associations shared similar views. One association argued that the central principle of non-discrimination must remain, emphasising that "an MDMS cannot refuse to distribute an airline that requires it," and suggests the policy measures lack clarity regarding when airlines are in or out of scope. Airlines for Europe similarly stated that it is difficult to assess how the measures would work in practice and they "do not seem to address issues with limited or distorted access to information for consumers".

Rail and public transport operators also considered the proposed policy measures for Problem 1 to be either ineffective or disproportionate, particularly around the proposals to mandate the unbundling of distribution systems from vertically integrated operators. Deutsche Bahn, VDV and another vertically integrated, incumbent rail operator, argued that this "unbundling" is unjustified and would weaken rail's competitiveness versus air travel. SJ AB similarly stated that the measures "significantly infringe on the commercial contractual freedom that should characterise an open market". Deutsche Bahn also emphasised that introducing new rules without taking national specificities into account could be counterproductive and risk undermining progress already achieved. SNCF called the measures "globally ineffective", arguing that they add to an already dense regulatory framework and fail to address core issues like "interoperability between operators' systems". Czech Railways mentioned that creating different obligations for platforms based on size could lead to imbalance and risks of abuse.

Rail and public transport associations were also critical of the policy measures in relation to Problem 2, particularly concerning unbundling of distribution systems and obligations on vertically integrated MDMS. VDV advocates for a "light regulatory approach" based on voluntary cooperation rather than mandated structural changes, which it considers disproportionate and harmful to commercial freedom. UITP similarly warns that unbundling and certain obligations risk undermining the role of public transport authorities and operators, who must retain control over their ticketing, distribution, and pricing, particularly for public service obligations. They caution that excessive reliance on private platforms could distort consumer choice and undermine public policy

goals such as affordability and sustainability. CER supports this position, arguing that enforced unbundling would weaken rail's competitiveness versus air travel, imposing additional burdens without addressing core issues like interoperability.

Conversely, ALLRAIL supported targeted intervention where it applies only to dominant vertically integrated MDMS, seeing the potential for unbundling to foster fair competition. They argue, however, that it must be accompanied by the dissolution of parallel integrated platforms to avoid market fragmentation and undermine emerging open-access initiatives. ALLRAIL suggested that the proposed policy measures could improve effectiveness and enhance the visibility of both dominant and new entrant rail MDMS platforms in the EU, ultimately benefiting consumers through access to more ticket choices and lower prices. However, a major ferry operator stressed that limitations in system and technical standards across Member States might hinder its effectiveness.

MDMS providers offered varied perspectives on the effectiveness of the proposed policy measures in addressing Problem 2. Some respondents questioned the clear advantages of certain measures and argued that uneven access to essential MDMS platforms is not the core issue. Instead, they emphasised that policy efforts should focus on ensuring large transport operators, particularly airlines, provide reliable and non-discriminatory API access.

Responses from *B2C MDMS providers* showed scepticism about the relevance and effectiveness of the policy measures in addressing Problem 2. Skyscanner argued that the measures misdiagnose the problem by placing obligations on MDMS rather than addressing "the unwillingness of airlines to share their full content on fair terms". Another B2C MDMS provider similarly argued that the problem is not one of distorted or limited consumer access, but of transport operators failing to give MDMS fair access to their offers. Dohop questioned why certain measures (specifically PM 17) were not included, and stressed the need to ensure FRAND terms for data access.

CRSs also generally doubted the relevance and clarity of the proposed policy measures in targeting Problem 2. One CRS rejected the existence of Problem 2 and considered the related measures irrelevant or outdated, particularly questioning the continued need for the CRS Code and arguing that response time issues like with airlines, not MDMS platforms. Another CRS similarly criticised the lack of clarity in key concepts such as "indispensable MDMS" and terms in measures 12 and 13, criticising vague terms such as "unfair conditions" and warning that obligations on vertically integrated platforms could backfire by reinforcing their dominance. A third CRS noted possible benefits for operators if indispensable MDMS are obliged to include their offers, but questioned the meaning of "unbundling", asserting that such measure would better address Problem 3 rather than Problem 1.

OTAs were also critical of the proposed policy measures in addressing Problem 2. Two OTAs argued that the problem itself does not reflect market reality and therefore the policy measures do not address an actual issue. A third OTA noted that the real barrier is the refusal of large transport operators to grant access under fair conditions, suggesting that the policy measures are misdirected. Another OTA stated that some proposed measure, notably PMs 6,9, and 18) could help create fairer competition in distribution, but it warned that unclear thresholds and poorly designed mandates could instead reinforce vertically integrated MDMS, undermining independent platforms and the goal of a harmonised European ticketing framework.

Similarly, *new content aggregators also* considered the policy measures to be ineffective in addressing Problem 2, focusing instead on what they view as the actual root cause: large transport operators' unwillingness to grant fair access to their content. One new content aggregator stated that the issue likes not in MDMS limitation but in the behaviour of major operators, forcing MDMS to invest significantly to maintain a comprehensive offer display. Another new content aggregator similarly noted that the measures no not appear to address issues related to limited or distorted access to information for consumers.

MDMS associations and networks also generally noted that the issue is not limited or distorted offers by MDMS themselves, but the unwillingness of large transport operators to grant full access to their content. One tourism industry association highlighted that Policy Measures 2 and 3, which extend the CRS Code of Conduct rules on fair treatment and marketing data, can improve equal treatment and information completeness, rating PM2 as 4/5 effective and PM11, targeting vertically integrated MDMS with significant market power, as 5/5. However, they noted that in order for PM3 to be effective, strict enforcement and monitoring would be needed, as "dominant players may still find ways to subtly influence booking behaviour". EU Travel Tech cautioned that PM16, obliging vertically integrated MDMS to resell competitors' tickets, could reinforce incumbents' dominance and harm competition, while PM18, requiring unbundling, could facilitate entry for independent

MDMS. ADN Mobilites similarly argued that PM16 risks undermining smaller vendors and would not enhance cross-border or multimodal travel.

National authorities considered that the policy measures aimed at addressing the issue of uneven access for transport operators to indispensable MDMS platforms would be highly effective in promoting fair competition, enhancing consumer choice, and improving transparency within the transport sector. However, they also noted that the measures fall short of addressing operational complexities, particularly the risk of revenue loss for transport operators when MDMS platforms sell tickets with a markup or commission. Therefore, they stressed the need for careful implementation by building a business case for transport operators to support MDMS platforms. A few however noted, similarly to the responses provided by some transport operators and MDMS providers, the limitation in scope for PMs 9, 10, and 11, stressing that all transport operators and not only rail should be in scope and the same was noted for PM 12.

Other stakeholders such as EPF indicated that the CRS CoC in line with PMs 2 and 3 is applicable to other modes of transport and distribution channels, although specific provisions may require revision. They also noted that enforcement is key with national authorities to settle disputes in line with PM 6. The stakeholder further highlighted the need for clarity regarding PMs 10 and 11, and what is considered 'indispensable' under PM 9. The respondent additionally noted the importance of applying FRAND principles for all transport modes and MDMS platforms, irrespective of market share or turnover. Meanwhile, other stakeholders, including the EPF, claimed that the reluctance of large transport operators to provide MDMS platforms with full and fair access remains a major issue, and that it is not limited to rail but also extends to dominant airlines and airline groups.

15.13.4.3 In your view, how effective do you expect the policy measures identified in Table 3 to be in tackling Problem 3 (i.e. potential distortion of competition between regulated (CRS) and non-regulated B2B distribution channels performing similar functions to CRS)?

15.13.4.3.1 Policy measure 4: Update definition of “CRS” to apply the following CRS Code of Conduct's rules to all B2B MDMS irrespective of business model: fair treatment of subscribers, equivalent treatment of EU airlines on 3rd country B2B MDMS

Stakeholders were asked to indicate how effective they expect policy measure 4 to be in tackling Problem 3 (see Figure 40).

Across all stakeholder groups, 26 of 66 expected it to be very or somewhat effective (13 very effective, 13 somewhat effective). Furthermore, 11 of 66 stakeholders expected it to be very ineffective (1) or somewhat ineffective (10). Moreover, 29 of 66 stakeholders were neutral (4) or did not know (25).

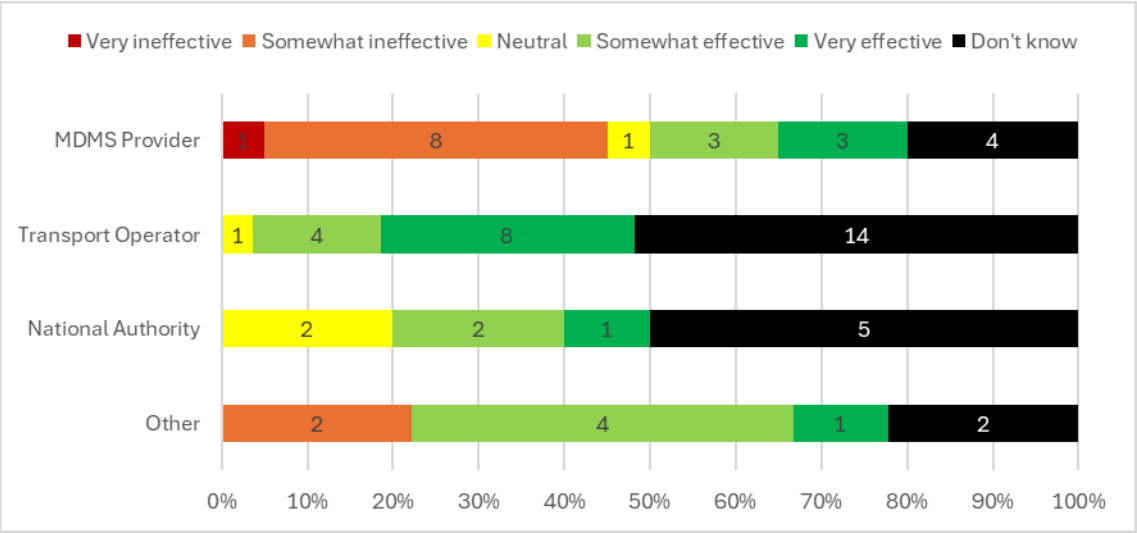
In relation to MDMS providers, 6 of 20 expected it to be very or somewhat effective (3 very effective, 3 somewhat effective). Furthermore, 9 of 20 MDMS providers expected it to be very ineffective (1) or somewhat ineffective (8). Moreover, 5 of 20 MDMS providers were neutral (1) or did not know (4).

In relation to transport operators, 12 of 28 expected it to be very or somewhat effective (8 very effective, 4 somewhat effective). Furthermore, 15 of 28 transport operators were neutral (1) or did not know (14).

In relation to national authorities, 3 of 10 expected it to be very or somewhat effective – 1 very effective (LV-2) and 2 somewhat effective (IE, NO). The majority of national authorities (7 of 10), however were neutral (2) or did not know (5).

In relation to ‘Other’ stakeholders, 5 of 9 expected it to be very or somewhat effective (1 very effective, 4 somewhat effective). Furthermore, 2 of 9 ‘Other’ stakeholders expected it to be somewhat ineffective. Moreover, 2 of 9 ‘Other’ stakeholders did not know.

Figure 15-38 In your view, how effective do you expect policy measure 4 to be in tackling Problem 3 (i.e. limited and distorted information and access to tickets for consumers on MDMS)?



15.13.4.3.2 Policy measure 5: Remove provisions from CRS Code of Conduct on data protection which are no longer necessary due to GDPR

Stakeholders were asked to indicate how effective they expect policy measure 5 to be in tackling Problem 3 (see Figure 41).

Across all stakeholder groups, 9 of 66 expected it to be very or somewhat effective (2 very effective, 7 somewhat effective). Furthermore, 10 of 66 stakeholders expected it to be ineffective (9 very ineffective, 1 somewhat ineffective). Moreover, 47 of 66 stakeholders were neutral (22) or did not know (25).

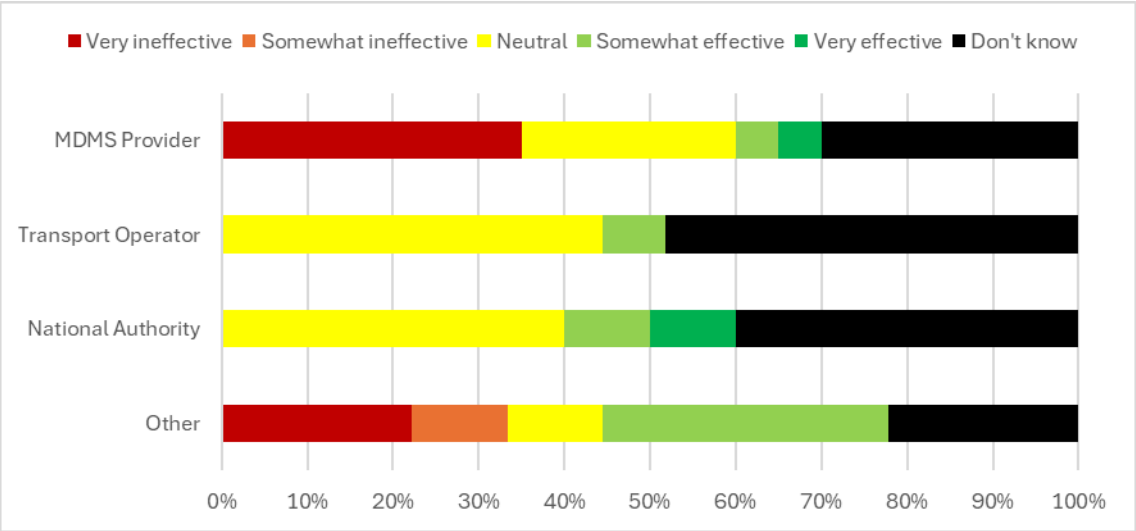
In relation to MDMS providers, 2 of 20 expected it to be very or somewhat effective (1 very effective, 1 somewhat effective). Furthermore, 7 of 20 MDMS providers expected it to be very ineffective. Moreover, 11 of 20 MDMS providers were neutral (5) or did not know (6).

In relation to transport operators, 2 of 28 expected it to be somewhat effective. Furthermore, 25 of 28 transport operators were neutral (12) or did not know (13).

In relation to national authorities, 2 of 10 expected it to be very or somewhat effective – 1 very effective (LV-2) and 1 somewhat effective (PT). However, 8 of 10 national authorities were neutral (4) or did not know (4).

In relation to 'Other' stakeholders, 3 of 8 expected it to be somewhat effective. Furthermore, 3 of 8 'Other' stakeholders expected it to be ineffective (2 very ineffective, 1 somewhat ineffective). Moreover, 3 of 8 'Other' stakeholders were neutral (1) or did not know (2).

Figure 15-39 In your view, how effective do you expect policy measure 5 to be in tackling Problem 3 (i.e, potential distortion of competition between regulated (CRS) and non-regulated B2B distribution channels performing similar functions to CRS)



15.13.4.3.3 Please elaborate on your responses to the effectiveness of the policy measures identified in Table 3 in tackling Problem 3.

Among **transport operators**, only airlines commented on the effectiveness of the policy measures in tackling Problem 3. They strongly agree that the CRS CoC neutral display obligation and fair treatment requirements should be extended to dominant B2B MDMS to reflect technological developments in the field. They commented that these requirements should be mandatory and legally binding, with one also emphasising the need for national authorities to enforce these measures. One airline argued that in addition to extending the regulation to B2B MDMS, the CoC should also be extended to B2C MDMS providers like OTAs and MSEs. The same airline was also of the opinion that regulation would be unable to ensure effective enforcement and supported instead the use of private enforcement (e.g., through private litigation).

MDMS providers presented very mixed views on the topic.

B2C MDMS providers shared mixed views. One B2C MDMS provider argued that the core issue is the uneven application of Regulation 80/2009, which allows large transport operators, particularly airlines, to impose higher fees or restrict content on neutral channels while favouring less efficient systems. They considered this to distort competition and increase costs for MDMS and consumers. In contrast, Skyscanner stated that Problem 3 does not reflect competitive challenges faced by B2C MDMS in air ticket distribution and argued that existing EU rules already ensure fair treatment of intermediaries and transport operators, making additional measures largely unnecessary.

Among *CRSs*, one stated that policy measure 4 would be effective only if applied to rail rather than air. Another CRS agreed that this measure could address Problem 3 but argued that the CRS Code itself is no longer needed; if retained, they noted that it should apply to all B2B MDMS and potentially to operators as well. This same stakeholder also noted that clarifying CRS roles as data controllers could help smaller agencies navigate distribution chain, although removing GDPR provisions would not meaningfully address distortions. A third CRS supported the objective of creating a level playing field for B2B MDMS but recommended a full repeal of the CRS Code of Conduct. They disagreed however that the CRS Code of Conduct provisions listed in policy measure 4 are necessary in “today’s market context”; they noted that “fair treatment of subscribers is already guaranteed by other legislation”.

New content aggregators also provided mixed views, highlighting issues related to access and competition in B2B distribution channels. One new content aggregator emphasised that large transport operators exploit uneven application of Regulation 80/2009 to restrict access and impose higher charges on neutral channels. Another new content aggregator focused on the CRS Code of Conduct, highlighting that its protections should be maintained and expanded to prevent discrimination and bias, with effective enforcement through national authorities.

MDMS associations and networks expressed some concerns about the policy measures. SRF, FTO, Welcome Travel Group and ECTAA highlighted that large transport operators, particularly airlines, exploit uneven application of Regulation 80/2009 by restricting content on neutral channels or imposing higher charges, thereby forcing MDMS providers into less efficient systems at additional cost. EU Travel Tech noted that they "do not believe that the application of a threshold, including the neutral display provision, would be an adequate solution to the challenges currently faced for the application of the current Code of Conduct". They noted that applying such thresholds could exclude smaller but strategically significant players and create enforcement complexities, potentially allowing circumvention by multi-channel operators.

National authorities did not comment on this question.

One **other stakeholder**, the EPF, commented on the effectiveness of the measures in addressing Problem 3. In their view, the principles underlying the CRS CoC are relevant to other modes and distribution channels and should therefore be extended to ensure non-discriminatory treatment across the transport spectrum.

15.13.4.4 In your view, are there any policy measures that are missing from Table 3 that have the potential to help to tackle the identified problem drivers? If 'Yes', please propose the policy measures and note the specific objectives that they will help to deliver.

A number of suggestions were made by **transport operators.** One incumbent rail operator (SJ AB) argued that there is a need for MDMS platforms to act with more transparency. They stated that MDMS providers should take more responsibility for how they present the content of rail operators. This stakeholder added that "they should proactively inform both passengers and rail operators if their offers are included in any multimodal journeys that the rail operator has not explicitly consented to" and that this would ensure transparency and trust. Airlines also provided a number of alternative policy measures. They call for regulatory oversight of online travel agencies (OTAs), citing practices like customer data swapping and fee misinformation. They argue that the current CRS CoC has not curbed CRS dominance, which continues to inflate consumer prices and stifle innovation, and suggest that PM 12, targeting MDMS with significant market power, would be more effectively applied to issues in air distribution (Problem 3) due to long-standing restrictive practices like exclusivity clauses and parity obligations. Airlines also advocate for a general ban on discriminatory or biased behaviour by MDMS platforms, stronger rules on neutral display and equal access, and prohibitions on unfair contract terms, such as unjustified loyalty incentives and mandatory technology use. To ensure effective enforcement, they recommend enabling private legal action and allowing the European Commission to intervene in relevant court cases.

MDMS providers proposed a comprehensive set of alternative policy measures to ensure fairer competition and reduce market barriers, particularly for smaller players. Both B2B and B2C platforms called for the definition of common data and ticketing standards to lower operational costs, simplification and harmonisation of cross-border ticket conditions, and the establishment of minimal standard commercial agreements that cannot be rejected by dominant market players. Another key concern, cited by 15 MDMS providers and relevant associations (including BT4Europe, ECTAA, EU Travel Tech, FTO, and Welcome Travel Group SpA [associations / networks], Skyscanner and SRF [B2C MDMS providers]) is the limited willingness of dominant operators to offer full content on fair terms – an issue that extends beyond rail to include major airline groups. To address this, seven MDMS providers and relevant associations (including ADN Mobilites, Dohop, EU Travel Tech [tourism industry association] and Skyscanner) advocated for the reintroduction of FRAND principles as a central legal standard in the MDMS regulation. FRAND would provide legal clarity, reciprocal protections, and a level playing field in distribution agreements, especially between dominant operators and smaller MDMS.

These stakeholders also urged the Commission to issue specific FRAND guidelines adapted to different transport modes and market contexts. Further, they highlight the need to extend obligations beyond rail to include the air and coach markets and stress the importance of robust enforcement mechanisms, including clearly defined complaint procedures, timelines, and expanded roles for national dispute resolution bodies. They argue that specific obligations should also require legal separation between the transport and distribution arms of dominant operators, and ensure independent vendors have FRAND-based access to all real-time operational data, fare structures, and customer service tools, including those needed for journey continuation and compensation claims.

National authorities did not respond to this question.

Other stakeholders, including the BEUC and the EPF, also pointed to the need for unfair practices by both transport operators and platforms to be more strictly identified and regulated. This includes practices that nudge consumers to purchase tickets quickly, 'dark patterns' and hidden fees.

15.13.5 Other potential impacts

15.13.5.1 In your view, would the implementation of any of the measures have a disproportionate impact on SMEs (e.g. on the basis of a comparison of expected net costs per employee/revenue)?) If 'Yes', please indicate which measures would lead to such disproportionate impacts, elaborate on the nature and likely extent of these costs.

Four **transport operators**, including an airline, an incumbent rail operator, a municipal public transport operator, and a major ferry operator, stated that they would expect negative impact on SMEs. This is due to the fact that SMEs do not have the same human and financial resources to comply with complex regulatory frameworks and the costs that they may introduce.

Three of 20 MDMS providers that responded to this question indicated that they would not expect a disproportionate impact on SMEs. An association mainly representing B2C platforms highlighted that this is due to proposed measures that aim to address current disproportionate burden by SMEs due to limited access, non-transparent fees, and legal asymmetries (e.g., PMs 11, 14, 17 and 18). These measures would therefore reduce barriers for SMEs, not increase them.

Two of 20 MDMS providers (trade / industry associations) expected the implementation of any of the measures to have a disproportionate impact on SMEs. One emphasised that improved use of MDMS (via flexible propositions and lower costs) would increase usage, reduce travel costs, and support public policy goals like accessibility and affordability, particularly by enabling targeted subsidies and reducing car ownership. The second stakeholder warned that PM 16 could disproportionately harm SMEs, especially independent MDMS, by placing heavier burdens on them relative to larger players.

The remaining MDMS providers indicated they "don't know" what impact the PMs may have in this context.

National authorities and **other stakeholders** did not provide input to this question.

15.13.5.2 How effective would addressing each of the three problems (referenced again at the top of this page) be for improving the ease of entry and access to the MDMS market for SMEs?

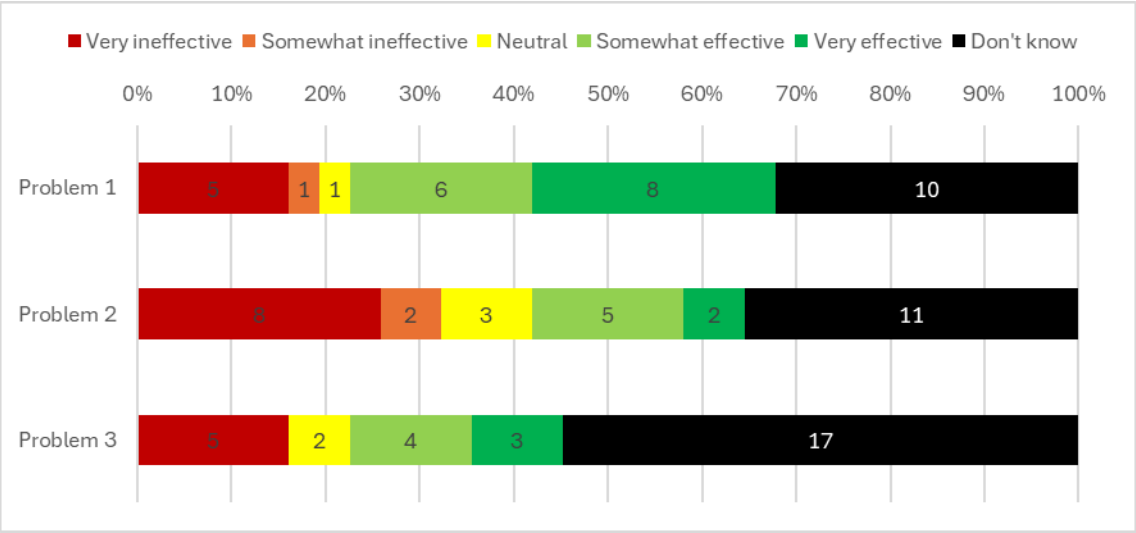
Stakeholders were asked to indicate how effective they expect addressing each of the three problems to be for improving ease of entry and access to the MDMS market for SMEs (see Figure 42).

In relation to addressing Problem 1 (Limited and distorted information and access to tickets for consumers on MDMS, in particular for rail), 14 of 31 expected it to be very or somewhat effective (8 very effective, 6 somewhat effective). Furthermore, 6 of 31 stakeholders expected it to be ineffective (5 very ineffective, 1 somewhat ineffective). Moreover, 11 of 31 stakeholders were neutral (1) or did not know (10).

In relation to addressing Problem 2 (Uneven access of operators to indispensable MDMS platforms), 7 of 31 expected it to be very or somewhat effective (2 very effective, 5 somewhat effective). Furthermore, 10 of 31 stakeholders expected it to be ineffective (8 very ineffective, 2 somewhat ineffective). Moreover, 14 of 31 stakeholders were neutral (3) or did not know (11).

In relation to addressing Problem 3 (Potential distortion of competition between regulated (CRS) and non-regulated B2B distribution channels performing similar functions to CRS), 7 of 31 expected it to be very or somewhat effective (3 very effective, 4 somewhat effective). Furthermore, 5 of 31 stakeholders expected it to be very ineffective. Moreover, 19 of 31 stakeholders were neutral (2) or did not know (17).

Figure 15-40 How effective would addressing each of the three problems (referenced again at the top of this page) be for improving the ease of entry and access to the MDMS market for SMEs?



15.13.5.3 In your view, would the implementation of any of the measures affect citizens differently, depending on their age (e.g. have a more significant impact on the young or the elderly)? If 'Yes', please indicate which measures would affect which of the respective age-groups of citizens differently? Please elaborate on the nature and likely extent of these impacts.

Nine of 21 **transport operators** who responded to this question indicated that the measures would likely affect citizens differently based on age. ALLRAIL expected that young passengers, who are more digitally adept, would benefit more immediately from enhanced MDMS platforms through better visibility of options and pricing. However, ALLRAIL, as well as a major ferry operator, a municipal transport operator, two railway operators, and a rail sector association, agreed that elderly citizens and those lacking digital literacy could be disproportionately disadvantaged if physical ticketing options become economically unsustainable due to digital prioritisation.

Four of 21 transport operators did not expect the measures to affect citizens differently based on age. Three of these stakeholders were from the aviation sector, while one was an association representing public transport and rail freight companies. They did not elaborate on their response or provide a reason why.

The remaining transport operators indicated they "don't know" in response to this question.

Five of 14 **MDMS providers** who responded to this question, including a B2C online travel agency, an independent B2B MDMS provider, an independent B2C MDMS provider, and two relevant sector associations, expressed similar views as transport operators, indicating that younger users would benefit more from the proposed measures due to digital literacy, but also because they travel more, have less time constraints, and want to travel sustainably. While they also reflected on more elderly travellers being less digitally savvy, they indicated that all users would benefit from the simplification of ticketing options and the possibility of cheaper options being made available.

Three of 14 MDMS providers did not expect the measures to affect citizens differently based on age. They did not elaborate on their responses.

The remaining MDMS providers indicated they "don't know" in response to this question.

Three of 12 **national authorities** who responded to this question indicated that the measures would likely affect citizens differently based on age. These stakeholders, namely Helsinki Region Transport, National Transport Authority of Ireland, and the Norwegian Railway Directorate expressed concern over the need to retain non-digital means of booking travel due to the importance they play for more elderly individuals.

Two of 12 national authorities, including IMT and the Road Transport Association, did not expect the measures to affect citizens differently based on age. Five of 12 indicated they "don't know" in response to this question.

Finally, 6 of 8 **other stakeholders** who responded to this question, including the BEUC, the EPF, POLIS, T&E, Verbraucherzentrale Bundesverband, and one other European association, indicated that the measures would

likely affect citizens differently based on age. They largely agreed that digital solutions for booking and ticketing are a positive step but emphasised the need for continued in-person support and ticketing in stations to assist consumers, whether that be elderly individuals or people travelling to new countries/stations. Furthermore, a European association highlighted the need for accessibility features on MDMS platforms such as larger fonts, voice interfaces, simplified flows and digital support.

15.13.5.4 How effective would addressing each of the three problems be for improving the following in relation to the impacts on consumers and households?

15.13.5.4.1 Addressing Problem 1 for improving the impacts on consumers and households

Stakeholders were asked to indicate how effective they expect addressing Problem 1 would be for improving the impacts on consumers and households (see Figure 43).

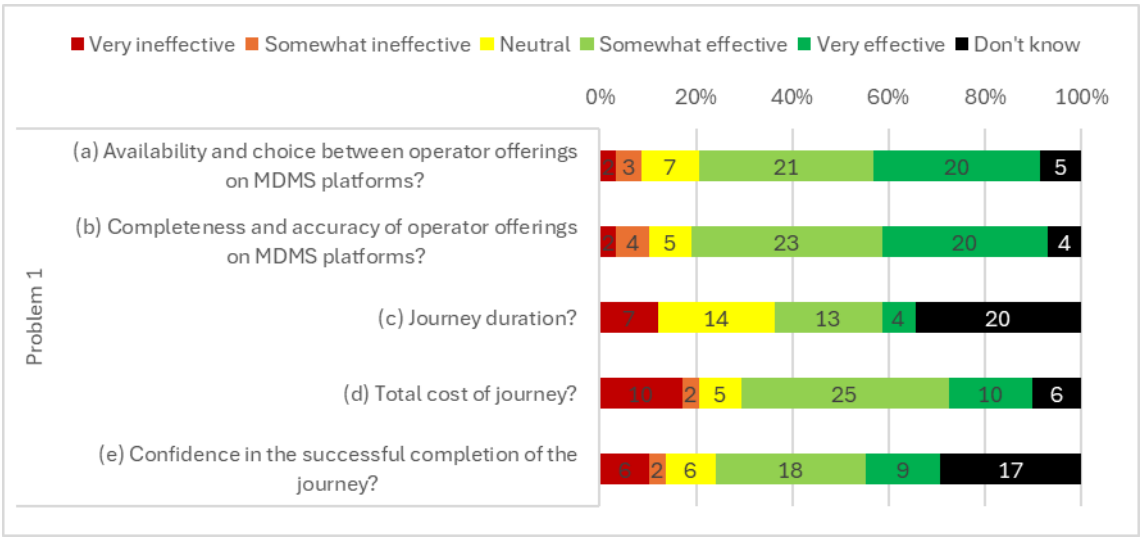
Stakeholders were asked to indicate how effective they expect addressing Problem 1 would be for improving impacts on consumers and households (see Figure 43). In relation to availability and choice between operators offering on MDMS platforms, 41 of 58 expected it to be very or somewhat effective (20 very effective, 22 somewhat effective). Furthermore, 5 of 58 stakeholders expected it to be ineffective (2 very ineffective, 3 somewhat ineffective). Moreover, 12 of 58 stakeholders were neutral (7) or did not know (5).

In relation to completeness and accuracy of operator offerings on MDMS platforms, 43 of 58 expected it to be very or somewhat effective (20 very effective, 23 somewhat effective). Furthermore, 6 of 58 stakeholders expected it to be ineffective (2 very ineffective, 4 somewhat ineffective). Moreover, 9 of 58 stakeholders were neutral (5) or did not know (4). In relation to journey duration, 17 of 58 expected it to be very or somewhat effective (4 very effective, 13 somewhat effective). Furthermore, 7 of 58 stakeholders expected it to be very ineffective. Moreover, 34 of 58 stakeholders were neutral (14) or did not know (20).

In relation to total cost of journey, 35 of 58 expected it to be very or somewhat effective (10 very effective, 25 somewhat effective). Furthermore, 12 of 58 stakeholders expected it to be ineffective (10 very ineffective, 2 somewhat ineffective). Moreover, 11 of 58 stakeholders were neutral (5) or did not know (6). In relation to confidence in the successful completion of the journey, 27 of 58 expected it to be very or somewhat effective (9 very effective, 18 somewhat effective). Furthermore, 8 of 58 stakeholders expected it to be ineffective (6 very ineffective, 2 somewhat ineffective). Moreover, 23 of 58 stakeholders were neutral (6) or did not know (17).

Among the options, addressing availability and choice between operators on MDMS platforms is seen as most effective, with 14 stakeholders expecting it to be very or somewhat effective. This is higher compared to other problems, indicating that improving availability and choice is viewed as a key step to ease market entry for SMEs.

Figure 15-41 How effective would addressing Problem 1 be for improving the impacts on consumers and households?



15.13.5.4.2Addressing Problem 2 for improving the impacts on consumers and households

Stakeholders were asked to indicate how effective they expect addressing Problem 2 would be for improving the impacts on consumers and households (see Figure 44).

In relation to availability and choice between operators offering on MDMS platforms, 25 of 57 expected it to be very or somewhat effective (9 very effective, 16 somewhat effective). Furthermore, 12 of 57 stakeholders expected it to be ineffective (6 very ineffective, 6 somewhat ineffective). Moreover, 20 of 57 stakeholders were neutral (15) or did not know (5).

In relation to completeness and accuracy of operator offerings on MDMS platforms, 27 of 57 expected it to be very or somewhat effective (6 very effective, 21 somewhat effective). Furthermore, 9 of 57 stakeholders expected it to be ineffective (4 very ineffective, 5 somewhat ineffective). Moreover, 21 of 57 stakeholders were neutral (17) or did not know (4).

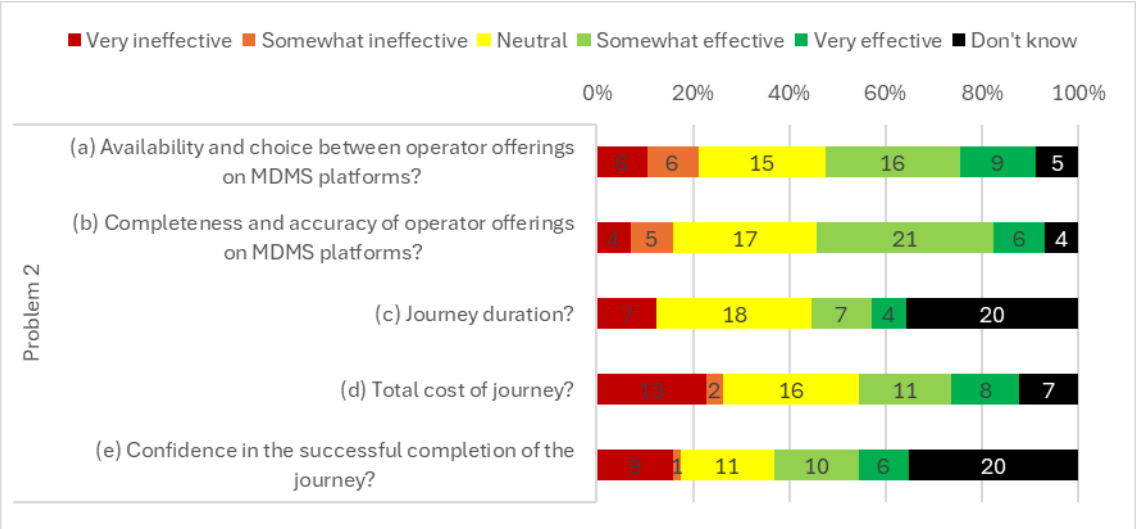
In relation to journey duration, 11 of 56 expected it to be very or somewhat effective (4 very effective, 7 somewhat effective). Furthermore, 7 of 56 stakeholders expected it to be very ineffective. Moreover, 38 of 56 stakeholders were neutral (18) or did not know (20).

In relation to total cost of journey, 19 of 57 expected it to be very or somewhat effective (8 very effective, 11 somewhat effective). Furthermore, 15 of 57 stakeholders expected it to be ineffective (13 very ineffective, 2 somewhat ineffective). Moreover, 23 of 57 stakeholders were neutral (16) or did not know (7).

In relation to confidence in the successful completion of the journey, 16 of 57 expected it to be very or somewhat effective (6 very effective, 10 somewhat effective). Furthermore, 10 of 57 stakeholders expected it to be ineffective (9 very ineffective, 1 somewhat ineffective). Moreover, 31 of 57 stakeholders were neutral (11) or did not know (20).

For problem 2, the highest expectation of effectiveness lies in addressing **availability and choice** as well, with 7 stakeholders considering it very or somewhat effective. However, a notable number also expect high ineffectiveness, suggesting mixed views on how well problem 2 can be tackled to improve market access.

Figure 15-42 How effective would addressing Problem 2 be for improving the impacts on consumers and households?



15.13.5.4.3Addressing Problem 3 for improving the impacts on consumers and households

Stakeholders were asked to indicate how effective they expect addressing Problem 3 would be for improving the impacts on consumers and households (see Figure 45).

In relation to availability and choice between operators offering on MDMS platforms, 21 of 56 expected it to be very or somewhat effective (13 very effective, 8 somewhat effective). Furthermore, 4 of 56 stakeholders expected it to be ineffective (3 very ineffective, 1 somewhat ineffective). Moreover, 31 of 56 stakeholders were neutral (12) or did not know (19).

In relation to completeness and accuracy of operator offerings on MDMS platforms, 25 of 56 expected it to be very or somewhat effective (13 very effective, 12 somewhat effective). Furthermore, 3 of 56 stakeholders expected it to be very ineffective. Moreover, 28 of 56 stakeholders were neutral (11) or did not know (17).

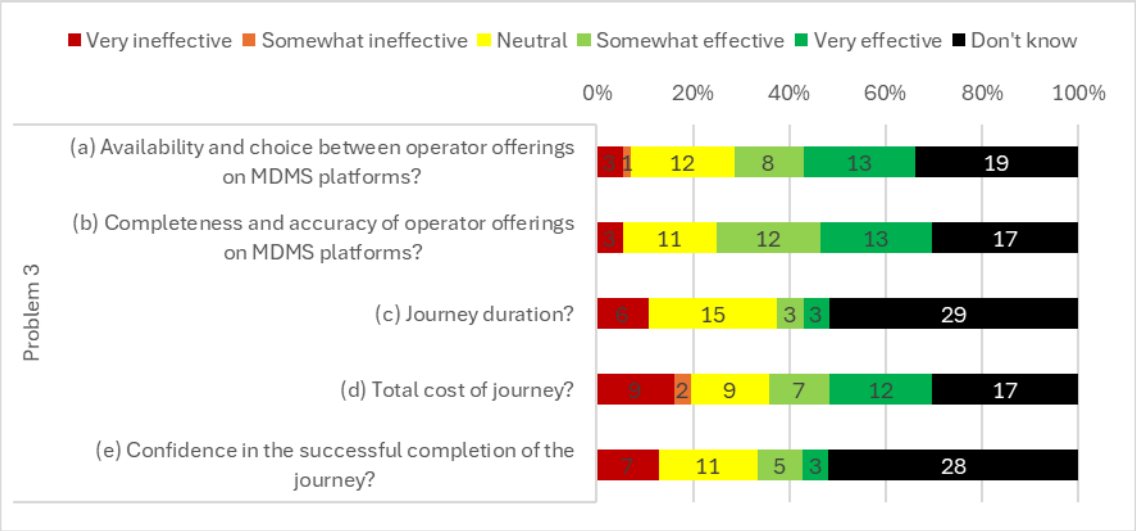
In relation to journey duration, 6 of 56 expected it to be very or somewhat effective (3 very effective, 3 somewhat effective). Furthermore, 6 of 56 stakeholders expected it to be very ineffective. Moreover, 44 of 56 stakeholders were neutral (15) or did not know (29).

In relation to total cost of journey, 19 of 56 expected it to be very or somewhat effective (12 very effective, 7 somewhat effective). Furthermore, 11 of 56 stakeholders expected it to be ineffective (9 very ineffective, 2 somewhat ineffective). Moreover, 26 of 56 stakeholders were neutral (9) or did not know (17).

In relation to confidence in the successful completion of the journey, 8 of 54 expected it to be very or somewhat effective (3 very effective, 5 somewhat effective). Furthermore, 7 of 54 stakeholders expected it to be very ineffective. Moreover, 39 of 54 stakeholders were neutral (11) or did not know (28).

Stakeholders perceive availability and choice again as the most promising area, with 7 expecting very or somewhat effectiveness. However, significant neutrality and uncertainty indicate less consensus on problem 3's impact compared to problem 1.

Figure 15-43 How effective would addressing Problem 3 be for improving the impacts on consumers and households?



15.13.5.4.4 Please indicate which measures would be particularly impactful (either positively or negatively) in this respect (for any of the problems) and elaborate on your reasoning.

Transport operators were divided on the impact of policy measures, generally favouring practical, sector-led improvements over regulation. Deutsche Bahn indicated that no policy directly improves journey confidence and warned that added obligations would increase costs and ultimately ticket prices. However, strong support from ALLRAIL, as well as a major coach and rail operator, was expressed for PMs 16 and 18, as these were seen as key to improving availability, visibility, and competition on MDMS platforms by ensuring access for independent operators and separating retail from incumbent interests. These were linked to shorter journey times, lower prices, and increased trust. On the other hand, an airline opposed PMs 11 and 16 for air travel, arguing that they would distort market dynamics and harm investment. The CRS CoC was noted as beneficial, by two airlines, in improving content accuracy, provided airlines retain control over commercial access.

MDMS providers and associated stakeholders, including four tourism industry associations (ECTAA, FTO, SRF, Welcome Travel Group SpA) as well as a B2C travel agency and a B2B MDMS provider, all emphasised the need to address distortions of competition between regulated CRS and unregulated MDMS environments, where dominant operators restrict access to content. Measures like PMs 11, 14, 17 and 18 were seen as especially impactful, by an independent B2C MDMS and an industry association, in ensuring fair access, enabling contract obligations between operators and MDMS, and promoting structural separation to prevent self-preferencing. These interventions were viewed as essential to improving availability, comparability, and combinability of offers, ultimately reducing journey time, cost, and increasing consumer confidence.

National authorities expressed mixed views on the impact of the measures on the above indicators. The National Transport Authority of Ireland questioned the necessity of certain measures given that the majority of transport journeys are routine, and that more MDMS platforms are not necessarily going to result in improved services for users. However, others, including the Competition Council of Latvia, the Federal Public Service Mobility and Transport (BE), and Norwegian Railway Directorate, highlighted that integrating transport operators and mobility services into MDMS could enhance the completeness and accuracy of travel options.

Other stakeholders presented positive views on the measures presented and their impact. For example, the BEUC and the EPF noted that mandating FRAND-based data sharing and resale rights would positively impact the availability and choice between operator offerings on MDMS platforms by ensuring that all relevant services are visible and accessible to consumers. These stakeholders, along with POLIS, said that open and interoperable APIs, along with standardised, real-time data exchange, would enhance the completeness and accuracy of information across platforms. While journey duration may not be directly affected, integrated ticketing and improved cooperation between operators could lead to better timetable coordination and safer connections. Increased competition and requirements for price transparency are expected to reduce the total cost of journeys. They mentioned that confidence in the successful completion of the journey would be strengthened through stronger passenger rights, clear operator liability, real-time disruption information, and consistent support mechanisms across all booking channels.

15.13.5.4.5 What impact, if any, would the implementation of the proposed measures have on modal shift? Please indicate which measures would be particularly impactful (either positively or negatively) in this respect and elaborate on your reasoning.

Transport operators from different sectors expressed a range of views. Rail operators, including the Community of European Railway and Infrastructure Companies, Deutsche Bahn and SJ AB, expressed concern that the policy measures do not address the aviation sector to the same extent, and as a result this could cause unilateral disadvantage to the rail sector. However, ALLRAIL were positive that some measures, including those that address competition within the rail sector and improve the booking experience for consumers, can support modal shift towards rail. The Community of European Railway and Infrastructure Companies, SNCF Group and VDV did however question whether addressing digital platforms and their ticketing will result in modal shift due to other challenges, such as infrastructure limitations or other factors that impact consumer travel choices such as time or cost.

MDMS providers in part echoed that there are other factors impeding modal shift, such as poor and immature distribution in the rail sector (Dohop), price and availability (an independent B2B MDMS provider). However, three tourism industry associations (FTO, SRF and Welcome Travel Group) and a B2C travel consultancy, also referred to issues related to the distortion of competition that benefits strong transport operators and discriminates against independent MDMS and non-incumbent railway providers. In their view, this leads to less multimodal offers in independent MDMS and therefore less uptake of multimodal transport more widely.

National authorities presented mixed views on the effectiveness of measures in encouraging modal shift. The National Transport Authority of Ireland and the Norwegian Railway Directorate commented that they would expect little to no impact due to the measures not providing incentives for individuals to switch and that they don't address local journeys. The Competition Council of Latvia, as well as another national authority, did however comment that they would expect the measures to provide benefits in the long term by enhancing the consumer experience and simplifying access to multimodal mobility options.

Other stakeholders, including the EPF and POLIS, presented positive views on the measures in terms of their impact on modal shift, namely due to improving the access of passengers to transparent information and improving ticketing. They noted that the measures may also increase the number of operators participating on MDMS platforms, enhancing the attractiveness of rail and coach services and providing more travel options of consumers.

15.13.5.5 How effective would addressing each of the three problems (referenced again at the top of this page) be for improving the following in relation to the functioning of the internal market?

15.13.5.5.1 Addressing Problem 1 for improving the impacts on the internal market

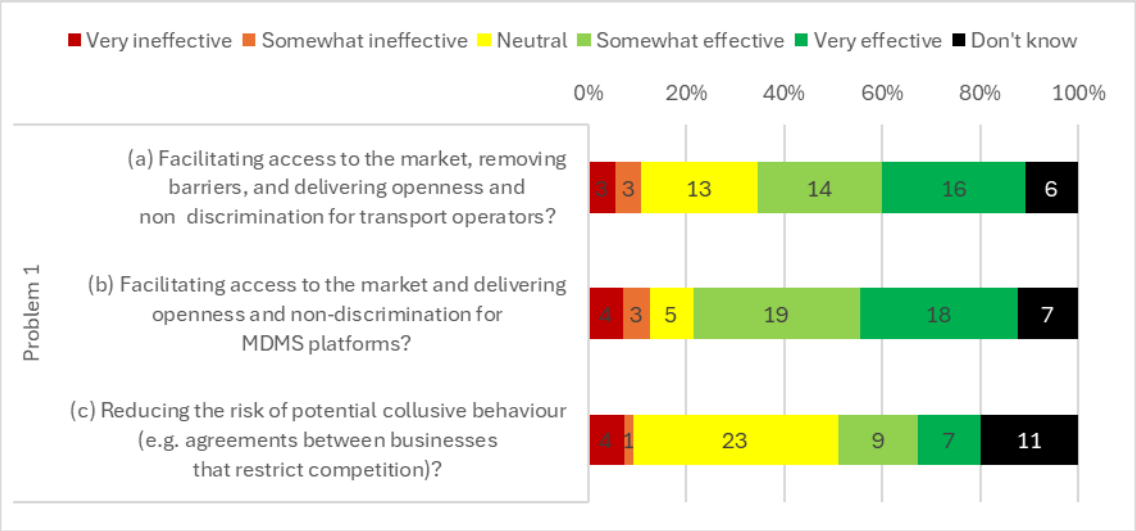
Stakeholders were asked to indicate how effective they expect addressing Problem 1 would be for improving the impacts on the internal market (see Figure 46). The results indicate that addressing Problem 1 is considered to be effective in facilitating market access for both transport operators and MDMS providers.

In relation to facilitating access to the market, removing barriers, and delivering openness and non-discrimination for transport operators, 30 of 55 expected it to be very or somewhat effective (16 very effective, 14 somewhat effective). Furthermore, 6 of 55 of stakeholders expected it to be ineffective (3 very ineffective, 3 somewhat ineffective). Moreover, 19 of 55 were neutral (13) or did not know (6).

In relation to facilitating access to the market and delivering openness and non-discrimination for MDMS platforms, 37 of 56 expected it to be very or somewhat effective (18 very effective, 19 somewhat effective). Furthermore, 7 of 56 of stakeholders expected it to be ineffective (4 very ineffective, 3 somewhat ineffective). Moreover, 12 of 56 were neutral (5) or did not know (7).

In relation to reducing the risk of potential collusive behaviour (e.g., agreements between businesses that restrict competition), 16 of 55 expected it to be very or somewhat effective (7 very effective, 9 somewhat effective). Furthermore, 5 of 55 expected it to be ineffective (4 very ineffective, 1 somewhat ineffective). Moreover, 34 of 55 were neutral (23) or did not know (11).

Figure 15-44 How effective would addressing Problem 1 be for improving the impacts on the internal market?



15.13.5.5.2Addressing Problem 2 for improving the impacts on the internal market

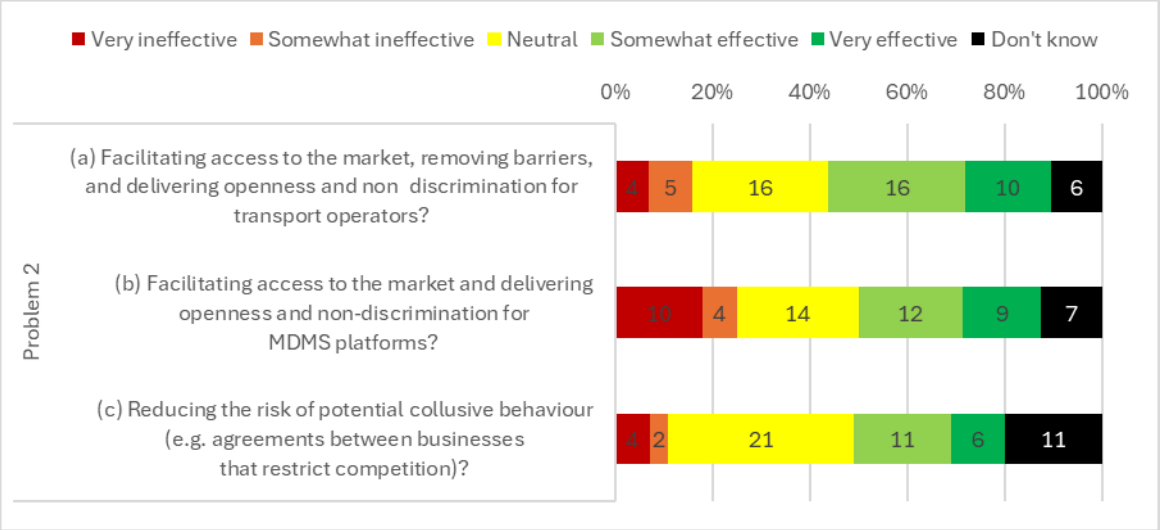
Stakeholders were asked to indicate how effective they expect addressing Problem 2 would be for improving the impacts on the internal market (see Figure 47).These findings suggest that Problem 2 could moderately facilitate market access and non-discrimination for transport operators. There is more scepticism regarding similar impacts on MDMS platforms, with an even split between those who expect positive outcomes, to those who are neutral or expect the problem to be ineffective. Reducing collusive behaviours remains an area with considerable uncertainty among stakeholders.

In relation to facilitating access to the market, removing barriers, and delivering openness and non-discrimination for transport operators, 26 of 57 expected it to be very or somewhat effective (10 very effective, 16 somewhat effective). Furthermore, 9 of 57 of stakeholders expected it to be ineffective (4 very ineffective, 5 somewhat ineffective). Moreover, 22 of 57 were neutral (16) or did not know (6).

In relation to facilitating access to the market and delivering openness and non-discrimination for MDMS platforms, 21 of 56 expected it to be very or somewhat effective (9 very effective, 12 somewhat effective). Furthermore, 14 of 56 of stakeholders expected it to be ineffective (10 very ineffective, 4 somewhat ineffective). Moreover, 21 of 56 were neutral (14) or did not know (7).

In relation to reducing the risk of potential collusive behaviour (e.g., agreements between businesses that restrict competition), 17 of 55 expected it to be very or somewhat effective (6 very effective, 11 somewhat effective). Furthermore, 6 of 55 expected it to be ineffective (4 very ineffective, 2 somewhat ineffective). Moreover, 32 of 55 were neutral (21) or did not know (11).

Figure 15-45 How effective would addressing Problem 2 be for improving the impacts on the internal market?



15.13.5.5.3Addressing Problem 3 for improving the impacts on the internal market

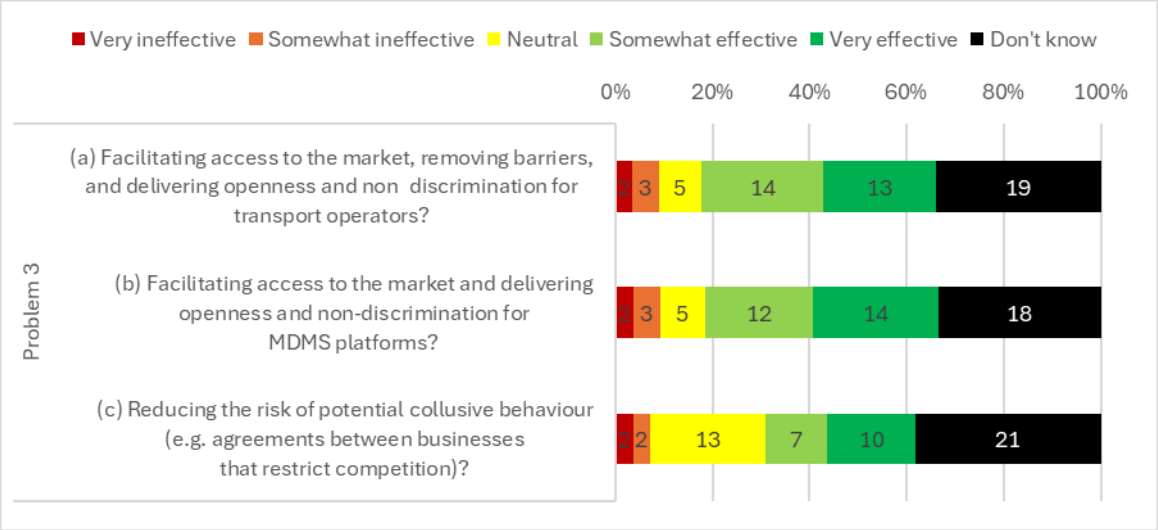
Stakeholders were asked to indicate how effective they expect addressing Problem 3 would be for improving the impacts on the internal market (see Figure 48). Overall, the results indicate a general positive outlook towards addressing Problem 3 and the outcome it could have on the internal market. Respondents indicated very or somewhat effective for both transport operators and MDMS platforms in terms of facilitating access to the market and delivering openness. Like the other problems, a substantial portion of stakeholders remain neutral or uncertain regarding the effects on collusive behaviour.

In relation to facilitating access to the market, removing barriers, and delivering openness and non-discrimination for transport operators, 27 of 56 expected it to be very or somewhat effective (13 very effective, 14 somewhat effective). Furthermore, 5 of 56 stakeholders expected it to be ineffective (3 very ineffective, 2 somewhat ineffective). Moreover, 24 of 56 were neutral (5) or did not know (19).

In relation to facilitating access to the market and delivering openness and non-discrimination for MDMS platforms, 26 of 54 expected it to be very or somewhat effective (14 very effective, 12 somewhat effective). Furthermore, 5 of 54 of stakeholders expected it to be ineffective (2 very ineffective, 3 somewhat ineffective). Moreover, 23 of 54 were neutral (5) or did not know (18).

In relation to reducing the risk of potential collusive behaviour (e.g., agreements between businesses that restrict competition), 17 of 55 expected it to be very or somewhat effective (10 very effective, 7 somewhat effective). Furthermore, 4 of 55 expected it to be ineffective (2 very ineffective, 2 somewhat ineffective). Moreover, 34 of 55 were neutral (13) or did not know (21).

Figure 15-46 How effective would addressing Problem 3 be for improving the impacts on the internal market?



15.13.5.6 How effective would addressing each of the three problems (referenced again at the top of this page) be for improving the following in relation to improving the EU competitiveness?

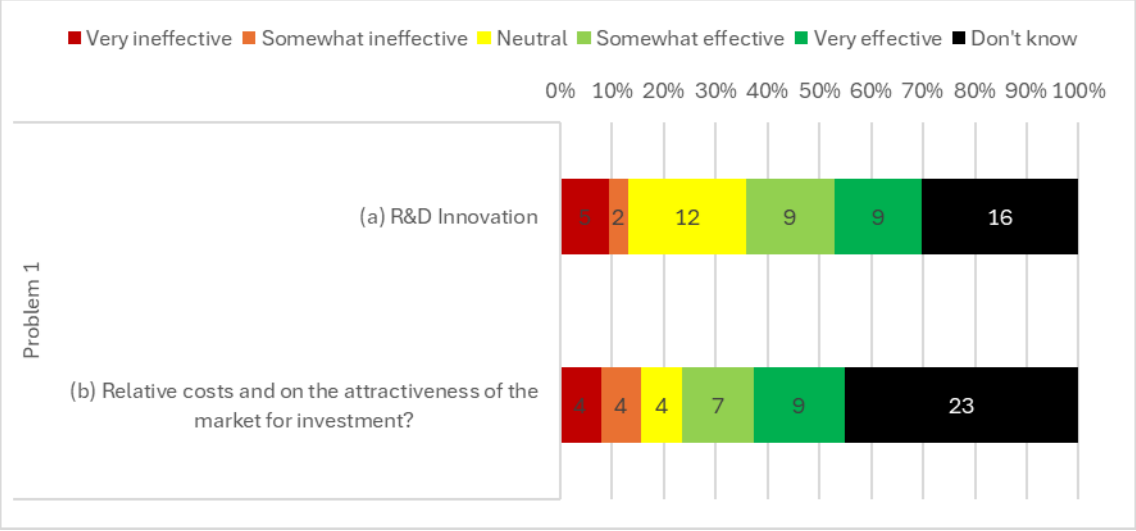
15.13.5.6.1 Addressing Problem 1 for improving the impacts on EU competitiveness

Stakeholders were asked to indicate how effective they expect addressing Problem 1 would be for improving the impacts on EU competitiveness (see Figure 49). A significant number of stakeholders see addressing Problem 1 as beneficial for enhancing EU competitiveness, however, there remains a large degree of neutrality and uncertainty in the responses.

In relation to R&D innovation and removing barriers, 18 of 53 expected it to be very or somewhat effective (9 very effective, 9 somewhat effective). Furthermore, 7 of 53 expected it to be ineffective (5 very ineffective, 2 somewhat ineffective). Moreover, 28 of 53 were neutral (12) or did not know (16).

In relation to relative costs and the attractiveness of the market for investment, 16 of 51 expected it to be very or somewhat effective (9 very effective, 7 somewhat effective). Furthermore, 8 of 51 expected it to be ineffective (4 very ineffective, 4 somewhat ineffective). Moreover, 27 of 51 were neutral (4) or did not know (23).

Figure 15-47 How effective would addressing Problem 1 be for improving the impacts on EU competitiveness?



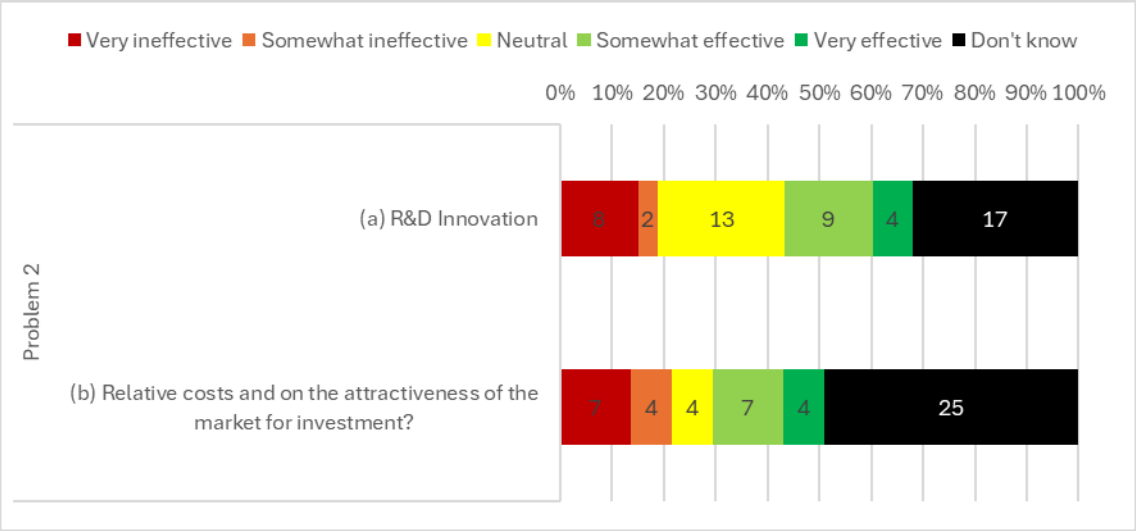
15.13.5.6.2 Addressing Problem 2 for improving the impacts on EU competitiveness

Stakeholders were asked to indicate how effective they expect addressing Problem 2 would be for improving the impacts on improving the impacts on EU competitiveness (see Figure 50).

In relation to R&D innovation, removing barriers, 13 expected it to be very or somewhat effective (four expected it to be very effective while nine expected somewhat effectiveness). Furthermore, 10 stakeholders expected it to be very ineffective (eight) or somewhat ineffective (two). Moreover, 30 stakeholders were neutral (13) or did not know (17).

In relation to relative costs and on the attractiveness of the market for investment, 11 expected it to be very or somewhat effective (four expected it to be very effective while seven expected somewhat effectiveness). Furthermore, 11 stakeholders expected it to be very ineffective (seven) or somewhat ineffective (four). Moreover, 29 stakeholders were neutral (four) or did not know (25).

Figure 15-48 How effective would addressing Problem 2 be for improving the impacts on EU competitiveness?



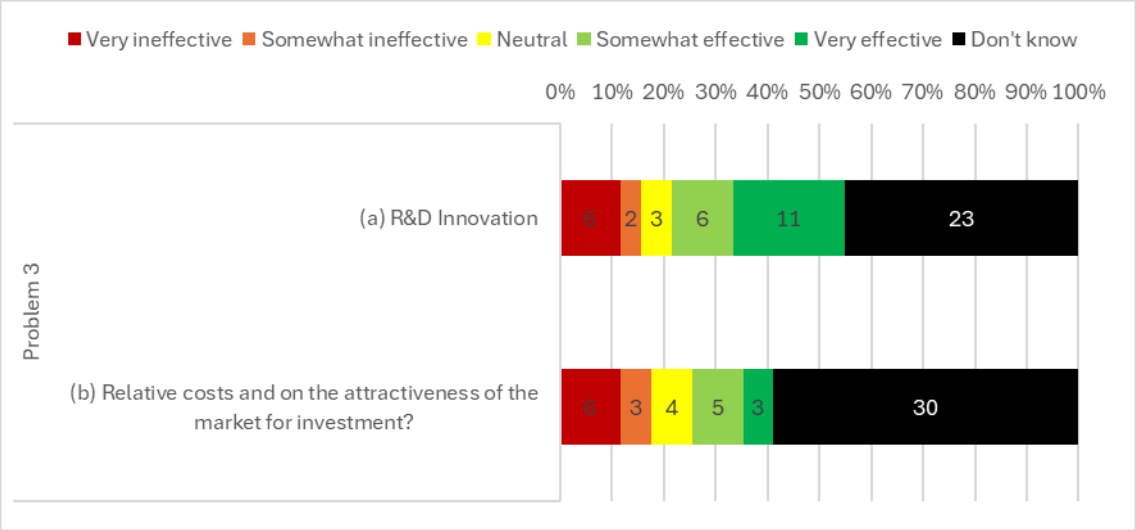
15.13.5.6.3Addressing Problem 3 for improving the impacts on EU competitiveness

Stakeholders were asked to indicate how effective they expect addressing Problem 3 would be for improving the impacts on improving the impacts on EU competitiveness (see Figure 51).

In relation to R&D innovation and removing barriers, 17 of 51 expected it to be very or somewhat effective (11 very effective, 6 somewhat effective). Furthermore, 8 of 51 expected it to be ineffective (6 very ineffective, 2 somewhat ineffective). Moreover, 26 of 51 were neutral (3) or did not know (23).

In relation to relative costs and the attractiveness of the market for investment, 8 of 51 expected it to be very or somewhat effective (3 very effective, 5 somewhat effective). Furthermore, 9 of 51 expected it to be ineffective (6 very ineffective, 3 somewhat ineffective). Moreover, 34 of 51 were neutral (4) or did not know (30).

Figure 15-49 How effective would addressing Problem 3 be for improving the impacts on EU competitiveness?



15.13.5.6.4 Please indicate which measures would be particularly impactful (either positively or negatively) in this respect and elaborate on your reasoning.

Transport operators had mixed views in response to this question. Deutsche Bahn, SJ AB and VDV expressed strong concerns that policy measures introducing additional regulation and obligations, particularly those involving the unbundling of distribution systems, would severely distort the market, undermine innovation, and be largely financed by EU passengers despite already narrow profit margins. The Community of European Railway and Infrastructure Companies warned that such measures would primarily benefit large digital platforms, often foreign-owned, and risk creating monopolistic "gatekeepers" that reduce incentives for innovation among new entrants. Conversely, ALLRAIL highlighted that measures like PMs 16 and 18 could significantly improve investment conditions for new entrants by ensuring visibility and fair access to dominant MDMS platforms. A major coach and rail operator also stressed the importance of long-term market predictability and called for EU financial support for high-TRL innovations to address the sector's limited capacity for self-funded R&D.

MDMS providers broadly agreed that addressing structural market imbalances, particularly through measures such as PMs 11 (endorsed by a MDMS trade association), 14 (endorsed by a MDMS trade association and an independent B2C MDMS provider), 17 (endorsed by a MDMS trade association and a B2B MDMS provider) and 18 (endorsed by an independent B2C MDMS provider), would significantly boost R&D and innovation, as well as improve the relative cost dynamics and attractiveness of the market for investment. EU Travel Tech and another independent B2C MDMS platform emphasised that fair access to transport operators' content enables a competitive environment where independent MDMS platforms can drive digital innovation, improve the customer experience, and incentivise the entire sector to evolve. Several providers (ADN Mobilites, EU Travel Tech, an independent B2C MDMS provider) cautioned that failing to regulate dominant vertically integrated platforms could entrench incumbents, reduce competitive pressure, and diminish incentives for innovation. While supportive of independent MDMS-driven growth, ADN Mobilites, as well as another independent B2C MDMS provider argued that forcing incumbents to act as distribution channels for competitors could lead to stagnation, as innovation would be constrained by the standards of incumbent platforms. Overall, providers, including EU Travel Tech, two independent B2C MDMS providers, and a relevant trade association, specifically underlined that open, modular systems, and protections against restrictive practices, are essential for fostering sustainable digital innovation in the mobility sector.

Two **national authorities,** namely Competition Council of Latvia and National Transport Authority of Ireland, acknowledged that policy measures fostering transparency and competition could enhance innovation among MDMS platforms and promote more reliable revenue streams through better-informed consumer choices. They noted that a more open market could encourage entry by smaller players and attract investment. The Norwegian Railway Directorate expressed concern that the measures more generally may benefit commercial actors at the expense of consumers, but did not provide example of specific measures they were concerned of.

One **other stakeholder** (the EPF) commented on the potential of the measures to foster innovation and improve the attractiveness of the market for investment. They highlighted the potential for MDMS platforms to drive innovation by drawing on lessons from synchro-mobility in the logistics sector, where integrated data frameworks and collaborative analytics enable seamless intermodal travel. They stressed the importance of EU policies that support "whole journey" thinking to facilitate modal shift, whilst maintaining openness to innovation. MDMS were seen as key to fostering competition across operators, modes and platforms, countering entrenched attitudes and dependency on subsidies—particularly in rail—and encouraging a more dynamic market.

15.13.5.7 Do you have any estimates relating to the potential number of job gains or losses resulting from any of the proposed measures (due to greater uptake of MDMS platforms)?

Three of 5 **transport operators** who responded to this question (Czech Railways, Community of European Railway and Infrastructure Companies, Lufthansa Group and another airline) indicated that there could be a potential for job losses, particularly in relation to a reduction in direct ticket sales either via transport operator website or physical ticket sales. Two airline operators, including Lufthansa Group, indicated that the job losses could occur as a result of MDMS platforms having full content access, diverting sales away from direct ticket distribution. One rail operator (Czech Railways) instead indicated that physical ticket sales would become unprofitable, resulting in a reduction of physical staff at points of sale that also are able to offer immediate assistance.

Five of 5 **MDMS providers** who responded to this question, i.e., ADN Mobilites, Dohop, an independent B2C MDMS provider, two industry associations, in contrast indicated that the extension of MDMS activities and further data being made available could result in additional employment opportunities. They argued that this could result in an overall market increase, not only for vertically integrated MDMS, resulting in a net positive for employment generally in the sector. MDMS providers also commented that the growth of MDMS platforms could also generate investment in technology and new services, creating jobs in these sectors also.

No representatives from other stakeholder groups commented on this question.

15.13.5.8 In your view, would the implementation of any of the proposed measures require the development of new skills in the affected sectors? Please indicate which measures are particularly relevant in this respect and the skills that will be needed.

Only two **transport operators** (VDV and a global industry association for road transport) gave a response to this question. They indicated that physical ticket vendors would be significantly affected by the proposed measures and, secondly, that these measures act to promote the growth of the MDMS sector. This would require businesses to become more digital, which could impact smaller travel operators that are less digitally advanced or integrated.

Six of 7 **MDMS providers** who responded to this question, including ADN Mobilites, two industry associations, two independent B2C MDMS platforms, and a major Global Distribution System, indicated that some specific skills may be required, mostly to support the digital transformation required for a thriving MDMS sector. This would include product development, digital and IT talent, and engineers. This group of stakeholders also emphasised the need to further apply existing capabilities in the sector, such as those in digital ticketing, interoperability, regulatory compliance and commercial negotiations. The other MDMS stakeholder, a B2B provider, stated that no additional skills would be required.

Only one **'other' stakeholder** (a European association) responded to this question. They mentioned the need for similar new skills as those raised by MDMS providers, such as cross-disciplinary skills that combine digital, regulatory, mobility and user-centric expertise.

15.13.5.9 How effective would addressing each of the three problems (referenced again at the top of this page) be for improving the level of harmonisation of information provision and use across the EU?

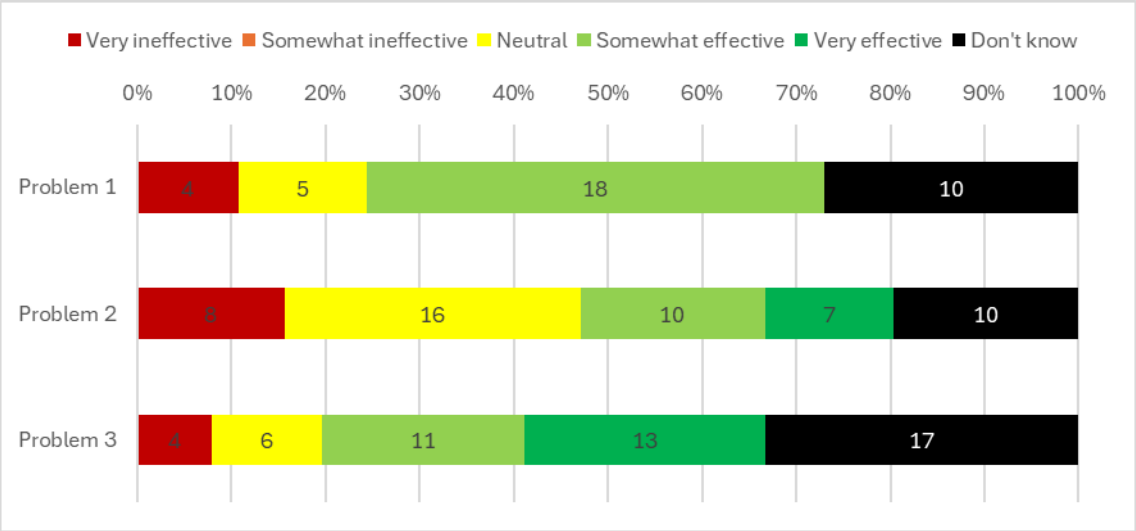
Stakeholders were asked to indicate how effective they expect addressing each of the three problems would be for improving level of harmonisation of information provision and use across the EU (see Figure 52). Overall, stakeholders indicated that addressing Problem 3 would be most effective in improving the level of harmonisation.

In relation to addressing Problem 1, 18 of 37 expected it to be somewhat effective. Furthermore, 4 of 37 expected it to be very ineffective. Moreover, 15 of 37 were neutral (5) or did not know (10).

In relation to addressing Problem 2, 17 of 51 expected it to be very or somewhat effective (7 very effective, 10 somewhat effective). Furthermore, 8 of 51 expected it to be very ineffective. Moreover, 26 of 51 were neutral (16) or did not know (10).

In relation to addressing Problem 3, 24 of 51 expected it to be very or somewhat effective (13 very effective, 11 somewhat effective). Furthermore, 4 of 51 expected it to be very ineffective. Moreover, 23 of 51 were neutral (6) or did not know (17).

Figure 15-50 How effective would addressing each of the three problems (referenced again at the top of this page) be for improving the level of harmonisation of information provision and use across the EU?



15.13.5.9.1 Please indicate which measures would be particularly impactful (either positively or negatively) in this respect (for any of the problems) and elaborate on your reasoning.

Few **transport operators** elaborated on their answer. ALLRAIL argued that PMs 16 and 18 would have the strongest impact on levels of harmonisation of information provision. They argue that reducing fragmentation and the increasing the number of operators visible on MDMS platforms would aid in building a European information space where passengers are able to see complete offers regardless of where they are or the ownership of the MDMS platform. A prominent airline stated that expanding the CoC protections is the best approach to providing undistorted information regarding travel services. Finally, Czech Railways mentioned that regulation would "undoubtedly result in an increase in the financial burden on carriers, which would then be reflected in the price of fares". They noted that this approach would be at odds with the fundamental principals of enhancing rail accessibility.

MDMS providers had split views on the effectiveness of the measures in improving harmonisation of information. An industry association and an independent B2B MDMS provider commented on how extending the CRS CoC ensures that users across the Member States receive consistent, transparent, and comparable information which supports a cohesive EU-wide framework. However, other MDMS providers, including ADN Mobilites, two B2C MDMS platforms, and a major CRS, indicated that harmonisation can only be achieved by supporting independent MDMS platforms who apply the same approach to travel in every Member State. They state that measures, such as those aimed at addressing Problem 2, for example, will have a national impact but no assurance of consistency at the European level.

One **other stakeholder**, the EPF, indicated that these measures would be somewhat effective to improve the level of harmonisation as they would improve access to data and data sharing. This would ensure a more comprehensive view of all relevant travel options to passengers.

15.13.5.10 How effective would addressing each of the three problems (referenced again at the top of this page) be for improving the availability of transport services that could increase accessibility for persons in transport poverty?*

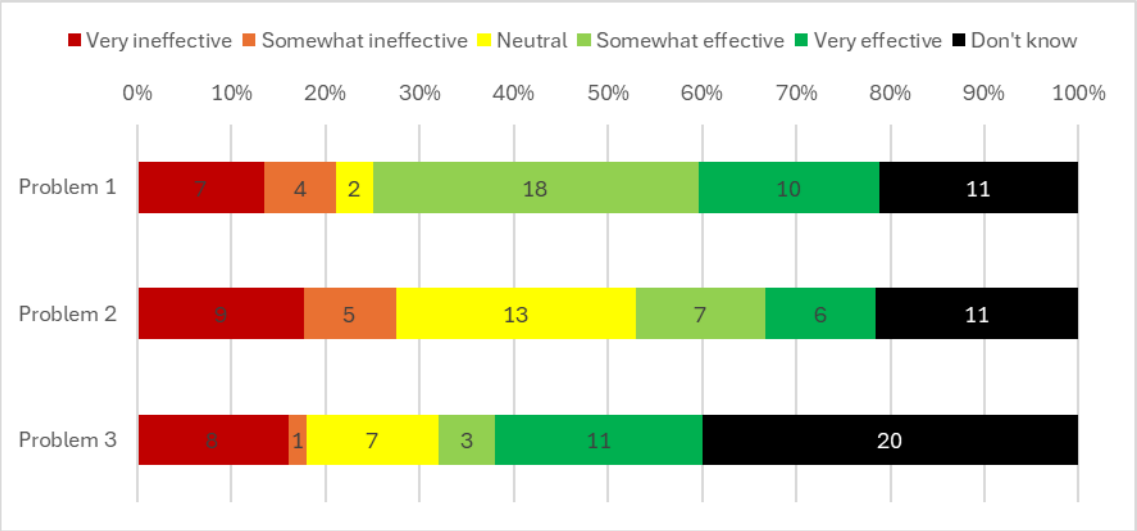
Stakeholders were asked to indicate how effective they expect addressing each of the three problems would be for improving the availability of transport services that could increase accessibility for persons in transport poverty (see Figure 53). Overall, stakeholders viewed Problem 1 as the most effective route to improving the availability of transport services and increasing accessibility.

In relation to addressing Problem 1, 28 of 52 expected it to be very or somewhat effective (10 very effective, 18 somewhat effective). Furthermore, 11 of 52 expected it to be very ineffective (7) or somewhat ineffective (4). Moreover, 13 of 52 were neutral (2) or did not know (11).

In relation to addressing Problem 2, 13 of 51 expected it to be very or somewhat effective (6 very effective, 7 somewhat effective). Furthermore, 14 of 51 expected it to be very ineffective (9) or somewhat ineffective (5). Moreover, 24 of 51 were neutral (13) or did not know (11).

In relation to addressing Problem 3, 14 of 50 expected it to be very or somewhat effective (11 very effective, 3 somewhat effective). Furthermore, 9 of 50 expected it to be very ineffective (8) or somewhat ineffective (1). Moreover, 27 of 50 were neutral (7) or did not know (20).

Figure 15-51 How effective would addressing each of the three problems (referenced again at the top of this page) be for improving the availability of transport services that could increase accessibility for persons in transport poverty*?



(a) Please indicate which measures would be particularly impactful (either positively or negatively) in this respect (for any of the problems) and elaborate on your reasoning.

Five of 9 **transport operators who responded to this question (Czech Railways, Deutsche Bahn, NS, SJ AB, and VDV)** indicated that regulation that increases the cost of operations will not result in lower ticket prices, and that this would disproportionately affect individuals in transport poverty who rely on affordable transportation.

Three of 6 **MDMS providers** who responded to this question, i.e., ADN Mobilites and two other independent B2C MDMS providers, commented on the ability of transport solutions to support individuals in transport poverty. They highlighted that being able to access a range of different modes of transport is a good solution for those in transport poverty as it gives them the widest choice and flexibility, including across price points. One other independent B2C MDMS platform indicated that as less and less offers are made available in one place, citizens that are less technologically literate, which can at times coincide with transport poverty, will struggle to compare prices and find the most affordable option. They stated that having the right information available and ticket choices displayed in a neutral way would be of great benefit.

One **national authority**, the Norwegian Railway Directorate, indicated that the "worst case is that the regulations may have a negative impact on today's services, by fragmenting the market and making some transport offerings unprofitable".

One **other stakeholder**, the EPF, stated that increased competition between transport modes and between distribution services could lead to more affordable prices (on the condition that any costs or fees related to data sharing and distribution are reasonable).

15.13.5.11 How effective would addressing each of the three problems (referenced again at the top of this page) be for improving the availability of transport services that could increase accessibility for persons with reduced mobility?

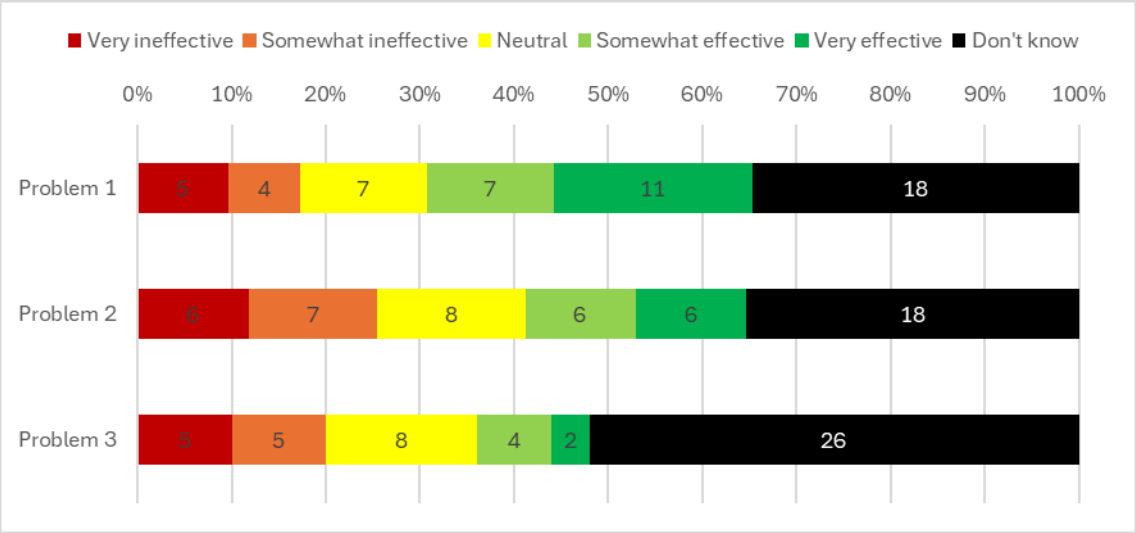
Stakeholders were asked to indicate how effective they expect addressing each of the three problems would be for improving the availability of transport services that could increase accessibility for persons with reduced mobility (see Figure 54). Problem 1 had the largest number of stakeholders indicate possible effectiveness in improving accessibility for persons with reduced mobility. However, it is important to note that the number of stakeholders who are neutral or unsure is consistently high across all three Problems.

In relation to addressing Problem 1, 18 of 52 stakeholders expected it to be very or somewhat effective (11 very effective, 7 somewhat effective). Furthermore, 9 of 52 expected it to be very ineffective (5) or somewhat ineffective (4). Moreover, 25 of 52 were neutral (7) or did not know (18).

In relation to addressing Problem 2, 12 of 51 stakeholders expected it to be very or somewhat effective (6 very effective, 6 somewhat effective). Furthermore, 13 of 51 expected it to be very ineffective (6) or somewhat ineffective (7). Moreover, 26 of 51 were neutral (8) or did not know (18).

In relation to addressing Problem 3, 6 of 50 stakeholders expected it to be very or somewhat effective (2 very effective, 4 somewhat effective). Furthermore, 10 of 50 expected it to be very ineffective (5) or somewhat ineffective (5). Moreover, 34 of 50 were neutral (8) or did not know (26).

Figure 15-52 How effective would addressing each of the three problems (referenced again at the top of this page) be for improving the availability of transport services that could increase accessibility for persons with reduced mobility?



15.13.5.11.1 Please indicate which measures would be particularly impactful (either positively or negatively) in this respect (for any of the problems) and elaborate on your reasoning.

Stakeholders did not express strong views on the potential of each of the three problems to increase accessibility for persons with reduced mobility.

A **transport operator** argued that prioritising digital platforms or mandating the unbundling of distribution systems from parent operator systems risks making physical ticket purchasing economically unsustainable, in turn, impacting passengers who rely on physical ticketing purchasing methods.

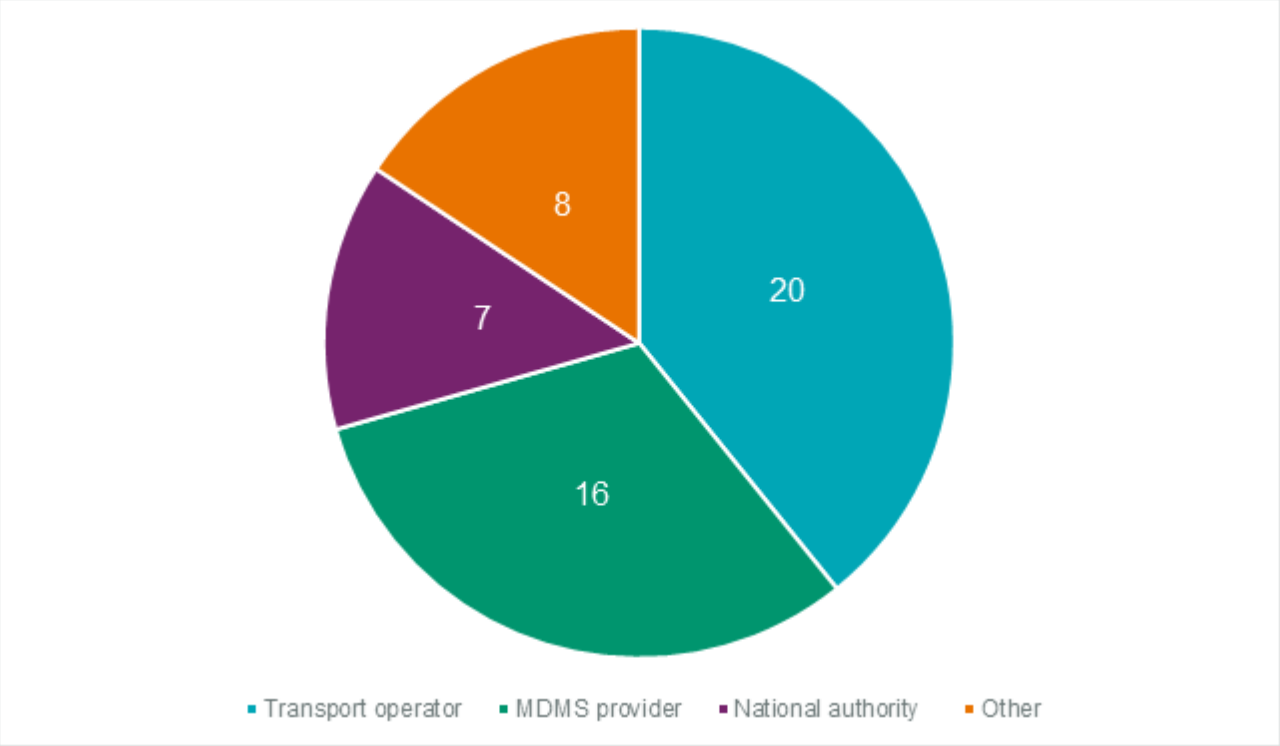
One **MDMS provider** indicated that PMs 11, 14 and 17 would ensure full and non-discriminatory access to ticketing content and services. They emphasised the importance of real-time and reliable information (e.g., step-free access, transfer times etc.) for persons with reduced mobility. Improving the usability of MDMS platforms and improving access to content and services would positively impact the usage of MDMS for individuals with reduced mobility.

Other stakeholders expressed similar views to that of MDMS providers, emphasising the importance of accessible user interfaces, mobility-aware journey planning features and the use of personalised filters based on mobility needs (e.g., wheelchair access). The importance of having live updates on the status of key accessibility features was also noted.

15.14 ANNEX 6.5: ANALYTICAL SUMMARY OF THE INTERVIEWS

15.14.1 Profile of the respondents

Figure 15-53 Profile of the interviewees (number)



Total: 51 responses

The interview sample[273] for the project is composed of a wide range of stakeholders across the mobility and transport ecosystem, reflecting a balanced mix of perspectives from MDMS providers, transport operators, national authorities, and other organisations, at both EU and national levels.

Within the category of MDMS (which includes MDMS providers / MDMS association / MDMS-related tech provider / MDMS-related information platform), the sample includes both vertically integrated[274] (five) and independent platforms (16). Vertically integrated MDMS are those owned and operated by transport providers. These organisations combine control over services with direct management of their distribution platforms. On the other hand, independent MDMS platforms are not tied to specific operators and function across multiple services. Other companies that participated in the consultation serve more as distribution system providers or aggregators, particularly in the air sector. Some associations represent the interests of the digital distribution sector more broadly. As part of this MDMS landscape, there are certain nuances that should be noted. Indeed, MDMS from both the B2C and B2B markets have been interviewed.In the sample, there are three OTAs, three

[273] Of the 51 respondents, 22 opted to remain anonymous, 21 consented to be identified by their organisation's name, and eight did not specify a preference. To ensure ethical compliance, these eight respondents were anonymised by default. The stakeholders that indicated permission to be referenced by the organisations name are: EU Travel Tech (ETT), the Man in Seat 61, DoHop, Skyscanner, ADN Mobilites, Deutsche Bahn, AllRail Community of European Railway and Infrastructure Companies (CER), Statens Järnvägar Aktiebolag (Swedish State Railways Ltd), Société Nationale des Chemins de fer Français (SNCF), Snälltåget, Airlines for Europe (A4E), Union Internationale des Transports Publics (UITP), WestBahn, Finnish Ministry of Transport and Communications, Polis, Helsinki Region Transport, European Travel Agents' and Tour Operators' Associations (ECTAA), Transport and Environment (T&E), Bureau Européen des Unions de Consommateurs (BEUC), European Passengers' Federation (EPF).

[274] Given that the vertically integrated platforms are owned by incumbent rail operators, they were classified under the category of "transport operators" for the purposes of this report. Accordingly, only one interview was conducted per operator group (e.g. a single interview covered both DB and its platform bahn.de).

CRS, one meta-search engine, five new content aggregators (one associated to a public transport platform), one travel tech associations, one expert in digital platforms and two travel industry associations.

The transport operators interviewed comprise both companies and industry associations from the rail and air sectors. Among rail operators, there is a clear distinction between incumbents and new entrants. Rail incumbents represent large, traditionally state-owned or formerly state-owned national carriers. These are typically vertically integrated and hold dominant market positions. By contrast, the sample also includes newer private rail entrants. These operators often challenge the dominance of national incumbents and bring attention to barriers to entry and distribution services. Among the transport operators in the air sector, there are two airline association and four large airlines.

National authorities in the sample represent a geographically diverse cross-section of seven EU Member States[275]. These bodies range from transport ministries and regulators to competition authorities and metropolitan PTAs, offering varied insights into how different national contexts shape MDMS policy and practice.

Within the category of other organisations, the sample includes several prominent public-interest and consumer advocacy groups[276]. Finally, some organisations represent networks of cities and metropolitan transport authorities respectively, and contribute knowledge about urban and local-level implementation[277]. The sample also includes a mix of EU-level and national-level organisations.

The following stakeholders were interviewed, classified by stakeholder type:

- Five representatives of incumbent rail operators (includes one railway association).
- Five representatives of new entrant rail operators (includes one railway association).
    - Six representatives of the airline sector (includes two associations).
- Two representatives of the sector of bus & coach (includes two associations).
    - Sixteen representatives of MDMS providers. This wide category includes three OTAs, three CRS, one meta-search engine, five new content aggregators (one associated to a public transport platform), one travel tech associations, one expert in digital platforms and two travel industry associations.
- Two associations of metropolitan regions.
- One regional authority.
- Seven national authorities.
- Five NGOs, consumer organisations and other civil society organisations.
- One ferry operator.
- One specialist on digital platforms.

15.14.2 Problem 1. Limited and distorted information and access to tickets for consumers on MDMS, in particular for rail.

Based on the interviews conducted for the MDMS impact assessment, a number of themes and tensions emerge. These reveal both converging and diverging stakeholder views, particularly concerning the role of dominant operators, data quality, commercial practices, and the structure of the MDMS ecosystem. A careful analysis highlights systemic barriers, competitive distortions, and the regulatory challenges inherent in fostering a fair and integrated mobility data and ticketing market across Europe.

Market dominance and access restrictions

A concern expressed across three stakeholder groups during the interviews (mainly new entrant rail operators, transport authorities and consumer organisations) is the persistent market dominance of incumbent operators— for MDMS, especially state-backed platforms such as bahn.de—which continues to constrain access for new entrants. **Nine out of 16 MDMS providers / MDMS association (five new content**

[275] AT, BE, CZ, FI, IT, PT, SE

[276] This category is represented by five organisations, three of them wanted to be referenced by the name of the organisation (T&E, BEUC and EPF) while one wanted to remain anonymised and another one did not specify its preference, reason for which it was anonymised.

[277] This is the case of Helsinki Region Transport and Polis.

aggregators/associations, plus ETT and the independent travel information website The Man in the Seat 61, one CRS and one OTA) and five out of 20 transport operators (four new entrant rail operators/associations including WestBahn, Snälltåget and AllRail) are explicitly concerned about market dominance of incumbent operators. Even with rail market opening, usage habits haven't changed much[278]. Most users still go directly to the transport company's website (ADN Mobilités, AllRail). Although third-party services may be listed on such platforms, they are often not bookable, undermining effective competition (statement supported by three new entrants in rail sector, including WestBahn and AllRail, but also by one MDMS provider, one national authority, and four category Other[279]). A new entrant rail operator in particular highlights practices by Deutsche Bahn that selectively downplay or obscure competing services, including omitting price information or relegating listings to less visible positions, despite legal obligations for fair visibility. Given that the vast majority of ticket sales in Germany occur via DB's platform, the implications for market access are substantial[280].

WestBahn notes that platforms such as Trainline and Omio remain marginal in user adoption in the countries where they operate, further cementing incumbents' monopoly positions. Several stakeholders underscore that this dominance has been shaped by historical public subsidies and state ownership, creating a normative expectation that incumbent's platforms should at minimum guarantee neutral and inclusive service visibility (two consumer organisations out of five, including T&E, and AllRail). According to AllRail, the real barrier is a lack of political will and discriminatory practices from incumbent rail operators. DB and others are satisfied with selling tickets from fellow state-owned incumbents (like OBB), but not from independent operators (like European Sleeper or Westbahn).

Furthermore, according to one MDMS provider vertically integrated MDMS platforms are seen to exercise significant market power by demanding higher commissions or preferential commercial terms from operators, reinforcing the power asymmetry. In the view of this MDMS provider these practices blur the line between service aggregation and market manipulation.

Five MDMS providers / MDMS association (out of 16, including EU Travel Tech and ADN Mobilités, and one Other category out of eight - the consumer organisation EPF) challenge the existence of **intentional discrimination** against MDMS by transport operators and argue that they actively seek comprehensive operator coverage to offer competitive and consumer-friendly services. In the view of five out of 16 independent MDMS providers the real barrier lies not in their willingness to integrate operator content, but in the unfavourable contractual terms set by incumbent operators. In this sense, the tension arises not from a lack of openness but from asymmetrical bargaining power and commercially restrictive practices.

Data quality and service accuracy

Data quality and system interoperability also emerge as points on which interviewed stakeholders have diverging views. While MDMS platforms struggle with consistency and completeness—particularly for multi-operator or international journeys according to one national authority, two consumer organisations including BEUC and one MDMS platform)—a national authority and the consumer organisation BEUC argue that the issue is overstated and mainly applies to complex or low-frequency itineraries. **Four MDMS providers out of 16 (three new content aggregators/associations and ETT) and four transport operators out of 20 (three new entrant rail operators including WestBahn and Snälltåget and one ferry operator) mentioned some concern for data quality and system interoperability**. For high-frequency routes or where cooperation among national operators is strong (e.g., DB and ÖBB), ticketing is more streamlined and accurate according

[278] This is only valid for the rail market opening. The aviation sector is fully liberalised and is not concerned by the same problem

[279] Polis, T&E, EPF and a consumer organisation.

[280] Reference can be made to the competition case of July 2023 in which the German Federal Cartel Office found that Deutsche Bahn (DB) had abused its dominant market position by restricting third-party ticketing platforms from providing integrated booking services and comparative travel information. Cartel Office Ruling Shows that EU Transport Commissioner Vălean's New MDMS Plans Will Be Anti-Competitive | ALLRAIL - The Future of Passenger Railways

to three national authorities out of seven, including the Czech Authority, and two consumer organisations out of five, including EPF and T&E.

In contrast, stakeholders such as the consumer organisation EPF and one national authority point to significant fragmentation for cross-border and multimodal travel, noting that national neutrality does not translate into comprehensive international solutions. According to these stakeholders interviewed these issues are particularly acute for long-distance journeys involving multiple modes and operators. Meanwhile, two rail incumbents including DB, but also UITP representing the view of public transport operators stress the reliability of their own real-time data and tariff systems, suggesting ongoing efforts to enhance cross-border coordination.

Limited willingness to cooperate

A critical barrier to a functional MDMS landscape is the reluctance of indispensable operators and indispensable platforms to cooperate beyond what aligns with their commercial interests. Several interviewed stakeholders (**four MDMS providers out of 16 - including ADN Mobilités, two new content aggregators in the rail business, one travel tech association – one organisation out of eight in the category Other and AllRail**) describe a lack of coordination as a structural issue that impedes seamless integration, mainly independent MDMS providers who believe transport operators retain information. Independent MDMS need access to data on available and free seats of railway operators, and this is not complied with everywhere in EU according to ADN Mobilités. These dynamic limits the potential of MDMS to provide neutral and comprehensive services across the EU.

According to one MDMS provider a further source of friction is the prevalence of relinking models, whereby users are not offered tickets from other operators but redirected to external websites to complete transactions. This interrupts the user experience and undermines the promise of seamless, end-to-end travel planning . Indispensable rail operators argue that such business models contribute little to consumer benefit and merely monetise traffic through affiliate structures.

Stakeholders also raise the issue of ancillary fees and pricing discrepancies. According to two railway operators out of nine interviewed, including DB, some MDMS providers add costs for services such as seat reservations or travel alerts—features that are otherwise free when booking directly through operator websites. While such variations are often attributed to value-added services or flexible refund policies (as expressed by CER, Helsinki Region Transport), they also reflect the lack of regulatory oversight on pricing practices. The absence of uniform price obligations allows platforms to present different fares for the same service (according to Helsinki Region Transport).

Compounding the issue is the **lack of true multimodal integration**. Although OTAs often brand themselves as multimodal, in practice, air travel remains dominant on their platforms. For example, MDMS services frequently fail to suggest train options for corridors such as Barcelona–Paris, even when viable rail alternatives exist (referred by one new content aggregator in the air sector).

This fragmentation is compounded by a **strategic shift towards direct distribution in the commercial aviation sector**. Many transport operators—mainly airlines—favour their own channels, even when they are also present in other B2B and B2C channels, to maintain control over pricing, user data, and ancillary revenues (referred by four independent MDMS providers such as DoHop, by consumer organisations, such as EPF, and by others such as ECTAA). This preference restricts the availability of complete travel solutions on MDMS platforms and distorts the multimodal offer.

Selective offer

Another area of concern is the potential for selective presentation of options by MDMS platforms, whereby users are shown only a limited subset of services—often simplified offerings or those associated with higher profit margins. This practice disadvantages users with more complex travel needs (e.g. those requiring bike transport or accessible services), who are often excluded from the fare displays according to one new entrant in the rail sector, WestBahn, out of four interviewed, two MDMS providers, including ADN Mobilités, out of 16

and one civil society organisation, T&E, out of five). WestBahn explicitly calls for regulation to require the display of all relevant services without discrimination.

Neutral display to avoid discrimination

The question of what constitutes “neutral” display is complex. **Four stakeholders out of 51 advocate for prioritisation based on sustainability or multimodal integration (one national authority out of seven, UITP representing public transport operators and two other organisations, Polis and BEUC, out of eight in the category Others)**. One MDMS provider out of 16 stresses timetable logic and service quality in structuring its displays, whereas two public authorities out of seven emphasise the potential risk of public MDMS platforms excluding services that conflict with sustainability goals.

Nonetheless, concerns over **algorithmic discrimination** or biased display remain. Stakeholders fear that MDMS platforms may privilege higher-commission offerings, subtly skewing the consumer's view and undermining transparency (**three MDMS providers/associations out of 16, including ECTAA, together with Snälltåget).** According to one of the previously cited stakeholders, price remains a key consideration for many passengers, and the choice of selection criteria should ultimately stay with the user. The example of platforms such as eDreams and other online booking services was cited to illustrate how a more neutral interface can be achieved—allowing users to apply filters such as “cheapest,” “fastest,” “most environmentally friendly,” or “best ranked” according to their own preferences. On this basis, it was argued that a neutral approach to information display is preferable, and that default settings (e.g., automatically showing the fastest connection) should be avoided to prevent bias in user choice. Both WestBahn and AllRail pointed out that Deutsche Bahn’s platform defaults to “fastest connections,” a setting that effectively favours DB services—particularly as it controls most high-speed routes. They argue this approach pushes DB to the top of search results while downplaying lower-cost alternatives offered by new market entrants.

Two independent MDMS providers out of 16 defend the current system, arguing that **transparent filtering** and neutral search criteria preserve consumer choice and that independent MDMS—those without their own transport services— have no incentive to promote specific offers (ECTAA). According to this view, accusations of platform bias are unfounded, and platform operators follow standard advertising models without compromising independence (ECTAA). According to ADN Mobilités, the introduction of the Code of Conduct in aviation was driven by concerns that airlines, acting as CRSs, were prioritising their own services. According to ADN Mobilités, rail services typically offer fewer variations in schedule and pricing—for example, a high-speed train every hour at a similar fare, alongside slower, less frequent alternatives, often operated by the same provider. ADN Mobilités also expressed the view that this stands in contrast to air travel, where options differ significantly in terms of duration, stopovers, and price. Because of this, filtering and ranking is less relevant in rail than in air .

Differentiating MDMS structures and regional specificities

Another topic raised is the importance of distinguishing between MDMS types. **Two rail operators -one incumbent, one new entrant- out of nine and two independent MDMS providers / MDMS association out of 16, including ETT,** argue that vertically integrated MDMS—those owned or operated by transport companies—must be treated differently from independent platforms to avoid policy misapplications. According to these interviewed stakeholders this distinction is crucial to ensuring that competitive dynamics are correctly understood and addressed.

A MS representative, the incumbent rail operator SNCF and one other organisation mentioned similarly, that the role of regional operators, particularly in Germany and France, requires separate consideration. In these contexts, regional authorities—not operators—control fare and ticketing policies. As such, issues of cooperation and data sharing in Germany are subject to the governance frameworks set by the Länder, not the commercial strategies of operators a. Previously cited MS representative call for EU-level recognition of this structure, cautioning against imposing obligations on operators who lack the capacity to fulfil them.

15.14.3 Problem 2: Uneven access of operators to indispensable MDMS platforms

Fragmentation and discrimination

The agreement among the consulted independent MDMS providers appears to be that the real barrier lies not in their willingness to integrate operator content, but in the unfavourable contractual terms set by rail incumbent operators (referred by an independent MDMS provider). In this sense, the tension arises not from a lack of openness but from asymmetrical bargaining power and commercially restrictive practices. Similar challenges are already prevalent in the airline sector, where operators routinely exclude promotional fares from OTAs or impose surcharges, resulting in non-transparent pricing and constrained consumer choice (mainly referred by independent MDMS in the air business). While some see this as an extension of legitimate commercial strategies (mentioned by airlines), others frame it as undermining the principles of fair competition and neutral access to travel data (referred by one MDMS provider).

One part of the problem is that vertically integrated platforms owned and operated by rail incumbents exclude access to smaller players or make it difficult for them to access to their platform. The problem is not merely exclusion of smaller players; in several instances, incumbents actively restrict access to certain services or benefits. For example, Trainline users were able to purchase DB tickets but could not apply DB discount cards—an exclusion attributed to DB's own commercial strategy rather than technical limitations (one consumer organisation). According to AllRail, an incumbent operator like DB may show the timetables of other operators because they are forced to but not the purchasing option. While some stakeholders argue that such behaviour is justified by the significant investment operators make in their proprietary systems (mentioned by incumbent rail operators such as DB), others see it as protectionist and anti-consumer (EPF, ECTAA). Furthermore, according to one MDMS provider vertically integrated MDMS platforms are seen to exercise significant market power by demanding higher commissions or preferential commercial terms from operators, reinforcing the power asymmetry. In the view of this MDMS provider these practices blur the line between service aggregation and market manipulation.

Another barrier to meaningful MDMS participation is the **look-to-book ratio**, a metric heavily enforced in rail but much more lenient in air travel. Rail operators typically require high booking conversion rates—e.g., one booking for every 70 searches—compared to ratios as high as 1/10,000 in aviation. This discrepancy disincentivises MDMS from offering comprehensive rail content, as they risk penalties for underperformance (three MDMS providers including DoHop, and DB as a MDMS (bahn.de)).

When focusing on transport operators, 12 out of 20 inputs expressed the view that transport operators should retain the freedom to decide **who can sell their tickets**[281]**,** while other did not comment on the topic, and only a small minority of a new entrant rail operator and AllRail advocate for unblundling. Only the mentioned new entrant rail operator explicitly stated that distribution channels of incumbent companies should be treated as public assets[282]. This position is not widely shared among the rest of the stakeholders. In fact, it contrasts with the majority view of 12 out of 20 transport operators commenting on commercial freedom (this includes six rail operators - including DB, CER, two new entrant and two incumbent -, four airlines or airlines association, one public transport association and one ferry services company), as these stakeholders emphasise the commercial nature of distribution platforms, assert their right to control access to their own sales infrastructure, and oppose any form of forced ticket sales or mandatory access.

The second part of the expressed issue is that small operators or new entrants in particular in the aviation sector struggle to access indispensable MDMS at fair conditions vis-à-vis bigger airlines. In particular, this is the case for CRSs but increasingly for new platforms which are also gaining market shares. This is the view of an airline association, which clearly states that airlines are dependent on indispensable MDMS, being these CRS and also new large OTAs. An airline association provided that MDMS may be selected for quality and

[281][281] This is also supported by airlines. Two associations of airlines and three airlines support freedom of distribution in aviation, citing the ability to withdraw from OTA partnerships in certain cases, sometimes emphasising recourse against OTA misuse and the need for commercial control.

[282] "The existing sales channels of incumbent operators should be regarded as public property, as these need to be accessible to anyone who wants to put their building blocks in there for their channels to sell them." (New entrant rail operator)

service or cost. Airlines must be allowed to retain certain fares (such as light fares) if the cost of distribution through certain channels, such as CRSs, exceeds the benefits of distributing through them. As an example this association provides that often the total cost of distributing through a CRS includes the GDS fees and travel agencies incentives makes it economically unsustainable to provide low fares.

Airlines' position on full content obligations .

Two airlines association and two airlines emphasise that while they are open to sharing certain types of content—such as schedules or limited fare information—this must be under fair conditions that preserve their commercial freedom. They argue that full content obligations, particularly those pushed by consumer-facing intermediaries (e.g. OTAs, metasearch engines, aggregators), risk undermining innovation, distorting competition, and unfairly disadvantaging airlines. Past experiences with full content mandates—especially in the context of Global Distribution Systems (GDSs)—led to increased costs and restricted the airlines' ability to offer competitive fares directly, as they were forced to share all offers, including their lowest fares, and incur segment fees. Meanwhile, OTAs receiving GDS incentives gained an advantage. Airlines also highlight that such obligations have historically slowed technological advancements like the adoption of NDC.

According to the mentioned airlines and airline associations, full content agreements reinforce the dominant position of all players, in B2B of GDS which benefit from full content and on B2C, with platforms like Google and Expedia which would benefit from unrestricted content without the need to negotiate commercial terms, given the weaker bargaining power of some airlines. In particular, this would further reinforce the market power of both B2B and B2C MDMS at the expenses of smaller airlines, ultimately reducing competition and harming consumer choice..

Content control and competition: evolving dynamics in airline MDMS

Some MDMS working in air business (two CRS and one meta-search engine) refer that challenges are also present in the airline sector, where some operators retain lighter fares from some OTAs or impose surcharges, resulting in non-transparent pricing and constrained consumer choice. While airlines argue this as an extension of legitimate commercial strategies in which the airlines should retain their freedom to choose intermediaries and content fare to be distributed through them (supported by two airline associations and two airlines), another MDMS provider frames it as undermining the principles of fair competition and neutral access to travel data . This tension between retaining a certain commercial control and tendence to conclude agreement with intermediaries is increasingly playing out in strategic shifts across the sector. According to A4E, global distribution systems are expected to decline in relevance, while online travel agencies could gain traction thanks to enhanced access to airline content via technologies like NDC and APIs. Interestingly, even Ryanair—despite its public criticism of third-party sellers—is reportedly broadening its partnerships with OTAs, reflecting a pragmatic shift in response to changing market dynamics.

Business case for integration

At the core of MDMS viability is the **business case** for integration. Stakeholders stress that including rail services—especially long-distance or international connections—must make commercial sense. With little public subsidy and low passenger volumes on many of the longer and less frequent routes, the cost of integration is often disproportionate to the demand (**expressed by three MDMS providers / MDMS association out of 16, including ETT and DoHop, by three incumbent rail operators and their associations, including DB and CER, and by one national authority**). Integrating new tickets or fares for routes or operators with relatively low expected demand can be disproportionately costly, and forcing universal integration would introduce inefficiencies (according to one MDMS provider and CER). The situation is particularly difficult for smaller and regional operators who lack the technical and financial capacity to participate meaningfully (according to a national authority).

Freedom of distribution

The **freedom of distribution** argument remains central to many incumbent perspectives (all five incumbent rail operators interviewed mention it in some way or another). Operators assert their right to control who sells

their products, warning against compulsory integrations with platforms they perceive as untrustworthy or misaligned with legal standards (**mentioned by two incumbent rail operators out of five, including DB, public transport operators represented by UITP and one national authority out of seven**). At the same time, they assert a willingness to cooperate under fair commercial terms and highlight their compliance with transparency obligations—such as displaying competitor schedules—even if not offering full ticketing options (DB).

Lastly, **five stakeholders out of 51 underline that the technical complexity of integration should not be underestimated**. Particularly for small operators, the integration burden is high. Differences between reservation-based and non-reservation-based systems, lack of harmonised ticketing standards, and challenges in sharing accurate timetable data all hinder seamless integration (referred by the association of rail operators CER, one national authority, one MDMS provider, the Finnish Ministry and Polis). While initiatives such as OSDM aim to standardise access in the railway sector, concerns persist about its governance and inclusivity, with several stakeholders arguing it remains controlled by incumbents and lacks transparency (an MDMS provider). Other respondents (ADN Mobilités and AllRail) pointed out that technical complexity of integration is a pretext, “incumbents will say integration is complicated, require multiple meetings, claim technical issues, and keep postponing. It’s a stalling tactic and an abuse of the system” (ADN Mobilités). In the same line, according to AllRail, while efforts like Transmodel/NeTEx (which they support) and OSDM (preferred by incumbents) aim to create EU-wide ticketing standards, technical solutions alone are not enough. Even with interoperability, incumbents can still refuse to sell tickets from independent competitors.

15.14.4 Problem 3: Potential distortion of competition between regulated (CRS) and non-regulated B2B distribution channels performing similar functions to CRS. This problem has one problem driver associated with it

Outdated nature of CRS Code of Conduct

A key concern raised by many stakeholders in the air sector (one MDMS provider, and four airlines / airline association) is the outdated nature of the CRS Code of Conduct. While some recognise the value of the existing framework, they argue that it is now too narrow in scope to govern today’s diversified distribution environment. The market has evolved to include a range of new actors—content aggregators, OTAs, and meta-search platforms—that were not foreseen by the original regulation. These actors operate under very different models, and stakeholders emphasise the need for a regulatory distinction between B2B and B2C activities, given their differing dynamics (an airline association).

A particularly salient issue is the scope of the current code of conduct, which applies only to traditional CRS platforms. A significant portion of the distribution landscape—especially newer digital solutions—falls entirely outside its regulatory reach (one MDMS provider, four airlines / airline associations including A4E, Helsinki Region Transport). This creates what Helsinki Region Transport describes as a “distortion” in the marketplace, where regulated actors are increasingly disadvantaged in comparison to non-regulated ones that gain market share without being subject to equivalent constraints.

Transformations of the market and new players

Parallel to regulatory concerns, there is a marked trend towards direct distribution by operators. This is evident across both the airline and rail sectors and is characterised by a desire to maintain control over pricing, ticketing, and customer data (**four MDMS providers / MDMS association out of 16, including ETT and DoHop, and Helsinki Region Transport**). Several stakeholders note that this strategy, while reducing distribution costs, also restricts innovation. An air OTA highlights the consequences of such practices, especially in cases such as Ryanair, which has in the opinion of this MDMS provider actively resisted OTA cooperation. However, A4E contends that although GDS are likely to see further declines in market share, OTAs may gain increased visibility, driven by enhanced access to airline content via emerging technologies like NDC and APIs. Ryanair’s reported expansion of partnerships with OTAs also reflects a pragmatic approach to shifting market dynamics, despite its traditionally confrontational stance toward third-party platforms.

Four out of five air carriers highlighted insufficient enforcement mechanisms, particularly regarding OTAs. They stressed that OTAs are not subject to the same enforceable obligations as airlines. All the airlines pointed at misleading practices among OTAs, such as misleading fare breakdowns and selling airline services (like seat selection and baggage) as separate ancillaries and argue that the resistance to cooperation is also due to these practices as their products and ancillaries would not be displayed in the most suitable way by some OTAs.

Further compounding these issues is the use of restrictive full content agreements by GDS platforms (MDMS provider). These contracts mandate that airlines provide identical content to all channels, often in exchange of lower fees, limiting their ability to optimise distribution strategies and adapt to specific consumer needs. As an MDMS provider notes, this often prevents airlines from presenting value-added bundles—such as those including meals or baggage—in a flexible or consumer-friendly format. One MDMS provider attributed the limited inclusion of complex or dynamic bundled offers to technical constraints within traditional GDS systems. According to the provider, these limitations are prompting airlines to redirect sales to their own direct channels, where they retain greater control over pricing structures and product configurations.

An airline association refers that two principles are key: an airline should be able to choose business partners to ensure good servicing to consumers and the content it provides as well as to adapt the content to the channel with the right cost of distribution. The same association sees more and more challenges are present with OTAs doing tricks, malpractice and deceiving their customers while not showing their settlement prices with airlines

Neutral display and regulation

While some airlines and platforms active in the air sector, such as one MDMS provider, raise concerns about the operationalisation of neutral display requirements—particularly how they might function in practice—an airline association cautions that mandatory comprehensive content provision could inadvertently reduce competition. If large OTAs and meta-search engines are guaranteed access to all content under neutrality rules, smaller platforms may be crowded out, thus diminishing rather than enhancing consumer choice. A meta-search platform, however, disputes the very premise of this concern, suggesting that it is not a significant problem in the current market.

In contrast to the calls for expanded regulation, several stakeholders urge caution. **Two MDMS providers out of 16 and three incumbent rail operators / rail associations out of five, including SNCF and CER, argue that current regulatory tools**, including those governing access , are adequate. They stress that commercial decisions regarding distribution strategies should be respected and that authorities should not impose obligations for integration or content sharing where there is no mutual interest. This view is strongly supported by DB and CER, who emphasise the importance of distribution freedom and warn against forcing companies to open their platforms to competitors, especially if those competitors have not made similar investments in infrastructure.

Airlines associations refer that neutral display and non-discrimination should remain the main values. An airline association noted that although the accepted term is neutral display, they prefer a “regulated display”, meaning they should be rules on how, when and under what specific circumstances data is displayed to avoid unfair practices. A neutral display should mean that MDMS, in particular OTAs do not favour their own interest. The stronger these OTAs are, the more power they have to deceive consumers.

Despite these divergent perspectives on regulation, there is an agreement that enforcement of existing rules—where they do apply—must be strengthened. Two airlines / airline association including A4E call for more meaningful enforcement powers for national authorities to ensure compliance with regulatory obligations.

15.14.5 Other problems and barriers identified by stakeholders

Regulatory asymmetry between rail and aviation

Several stakeholders in the rail sector (**two incumbent rail operato**r out of five, including **the representative association CER**) and others (ECTAA) expressed concern about the relative disadvantage of rail versus air under the current regulatory trajectory. ECTAA added to this critique by drawing attention to the issue of threshold-setting in the proposed regulation. While they see no fundamental problem with including rail

operators above a certain threshold, they question why equivalent criteria are not applied to air transport. For ECTAA, this inconsistency exemplifies a broader failure to acknowledge the increasing market consolidation and evolving competition dynamics within the air sector, particularly in the post-pandemic landscape.

Nevertheless, the perception of regulatory asymmetry between rail and air is contested by a number of respondents operating in the airline industry. Three airlines, three MDMS providers (travel search engines), and one airline association opposed the idea of a common scope, emphasising that the air transport market is inherently open and competitive. One airline strongly argued that air and rail should not fall under a unified regulatory framework and should instead be treated separately. These stakeholders demonstrate interest in ensuring the availability of this content, primarily due to the strategic benefits they derive from its distribution and the financial or operational incentives provided by CRSs.

Scope of the regulation

In parallel, another debate topic emerged regarding the conceptual clarity and scope of the MDMS regulation itself. Several stakeholders of varied nature (**two MDMS providers out of 16, two rail operators – one incumbent and one new entrant – out of nine, and one national authority out of seven**) noted that the current definition of MDMS is insufficiently precise. These services operate in diverse and evolving configurations, and not all MDMS serve the same functions within the mobility ecosystem. For instance, an incumbent rail operator and a new entrant rail operator underscored the importance of distinguishing between platforms that simply aggregate information, those that facilitate ticket sales, and others that offer integrated payment and customer service functionalities. A uniform regulatory treatment of such heterogenous services risks being either overinclusive or underinclusive. Some MDMS can be private initiatives while others are services created and managed by metropolitan PTAs.

A national authority added another layer to this discussion by noting that many applications now selling transport tickets—including banking apps—fall outside traditional conceptions of MDMS. If the regulation is to be meaningful, it must provide clarity on whether such actors are within scope, and if so, under what conditions. Without this clarity, both regulators and service providers may struggle to navigate the compliance landscape, leading to uneven enforcement and legal uncertainty.

Other issues raised which are out of scope

On **passenger rights**, a regulatory grey zone persists. While carriers are technically responsible for the services they sell, MDMS often avoid deep involvement in managing disruptions, particularly for multimodal journeys (referred by one national authority, an MDMS provider, and other organisations such as EPF and the expert from The Man in Seat 61). The lack of a single point of accountability erodes consumer protection. Moreover, purchasing separate tickets for each segment can lead to a complete loss of rights if a connection is missed (The Man in Seat 61), a concern echoed in EPF's call for harmonised passenger rights for multimodal trips.

According to ADN Mobilités fare structures are often complex in the mobility sector. That makes integrating the offer of operators on MDMS technically more complex and potentially more costly. This complexity does not help passengers to navigate easily the offer on MDMS. For example, in France, users must navigate four different paid discount cards, family discount cards, approximately 20 regional discount cards, and various loyalty programmes for operators such as SNCF and Eurostar. In their view this already intricate landscape becomes even more complicated when flights are added into the mix. While some MDMS offer combined air and rail services, integrating these seamlessly is particularly challenging (ADN Mobilités).

The **low commission levels** offered to railway MDMS are also flagged as a structural weakness in the current distribution ecosystem. With margins thin and customer acquisition costs high, the economic model for independent MDMS remains fragile and, for some, unsustainable (one MDMS provider). Independent MDMS claim the commission they receive is artificially too low, as a result of low real negotiation power against incumbent train operating companies. If the commission rates are low, they claim it is difficult for them to develop and grow (ADN Mobilités).

15.14.6 Potential policy measures (focusing on the ones that arose in the actual discussion)

15.14.6.1 Obligation for all MDMS to apply the CRS Code of Conduct's updated neutral display obligations. Neutral display ranking criteria and display rules are updated. For transport operators (in all modes): obligation to apply data accuracy rules

The interviews conducted for the MDMS impact assessment reveal a strong convergence around the idea that the current regulatory framework, particularly the Code of Conduct for CRS, is outdated and misaligned with the realities of a rapidly evolving distribution landscape. At the same time, the proposed reinforcement of neutral display obligations generates more nuanced and sometimes conflicting views, especially regarding its practical relevance and scope.

Some stakeholders noted that the Code of Conduct governing CRS systems no longer reflects market dynamics. Organisations representing airlines, OTAs and GDS (**two airline associations out of two, two airlines out of four, four MDMS providers / MDMS association out of 16, - including one OTA, one new content aggregator, one CRS and EU Travel Tech, and one Other organisation – BEUC**) argue that the regulation has become obsolete, primarily because it does not encompass the diversity of actors now operating in the distribution ecosystem. As an airline association notes, aggregators such as Travelfusion and OTAs now perform roles similar to or overlapping with GDSs, yet are excluded from the scope of the current framework. BEUC similarly emphasises that many market players have developed booking systems and sales strategies that entirely bypass traditional CRS platforms, thereby circumventing the obligations imposed by the Code. One MDMS provider, itself a major player in the CRS space, supports this view, stating that it now competes with global actors not subject to the same regulatory burdens, which undermines competitive neutrality.

The functional irrelevance of the CRS Code is further illustrated by stakeholders such as two MDMS providers / MDMS association including ETT, who argue that while the principle of neutral display may retain some value in B2C contexts, it is largely ineffective in B2B scenarios. The divergence in how B2C and B2B markets function necessitates a more differentiated regulatory approach.

On the specific issue of neutral display obligations, stakeholders present a range of positions. One MDMS provider, one road transport operator, WestBahn, and EPF generally support the idea, provided it is implemented in a manner that enhances customer clarity. WestBahn in particular underscores the importance of allowing users to set their own preferences, suggesting that neutrality should not eliminate user agency but rather support it through transparent criteria.

50% of the airlines interviewed are in favour of CRS Code of Conduct neutral display of obligations. Indeed, t**hree out of six air carriers / airlines associations supported this policy**. One of them was cautious and, while acknowledges neutral display obligations already work for CRSs, questions the benefit of extending neutrality rules to B2C platforms. Another airline criticised business models (like Edreams) that allow airlines to pay for higher placement in search results. A third air carrier showed preference for “regulated display” over neutral display, to avoid deceptive practices by OTAs and ensure that airlines retain control over how and what content is shown.

By contrast, other stakeholders, such as a OTA, raise fundamental concerns about the concept itself, particularly its relevance and enforceability. For this OTA, imposing neutral display requirements in consumer-facing platforms could paradoxically reduce competitive pressure by homogenising offerings and eroding the ability of suppliers to differentiate. Similarly, a rail operator and other stakeholders (one new entrant and one national authority) challenge the very notion of what "neutral" means in practice, suggesting that it is a concept too ambiguous to serve as a solid foundation for regulation.

15.14.6.2 Obligation for all MDMS to apply the CRS Code of Conduct's rules on marketing and booking data

The interviews highlight the ongoing structural shifts in the travel distribution ecosystem, particularly regarding the declining utility of traditional CRS platforms and the ambiguous role of OTAs in ensuring transparency and neutrality. These developments have substantial implications for the relevance of current regulatory tools, including the CRS Code of Conduct, which several stakeholders argue is no longer fit for purpose (**two airline**

associations out of two, two airlines out of four, four MDMS providers / MDMS association out of 16, - including one OTA, one new content aggregator, one CRS and EU Travel Tech, and one Other organisation – BEUC-) .

An MDMS provider underscores a fundamental trend: as airlines increasingly shift towards direct-to-consumer distribution strategies, the marketing and booking data once central to the business model of CRS platforms is losing its strategic value. This is not only due to disintermediation by airlines themselves, but also because of the emergence of alternative data providers, such as IRT, which are gaining traction in the market. Consequently, the informational advantage once held by CRS is diminishing, eroding its former centrality in the travel booking ecosystem (an MDMS provider).

At the same time, the integrity and impartiality of online intermediaries—particularly OTAs and meta-search engines—are increasingly being questioned. An association of airlines expresses concern that these platforms tend to promote operators or products based on commercial interests rather than objective consumer value. In this view, the current Code of Conduct disproportionately safeguards the ability of OTAs to access airline content, without placing commensurate emphasis on ensuring transparency or neutrality for end users. From an association of airlines' perspective, this asymmetry in protection undermines the stated consumer-facing objectives of the regulation. They call for a recalibration of the Code to explicitly enshrine expectations of neutrality and openness, making it clear to consumers when and how platform interests may shape the display of travel options.

These observations reinforce broader patterns identified across other interviews: the growing misalignment between regulatory frameworks and actual market behaviour, and the increasing complexity of intermediary roles (referred by two airline associations out of two, two airlines out of four, four MDMS providers / MDMS association out of 16, - including one OTA, one new content aggregator, one CRS and EU Travel Tech, and one Other organisation – BEUC). As both the technological tools and commercial incentives driving travel distribution evolve, traditional regulatory safeguards, such as those embedded in the CRS Code of Conduct, appear increasingly ill-suited to guarantee fairness, neutrality, or relevance. While some stakeholders see continuing value in core regulatory principles such as transparency, they argue that such principles must be rearticulated and enforced within a framework that recognises the current digital and decentralised nature of distribution (mentioned by EU Travel Tech, one CRS and one airline association).

15.14.6.3 Obligation for Member States to appoint a national authority to settle disputes between parties

The prospect of establishing a neutral body to oversee aspects of the MDMS ecosystem elicited a range of views from stakeholders, highlighting both significant support and notable dissent across transport modes and institutional roles. The strongest proponents of such an entity (**two new content aggregators, two airlines, two rail new entrant – WestBahn and Snälltåget, a national authority, together with two Others including BEUC**)—envisioned as an independent regulatory or coordination body at the EU level—emphasise its potential to ensure market fairness, resolve disputes efficiently, and foster cross-border consistency in enforcement and governance.

Concerns were raised about the current state of regulatory enforcement. One MDMS provider criticises the enforcement of existing rules as fragmented and ineffective, implying that without a stronger and more coherent oversight mechanism, the ambitions of MDMS could falter in practice, regardless of the strength of the regulatory text. This critique links to broader calls for **clearer and more enforceable mechanisms** across the MDMS ecosystem.

A number of interviewed stakeholders across both air and rail sectors expressed clear support for a neutral oversight structure. Two airlines / association of airlines referred to their experience with passenger rights regulation as a positive precedent, suggesting that a neutral intermediary would contribute to consistent implementation of rules across Member States and strengthen dispute resolution mechanisms. This argument was echoed by BEUC and a consumer information association both of whom underlined the necessity of a supranational authority, particularly in light of persistent coordination challenges between national bodies. For BEUC, this is not just a procedural necessity but a consumer protection imperative, ensuring that overarching rules are enforced uniformly and equitably.

This agreement among consulted stakeholders, however, is not universal. An MDMS provider recognised the theoretical benefit of a neutral body but noted that disputes rarely escalate to a level that would need its involvement, implying that practical utility may be limited. More critically, other voices (CER and Czech authority) questioned both the need and effectiveness of such an institution. CER and the Czech authority, for example, argued that existing judicial and administrative bodies are sufficient for handling market disputes. The Czech authority was especially dismissive, claiming that a neutral body would add little value, given the competitiveness of the national ticketing market and the availability of redress through existing legal mechanisms.

These divergent views reflect not only sectoral differences but also national market conditions. Where competition is perceived as functioning well, the added value of a new EU-level institution is questioned. Conversely, in contexts marked by fragmented regulation, limited oversight, or asymmetrical market power, stakeholders tend to favour a coordinated and neutral supervisory structure. Importantly, all sides converge on the need to ensure fair competition and prevent monopolistic consolidation; the disagreement lies in whether new institutional arrangements are necessary to achieve this end or whether existing frameworks are adequate.

15.14.6.4 EC adopts decisions to designate indispensable B2C MDMS or rail operators

While a few actors acknowledged the potential for targeted regulation or incentives (two stakeholders in Others, which are Polis and one consumer information association), the dominant view was that defining any MDMS or operator as indispensable risks distorting the market, overregulating the sector, and failing to reflect the complex and evolving distribution landscape (four MDMS providers / associations, including, Skyscanner, ADN Mobilités and one CRS, the travel agents association ECTAA, three incumbent rail operators/associations, including DB and CER, and UITP). Other stakeholders adopt a cautious stance, expressing concern over how 'indispensability' is defined (three airlines/association of airlines, one new entrant rail operator, one new content aggregator)

Among the few expressing a more measured stance, an airline pointed out that indispensability is highly context-dependent, varying according to specific products and market structures. UITP also offered alternatives, suggesting that while full regulatory intervention may be unnecessary, light-touch incentives could improve cooperation where needed, provided flexibility is maintained.

However, **nine out of 16 stakeholders who offered complete responses on this topic, rejected the notion of indispensable MDMS, arguing that no platform currently holds such a position of market power.** They emphasised that a range of distribution channels is available today, allowing both large and small operators to access the market without being tied to dominant incumbents (referred by four MDMS providers / MDMS association including ETT and ADN Mobilités, three rail operators, including DB and CER, one association of airlines such as A4E, and others as Polis and ECTAA). SNCF's position was especially clear in asserting that its own platform is not indispensable, noting that, in their view, smaller operators often prefer alternative sales channels.

Criticism also focused on the vagueness and potential unfairness of the criteria proposed to determine indispensability. Several representatives of MDMS stressed that thresholds being discussed are not adequately justified, especially when applied to small B2B MDMS, which could be disproportionately affected by such designations (three MDMS providers including ETT, and other such as ECTAA). ETT in particular found it incoherent to label small B2B actors as indispensable, as this misrepresents their market position and business model. For ADN Mobilités, the criteria for determining which MDMS platforms are considered indispensable remain unclear, particularly for independent platforms. As stated by ADN Mobilités, while it is evident that vertically integrated MDMS owned by dominant carriers would qualify due to their market control, identifying other indispensable platforms is more complex. For the cited MDMS association, metrics such as ticket sales volume and revenue are unreliable, as commission rates vary and do not necessarily reflect profitability or market influence. Many platforms also generate income from services beyond ticket sales and operate across multiple transport modes, making it difficult to isolate rail-related figures. Additionally, user data is inconsistent – individuals may use platforms for information but purchase directly from carriers, making usage figures misleading (ADN Mobilités).

Concerns about overregulation and market distortion were echoed strongly by DB and another incumbent rail operators. They cautioned that obligating operators to sell through third parties, regardless of existing direct sales volumes, would interfere with commercial autonomy and might lead to inefficient outcomes. This, they argued, could create a situation where operators are penalised for successful independent sales strategies and forced into partnerships that offer little added value.

A further strand of critique focused on the oversimplification of MDMS types within current policy discussions. Stakeholders such as a rail operator, two airlines / airline association such as A4E, and Polis emphasised that the MDMS ecosystem comprises a wide variety of actors—ranging from global distribution systems and online travel agencies to meta-search engines and public transport authorities—with vastly different functions, incentives, and market behaviour. Treating these entities as functionally equivalent when determining indispensability risks misregulation and unintended consequences. Polis, for instance, argued for clear differentiation between commercially driven platforms and those operated by public authorities, which have very different objectives and constraints.

Finally, three airlines/airlines association warned that current concerns about market dominance should be redirected. Rather than focusing on rail platforms or national carriers, attention should turn to the significant concentration among OTAs. A4E highlighted that the combined market share of two MDMS providers exceeds 50% of the OTA sector, dwarfing any individual airline platform. This level of consolidation, they warned, could replicate dynamics seen in the accommodation sector, where a handful of players have gained outsized influence. An airline concurred, noting that these developments warrant regulatory vigilance.

15.14.6.5 Obligation for all B2C MDMS to share non-personal data for mobility management with public authorities

The sharing of trip data by MDMS providers with public authorities was viewed positively by several stakeholders, particularly in terms of its potential to enhance transport planning and policy evaluation. For authorities and passenger representatives, the access to such data would support a more accurate and comprehensive understanding of mobility patterns across transport modes, including critical first and last mile segments. A national authority noted that such data could significantly improve the assessment of the uptake of public and sustainable transport options, enabling evidence-based decision-making on mobility infrastructure and services. Similarly, a national authority and the European Passengers' Federation welcomed the measure, with the latter cautioning that while it is a constructive development, it may not yield immediate impacts.

However, this agreement among consulted stakeholders was not universal. Some stakeholders raised concerns about the commercial implications and limitations of the current approach. Snälltåget expressed a nuanced view: although the ability to observe passenger flows was seen as beneficial, there were reservations about the use of such data by public authorities in a way that could undermine commercially viable services. Citing experiences in Sweden, Norway, and Denmark, Snälltåget warned that trip data could be used to justify the creation of new public service obligations, replacing services previously operated commercially, which could negatively affect private operators (MDMS provider Snälltåget).

Further complexity was introduced by UITP, which underscored the importance of data reciprocity. While recognising the potential value of sharing data with public transport authorities, UITP warned of an emerging asymmetry wherein PTA-managed platforms, acting as aggregators, accumulate large datasets, while operators—who often provide the data in the first place—may not have access to the same information. This situation could create structural imbalances in the mobility ecosystem, with PTA-managed platforms becoming "data rich" and operators "data poor." Such an outcome could ultimately compel operators to buy back data they initially generated, which was considered problematic and unfair.

15.14.6.6 Obligation for all B2B and B2C MDMS to display information on GHG emissions of trips - only when the data is provided by the operators

The integration of greenhouse gas emissions data into MDMS platforms has garnered considerable support among various stakeholders, who underscore the importance of raising passenger awareness regarding the environmental impact of their travel choices. Advocates (two incumbent rail operator / association SNCF and

CER, two MDMS providers / association including ADN Mobilités, one airline, new rail entrant Snälltåget and other stakeholders such as EPF and T&E), emphasise that transparent emission disclosures could empower consumers to make more environmentally responsible decisions, potentially influencing modal shifts towards sustainable transport. This viewpoint aligns with CER's position, which stresses that all operators should be mandated to display emissions data; moreover, where operators fail to provide such information, MDMS platforms should still be obligated to estimate and present emissions based on standardised methodologies, ensuring consistency and reliability in environmental data provision.

Nonetheless, the benefits of emissions data transparency were widely recognised as contingent upon fair and meaningful comparisons across transport modes. Stakeholders such as one MDMS provider, two rail operators -one incumbent and Snälltåget, and a road transport operator highlight that emissions data is only useful if presented alongside comparable information from alternative modes of transport. For instance, an MDMS provider pointed out that in many European regions where air travel remains the sole viable option, displaying emissions data might offer limited practical relevance. In contrast, rail operators have increasingly sought to demonstrate their environmental efficiency, yet this effectiveness is dependent on presenting emissions in a broader multimodal context, thereby allowing passengers to weigh options appropriately.

The technical complexity and practical challenges involved in standardising emissions data were further emphasised by stakeholders, mainly transport operators, including two MDMS providers, two rail operators - one incumbent - and an airline. They note the difficulties stemming from diverse calculation methodologies employed by operators, which complicate cross-border travel assessments and undermine the granularity and comparability of available data. This fragmentation potentially diminishes the reliability of emissions information and complicates consumer decision-making. Additionally, some MDMS providers highlighted a lack of collaboration among operators in supplying consistent greenhouse gas data, further impeding the effectiveness of any disclosure regime (three MDMS providers and one incumbent rail operator).

Another debate was whether the emission disclosure should be mandated or voluntary. The notion of imposing an obligation to disclose emissions data led to divergent opinions. While some stakeholders endorsed mandatory requirements, others expressed reservations about compelling operators to publish such information. WestBahn, for instance, argued that emissions data provision should remain a voluntary commercial decision, noting that generic mode-based information might suffice for informing passengers without requiring granular data that differentiates between various service types, such as high-speed versus conventional trains (WestBahn).

Moreover, a number of stakeholders, including the Czech Authority, Helsinki Region Transport and others, questioned the practical impact of emissions information on multimodal travel choices, suggesting that customers may show limited interest in greenhouse gas data when making booking decisions. This scepticism points to a possible disconnect between the theoretical benefits of emissions transparency and actual consumer behaviour in mobility markets.

Finally, it is important to acknowledge the intersection of emissions data requirements with other ongoing EU initiatives, such as the Count EmissionsEU initiative, which could result in overlapping regulatory frameworks. BEUC noted the need to consider this potential duplication to avoid regulatory inefficiencies and ensure coherent policy development in environmental data disclosure.

15.14.6.7 Respecting the principles on distribution fees and without imposing highly restrictive clauses (exclusivity clauses, marketing clauses and other technical restrictions) when entering into commercial agreements with MDMS

The discourse surrounding cooperation under FRAND principles and mandatory data sharing reveals a complex interplay of support and concern among stakeholders. Many stakeholders (three MDMS providers / MDMS association including ADN Mobilités, ETT and one OTA, two new entrant rail operators/association, including AllRail, one national authority and one consumer organisation) advocate for compelling operators to share data and collaborate with multimodal digital mobility services under fair, reasonable, and non-discriminatory terms (FRAND), reflecting rulings by DG Competition and national authorities on cases such as RENFE and DB. Consumer organisations, such as EPF, and MDMS ADN Mobilités emphasise the necessity

of such explicit FRAND mandates to enable transparency and efficiency within the ecosystem. EPF further stresses the importance of a one-stop-shop booking and payment system characterised by transparency, simplicity, affordability, and a preference for through-ticketing solutions. In this vein, EPF advocates for regulated open data sharing on timetables and fares via standardised interfaces, with FRAND distribution agreements as a default, thereby ensuring an unbiased and comprehensive overview of travel options, enhanced price transparency, and fair competition, inspired by principles enshrined in the CRS Code of Conduct. AllRail considers there needs to be a basic willingness from operators to enter into commercial agreements and offers UK as a good example of fair terms. In the words of AllRail, a fair market requires both sides to be regulated. Operators must share their data, and ticket vendors must sell all operators' tickets. Without this balance, the system remains skewed.

The call to elevate the significance of FRAND principles resonates with stakeholders of different nature such as three MDMS providers / MDMS association including ADN Mobilités, EU Travel Tech and one OTA, one national authority, and the consumer organisation EPF, who see these terms as essential safeguards to foster equitable cooperation and access within the market. However, this perspective is met with caution by another MDMS provider (a CRS), which questions the practical feasibility of enforcing FRAND obligations. The CRS warns that while the principles appear appealing in theory, their implementation may prove overly prescriptive and risk undermining the regulation's objectives by introducing inefficiencies or unintended consequences.

Concerns regarding the regulation of distribution fees further complicate the debate. Stakeholders including DB, CER, SNCF, and UITP caution that imposing levels of fee defined by regulation could distort the true value of services rendered and overlook the internal costs borne by providers. DB illustrates that artificially regulated fees might exceed the service's actual worth or the operator's distribution expenses, potentially inflating the overall cost of ticketing processes. Accordingly, UITP argues that fee levels are better determined through bilateral agreements between the involved parties rather than through overarching EU-level mandates, advocating for market-driven solutions sensitive to contextual specificities. On the topic of distribution fees, AllRail offers again the example of UK. They regulated ticket vendor commissions to prevent dominant operators from squeezing vendors—setting them at 5% for online and 9% for offline sales. These levels have held for over 20 years and remain effective. According to AllRail, Trainline, for instance, thrives on the 5% rate and remains highly profitable, showing such limits do not harm vendors. By contrast, commissions of 10–12% or more may drive up ticket prices, ultimately burdening passengers.

Conversely, some actors such as one incumbent and one new entrant rail operator consider that the market is already naturally evolving towards more commercial, negotiated agreements, thus questioning the need for additional regulatory imposition on distribution fees or terms. The new entrant rail operator specifically highlights the lack of clarity around what constitutes "highly restrictive clauses," suggesting that regulatory interventions might be premature or misdirected without clearer definitions and understanding of market practices.

The imposition of complex or costly product requirements on platforms raises further reservations, mainly among transport operators. An incumbent rail operator and an association of airlines warn that forcing platforms to accommodate complicated or unreasonable products risks detracting focus from core offerings and diminishing user experience. This concern is echoed in strong opposition from one airline, two airline associations (including A4E) and one aviation new content aggregator towards any "full content" obligations, which historically have compelled airlines to distribute through GDS systems, incurring segment charges that ultimately elevate prices and restrict the airlines' capacity to offer the most competitive fares. Additionally, the airline industry strongly opposes full content obligations, arguing they hinder innovation, restrict commercial freedom, and create market distortions. Such agreements limit flexibility in tailoring fares or product bundles and obstruct the adoption of modern technologies like NDC. Airlines emphasise that these obligations arose from historical power imbalances where GDSs dictated terms and imposed costly conditions—forcing airlines to share their lowest fares while simultaneously being charged high GDS fees. This often results in a competitive disadvantage, especially compared to online travel agencies that benefit from GDS incentives. Additionally, airlines argue that they must retain the freedom to choose distribution partners based on cost, service, and strategic alignment, and should not be compelled to distribute certain content when doing so is economically unviable or operationally counterproductive.

Lastly, a national authority underlines a notable gap in the regulatory debate: the absence of clear definitions and conditions surrounding the agreements purportedly governed by FRAND principles or distribution mandates. This ambiguity complicates enforcement and creates uncertainty regarding the scope and limitations of any regulatory framework, highlighting a pressing need for clarity to ensure effective and fair implementation.

15.14.6.8 Obligation to unbundle the distribution system from the parent operators' system

The discussion on the unbundling of ticketing in long-distance rail reveals significant tensions between concerns about market sustainability and calls for greater openness and independence in ticket distribution channels. **Twelve out of 16 respondents who offered a complete response on the topic show a negative opinion on unbundling and view unbundling** as an ineffective and potentially harmful measure. For instance, DB emphasises that ticket revenue is essential for sustaining rail operations, arguing that the ticketing process directly funds train services. Regulatory demands to unbundle ticketing without adequate protections or compensation, from their perspective, risk undermining the financial viability of rail services, potentially rendering the model unsustainable in the long term (DB). This position is shared by other major three rail incumbents/rail association including CER and SNCF, three new content aggregators / MDMS association, one new entrant rail operator, one national authority and the UITP, who generally perceive unbundling as disruptive and not delivering added value to end customers. WestBahn has an intermediate opinion: while unbundling is not strictly necessary, it is strongly preferred as it would sever the link between railway undertakings and distribution platforms, reducing undue influence over what is displayed or sold.

Moreover, several interviewed stakeholders highlight challenges of implementation and limited political appetite for such reforms: Three rail operators / rail associations including CER and WestBahn, the MDMS provider EU Travel Tech, the UITP and a national authority caution that pursuing unbundling at this stage may be overly ambitious and risks complicating or even stalling broader legislative progress. A new entrant rail operator notes the delicate balance between acknowledging the real challenges posed by incumbent dominance in vertically integrated ticketing and the risk that introducing such a measure might jeopardise the entire regulatory framework, describing the situation as a “mixed bag”. Complexity is also underlined by the MDMS EU Travel Tech, which points to the inherent difficulties in establishing a fully independent MDMS that can operate without ties to incumbent operators.

Contrasting these concerns, there are voices that argue in favour of regarding incumbent sales channels as a form of inherited public property that must be accessible to all market participants. One of the most vocal advocates of unbundling is AllRail (others are AND Mobilites and two new entrant rail operators). The organisation representing mainly new entrant rail operators supports a State-owned rail organisations which should prioritise public benefit and transparency, especially since 63% of EU passenger rail services are subsidised. Passengers should see all available ticket options—not just those from state-owned operators. According to AllRail, some countries are leading the way. Austria plans to separate its ticket vendor from the national railway, allowing it to sell tickets from all operators. Norway has also unbundled its operator and ticket vendor, creating a more neutral platform, though improvements are needed.

In the same line, one new entrant rail operator asserts that in the era of monopolistic national operators, incumbent sales channels, especially in countries such as Germany and France, became the primary and almost exclusive gateways for ticket purchases, both domestic and international. This historical role confers on these platforms a dominant market position deeply ingrained in consumer behaviour. The new entrant in the rail sector argues that these sales channels, including those of operators such as DB, SB, and SNCF, function effectively as public assets, yet the operators behave as private entities by selectively controlling access to these platforms. This dynamic allows incumbents to reap the benefits of these “public” brands while limiting competition, an arrangement that may undermine fair market conditions (European Sleeper). A customer information association reinforces this view by emphasising that independent MDMS would deliver superior customer service by avoiding preferential treatment for any particular operator. They criticise the recent integration of DB Navigator into DB’s long-distance division as a misstep, suggesting it would have been preferable to establish a genuinely independent ticketing platform in Germany, a development that has been resisted by DB itself. On the rail side, WestBahn elaborated a concrete example of how such independent body could function, pointing to Austria’s "One Mobility" initiative. This project, currently responsible for issuing

the KlimaTicket, is being considered as a neutral ticketing infrastructure provider. WestBahn argued that a similar, impartial structure at the EU level could define and govern the algorithms and parameters underpinning MDMS platforms, thereby preventing distortions caused by commercial interests. New entrant rail operator Snälltåget, and a national authority also supported this position, stressing that central coordination is key to avoiding monopolistic behaviours and ensuring balanced market development.

WestBahn, a national authority, and a consumer information association advocate for the creation of **neutral distribution platforms, ideally governed by independent entities**. They argue that only a structurally independent platform—free from commercial transport interests—can guarantee unbiased access and display of travel options. This proposal is a direct counterpoint to vertically integrated models, where platform operators may favour their own services, thus compromising consumer choice and distorting competition.

AllRail attempts to summarise in one argument the relevance of unbundling to improve the visibility of new entrants in the distribution channels: Open Access operators face three key challenges which securing rolling stock, high track access charges, and access to ticketing systems. Among these, AllRail members consistently identify ticketing as the most significant barrier.

One persistent barrier for unbundling lies in the consumer's perception and behaviour. A public transport operators association notes that many passengers are not yet comfortable booking long-distance rail journeys through third-party platforms, preferring to use operators' own websites. This hesitation reflects deeper structural features of the rail market, where brand loyalty and trust in national incumbents remain high. In this sense, rail distribution differs from commodified network services such as energy, where unbundling is more straightforward. According to the public transport operators' association, the symbolic value of the brand and service experience in transport inhibits the standardisation and unbundling needed for MDMS to function fully as a neutral intermediary.

15.14.6.9 Forcing vertically integrated MDMS platforms to sell competitor services / obligation to enter into commercial agreements with particular MDMS

The debate on whether vertically integrated MDMS with SMP should be mandated to sell competing operators' services reveals a clear tension between the goal of improving consumer access and the risk of distorting the market or undermining viable business models. However, **12 out of 15 stakeholders (three MDMS providers/associations – including one new content aggregator, one CRS and ADN Mobilités –, three rail operators – two are incumbent, including CER, and one new entrant –, two national authorities, two airlines/airline associations, ECTAA and UITP) who offered a complete response on the topic express a negative or sceptical opinion** of forcing vertically integrated MDMS platforms to sell competitor services or imposing an obligation to enter into commercial agreements with particular MDMS. Several stakeholders argue that a more cooperative, commercially driven approach is preferable to outright regulatory imposition, including two independent MDMS providers namely ADN Mobilités, an incumbent rail operator, an association of airlines, the public transport operators association UITP, two national authorities and other organisations such as ECTAA argue that mutual commercial interest should guide collaboration in distribution rather than mandated access. These actors emphasise that partnership models are more sustainable in the long term and avoid the inefficiencies that can arise from enforced integration, particularly in an environment where commercial negotiations already take place. "If you impose this constraint against their will, they might comply, but it will take years. They will hide it (competitors' tickets / trip information), maybe put it on a separate page, somewhat hidden" (ADN Mobilités).

A strong concern is the risk of increased market concentration (voiced by two incumbent rail operators / rail association including CER, a national authority, and another organisation such as ECTAA). While proponents of broader access claim it would enhance consumer choice, these stakeholders caution that forcing all platforms to sell competing services could paradoxically consolidate the market. As CER states, dominant platforms would likely become more attractive to operators seeking maximum visibility, which in turn would pressure smaller independent MDMS to cut commissions or risk exclusion. According to CER, increasingly competitive fee structures may pose challenges for the economic sustainability of smaller platforms, potentially resulting in market consolidation and a greater concentration of activity among a few large MDMS providers.

In CER's view ultimately, rather than promoting diversity and competition, the measure may entrench a handful of dominant actors and reduce the very consumer choice it aims to enhance.

Another point of divergence concerns the economic fairness of requiring MDMS—particularly vertically integrated ones—to offer competitor content. DoHop argues that obliging platforms to sell rivals' services without compensation is inequitable. Instead, any such requirement should come with a standard and evenly applied distribution price to reflect the commercial value of the service. This position reflects a broader concern among operators and platform providers about balancing regulatory goals with cost realities.

In a similar vein, a new entrant rail operator advocates for a less invasive alternative, suggesting that relinking to competitor services—rather than full ticket sales integration—could be sufficient to address concerns about consumer access. This would allow for a degree of openness while preserving the integrity and autonomy of individual platforms.

In contrast, AllRail has a positive view of the measure. According to the organisation, visibility on major ticketing platforms is critical to the survival of Open Access operators. With around 95% of bookings made through dominant sales channels, limited visibility can severely undermine an operator's viability. Improving platform presence from 5% to full visibility is described as a potential "game-changer" — delivering enough growth to make the business sustainable. According to AllRail, this boost in visibility of new operators has the potential of doubling the modal shift of rail for long-distance travels.

Three out of three respondents from the air sector who offered complete responses on the topic show a negative opinion of forcing vertically integrated MDMS platforms to sell competitor services or being obliged to enter into commercial agreements with particular MDMS. From their perspective, no equivalent regulatory intervention is needed, as the ecosystem already provides ample consumer choice and commercial neutrality.

By contrast, some actors strongly support a broader application of the obligation. EPF and WestBahn believe that all MDMS, rail operators, and transport modes should be included within the regulatory scope. They argue that such an inclusive approach would prevent loopholes and ensure a level playing field across the sector. From their standpoint, an obligation for all MDMS to offer competitor content would be a step toward fully integrated, multimodal travel experiences that prioritize consumer needs over proprietary interests.

15.14.6.10 Other policy measures

A common theme emerging across several stakeholders is the call for harmonisation, both in technical standards and enforcement mechanisms, as well as concerns regarding neutrality, market inclusiveness, and the protection of passengers' rights in complex multimodal journeys.

An MDMS provider emphasises the necessity of a **baseline agreement framework for IT standardisation**, underscoring the importance of interoperability to facilitate seamless integration across different transport operators. This view finds more specific expression in the support for the adoption of OSDM as a key technical standard, endorsed by stakeholders including DB, CER, and SJ AB. These actors view OSDM as a foundational component in enabling MDMS to function efficiently across borders and operators, particularly in ensuring consistency in ticketing data and fare structures. Critics argue that stakeholders outside the incumbent circle lack influence in shaping OSDM development. Both the Commission and ERA have voiced concerns about OSDM, with ERA publishing technical criticisms (voiced by an MDMS provider).

There is also a clear divergence of opinion regarding the scope of the MDMS regulation. While some stakeholders focus primarily on rail, others **argue for broader modal inclusion**. One CRS, one travel industry association and rail operators association CER advocate for the inclusion of the air sector within the scope of the MDMS regulation The last one is arguing that this would help generate meaningful modal shift incentives, particularly from air to rail. Their position reflects a larger ambition regarding sustainability goals. In contrast, SNCF takes a more cautious stance, suggesting that the existing Ticketing Roadmap for the rail sector is already sufficient and that further extension of scope may not be necessary at this stage. A public transport operator association insists that the **scope should be based on the nature of the services provided rather than the size** or perceived market importance of the operators. This perspective aims to prevent exemptions

for large or small players based on arbitrary thresholds, and instead align the regulatory burden with the operational characteristics and relevance of the service.

Another concern is how travel results are displayed. A rail operator opposes any default ordering of transport options on MDMS interfaces, advocating instead for **user-led filtering mechanisms**. This approach seeks to uphold user agency and avoid implicit prioritisation of specific criteria, a point that dovetails with wider demands for platform neutrality and fair competition.

Finally, an often-overlooked aspect raised by two MDMS providers including GBTA is the need for a **strengthened framework on passenger rights**, especially when journeys involve combined bookings from multiple operators. They underline the importance of ensuring consistent obligations in terms of compensation and duty of care, particularly in multimodal travel scenarios where the lines of responsibility can become blurred. Without such safeguards, the passenger experience risks fragmentation, undermining confidence in MDMS as a reliable mobility solution.

15.14.7 Baseline and expected evolution in the absence of EU action

15.14.7.1 How do you expect the share of passenger transport trips arranged via MDMS platforms to evolve in the future without any further EU action?

Aviation

One MDMS provider offers a detailed breakdown of the current distribution landscape in the airline sector, estimating that approximately 30% of bookings are made directly through airline websites, while the remaining 70% go through indirect channels such as GDS, OTAs and other MDMS. However, in their view this ratio is expected to shift further towards direct sales, particularly driven by the continued growth of low-cost carriers. According to this MDMS provider these carriers, which dominate the intra-European market, favour direct distribution via proprietary digital channels, allowing them to retain control over ancillary revenue streams such as baggage fees and seat reservations.

This scepticism toward MDMS by airlines is echoed by one MDMS provider and ECTAA, both of which foresee a decline in the availability of air travel options on MDMS platforms if current market trends continue unchecked. ECTAA in particular warns that, without regulatory intervention, the diversity and completeness of air content available via MDMS will continue to erode, undermining the ambition of these platforms to offer seamless multimodal travel options.

Network carriers, on the other hand, present a more nuanced picture. While they have historically relied more heavily on indirect channels—including GDS and OTAs—due to the complexity of their fare structures and reliance on travel agency partnerships, they too are now investing in direct sales channels. A4E highlights that traditional carriers are adopting low-cost carrier tactics: increasing direct sales, unbundling fares, and developing dynamic distribution models.

There is, however, no clear consensus on how this evolution will ultimately affect MDMS. A4E argues that while GDS will continue to lose market share, OTAs may become more prominent due to their improved access to airline offers through newer technologies such as NDC and APIs. Even Ryanairis reportedly expanding agreements with OTAs, suggesting a certain pragmatism in adapting to evolving market conditions despite its public antagonism toward third-party sellers. This position contrasts with observations from other stakeholders that OTA market share is already diminishing relative to operator-controlled platforms (mentioned by one OTA, one MDMS technology supplier, ETT and AND Mobilités), raising the question of whether MDMS can remain relevant without stronger regulatory backing.

Two out of three interviewed GDS providers express concern about increasing competition from newer, less-regulated distribution models and actors. These include NDC-based intermediaries such as Travelfusion and Duffel, which offer airlines more flexibility and cost-efficiency than traditional GDS systems. Two MDMS providers / MDMS association, including EU Travel Tech, and an airline association A4E together with others such as ECTAA, all note the asymmetry in the current regulatory framework, pointing out that while GDS are subject to detailed rules under the CRS Code, alternative channels are not. This has led to calls for regulatory reform by the aviation industry, including from an MDMS provider, two association of airlines and BEUC, who

argue that several provisions of the CRS Code are outdated and should be repealed or restructured to reflect the new distribution landscape.

Rail

An MDMS provider and an incumbent rail operator observe a generally favourable evolution, underpinned by viable business cases. In particular, an MDMS provider reports that for international rail bookings in the countries it serves, as much as 90–95% of reservations are processed via its MDMS platform, highlighting the sector's strong potential for cross-border travel. However, national ticketing remains highly variable, largely contingent upon the maturity of each country's infrastructure and fare systems. Regarding the question whether OSDM brought improvements to integrating offers, several stakeholders (the three incumbent operators/rail associations DB, CER and SJ AB and two new content aggregators) have emphasised the importance of OSDM's role as a facilitator, noting that their experiences with the model have been positive.

Nonetheless, significant gaps persist. While sales and after-sales services are reported to have improved, real-time support during the journey continues to be a weak point, limiting the overall utility of MDMS from the passenger perspective (referred by an MDMS provider). Expanding functional support throughout the journey lifecycle is considered an important next step to enhance the value proposition of MDMS.

According to EU Travel Tech, competition in the rail market is increasing but remains limited. Despite technical improvements and an encouraging policy environment, they predict that the share of MDMS ticket sales for rail may actually decline without firmer regulatory support. ADN Mobilités is aligned: they consider that without intervention from the European Commission, the market might grow a little, but overall it will gradually shrink over time. Some of independent MDMS may be forced to leave the market because of very low margins.

This somewhat pessimistic outlook contrasts with more cautiously optimistic views from actors such as a rail operator, which anticipates steady, incremental growth in rail travel and multimodality in general. A rail operator, referencing recent partnerships such as Air France - Eurostar, argues that the market is evolving through voluntary commercial agreements and that a long-term upward trajectory is plausible, though difficult to forecast.

A further tension arises from the behaviour of incumbents. Two new entrants in rail operation, including WestBahn, argue that dominant rail operators are increasingly developing new services while simultaneously limiting access to their content for competitors and independent platforms. This closed approach undermines the principle of open competition and inhibits the potential for MDMS to serve as a comprehensive access point for rail services. Similarly, although there is increasing use of APIs and OSDM standards (an MDMS provider, DB, CER), the uptake remains uneven, and legacy systems persist in many parts of the sector, delaying full-scale interoperability.

An incumbent rail operator introduces the idea that a serious meta-search engine for rail—one that could aggregate results from all operators and redirect users to ticket purchase sites—might significantly increase rail modal share by improving visibility and simplifying consumer choice. This highlights the latent potential for innovation in distribution architecture, even in the absence of ticketing centralisation. At the same time, an association of public transport operators underscores that if metropolitan apps provided by transport authorities are included under the MDMS umbrella (albeit with a different functional scope), the overall prevalence of MDMS-style platforms is already on the rise.

In conclusion, while the rail sector shows clear signs of progress in integrating with MDMS platforms—particularly for international travel—its development remains patchy and susceptible to commercial fragmentation. Stakeholders are split between those who believe the market is evolving sufficiently through voluntary standards and business cases, and those who argue that without stronger regulatory intervention, structural barriers and incumbent resistance will continue to limit growth. The long-term success of MDMS in the rail sector will thus depend on whether the Commission and Member States can reconcile the complex commercial and behavioural dynamics of the industry with the goals of interoperability, consumer empowerment, and modal shift.

15.14.7.2 How do you expect the share of intermodal / air-rail passenger transport trips to evolve?

The prospects for the development and uptake of MDMS are tightly constrained by both infrastructural limitations and structural dynamics within the transport market. While many stakeholders agree that there is latent demand for intermodal travel, the absence of viable infrastructure, entrenched operator behaviours, and persistent digital fragmentation continue to hinder growth.

Five respondents out of 16 who provided a full response on intermodality / air-rail combination (one airline association, DB, CER, BEUC and a national authority) mentioned that the lack of intermodal tickets is not necessarily evidence of low market demand. For the cited stakeholders infrastructural bottlenecks exist, especially when it comes to the combination of air-rail on a single trip. According to the airline association and CER rail operators, in particular, are seen as operating at or near full capacity, with no room for expansion given the current state of physical networks. They cite specific examples, such as the Paris–Lyon and Paris–Nantes corridors, to underscore how high occupancy and limited track availability restrict the feasibility of expanding intermodal connections. In this view, the failure of multimodality to grow is not due to a lack of commercial interest but to the physical constraints of the system. For BEUC*,"(the Regulation) will ease the capacity for an individual to use the train and to find an alternative to flying, but we are not expecting significant modal shift from Day 1. We know that for rail there are capacity restrictions and that it is difficult to source some rolling stock*"

This diagnosis is complemented by the perspective of legacy airline which highlights its proactive role in integrating rail through commercial agreements that cover not just the service but also liability management in case of delays. The mentioned airline's business model, rooted in the hub-and-spoke architecture, requires bringing passengers to central hubs and is thus well-aligned with the use of feeder rail or coach services. However, they note that the incentives are asymmetrical: airlines depend on feeding long-haul flights, while rail operators do not have this structural imperative. This imbalance, they suggest, limits the willingness of rail providers to engage fully in intermodal partnerships unless compelled by other commercial or regulatory incentives. The airline reinforces this position, pointing to ongoing coordination with SNCF and Eurostar and highlighting potential future expansion into maritime services in regions such as Greece. An airline further reports active collaboration with coach services around Munich, framing these efforts as logical extensions of its network model, even though establishing such agreements remains commercially and operationally complex.

While major airlines continue to expand their intermodal networks, other voices express significant scepticism about the likely evolution of modal share in favour of rail. European Sleeper provides a notably pessimistic forecast, suggesting that the dominance of incumbent rail operators, combined with their inability to enable seamless international or intermodal ticketing, will result in stagnation. This view is echoed by WestBahn and organisation grouped in “others”, both of which assert that only EU-level regulatory intervention can alter the structural inertia that inhibits progress. One national authority shares this general outlook, noting that while larger operators are likely to continue investing in proprietary digital platforms, smaller operators—lacking the technical and financial capacity—will remain locked out of the vertically-integrated MDMS ecosystem unless new mechanisms for inclusion are established.

The commercial viability of integrating rail into multimodal platforms is also contested. From the perspective of intermediaries, such as an MDMS provider, distributing rail tickets is increasingly unattractive. Rail content is often state-controlled or monopolised by dominant operators, making commercial terms uncompetitive or unscalable. As a result, the incentive for OTAs to develop rail content is weak, particularly in comparison to more flexible and better-margined air or coach offerings.

Finally, the growing interest in sustainable business travel adds another layer to this debate. There is increased demand among corporate travellers for environmentally friendly alternatives to air travel, positioning rail as an attractive option. However, as ECTAA notes, systemic barriers—particularly poor access to rail content for intermediaries—continue to limit the ability of MDMS to support meaningful modal shift. Without better integration of rail content into MDMS and equitable access rules for intermediaries, the potential to replace short-haul air travel with rail remains largely unrealised.

15.14.8 Impact on costs

From the perspective of established MDMS platforms, especially those with strong market positions, the cost of adapting to regulation is not viewed as prohibitive. An MDMS provider argues that dominant MDMS platforms, given their healthy profit margins, are well-positioned to absorb incremental compliance costs without significant operational disruption. WestBahn echoes this sentiment for smaller independent players, asserting that while investment may be required, the long-term benefits—particularly in terms of market access and fairness—will outweigh the upfront costs for new entrants. However, a national authority warns that enforcement may necessitate additional funding for national regulatory bodies. ADN Mobilités consider that adapting rankings to incorporate neutral display of information requirements may be very costly and time-consuming (ADN mobilités).

A point of divergent views arises around the integration of systems and the use of technical standards. An MDMS provider stresses the importance of aligning integration efforts with open, shared standards, cautioning that reliance on proprietary interfaces substantially inflates costs. This MDMS provider contends that the cost argument is often used strategically by incumbent operators to resist or delay integration with new entrants. According to them, once OSDM is adopted, integration becomes significantly more cost-efficient—potentially up to ten times cheaper than legacy system integrations. The MDMS provider points to the potential for significant savings through the use of OSDM, particularly in areas such as seat reservation and dynamic pricing. However, this optimistic outlook is not universally shared. A rail operator raises concerns about OSDM being a standard created by and for incumbents, potentially failing to accommodate the technological frameworks or commercial needs of new entrants

The aviation sector raises concerns about the regulatory burden associated with new reporting requirements or the involvement of additional intermediaries. An airline notes that while platforms such as meta-search engines and OTAs operate with relatively high margins, airlines themselves contend with far thinner margins. As a result, even moderate increases in compliance obligations could lead to higher fares as costs are passed on to consumers. An MDMS provider, while noting the cost of integration, separates this from the broader issue of data sharing. They argue that providing access to data is not inherently costly—rather, the expenses arise from the need to integrate disparate data streams into a cohesive offering. The MDMS provider also raises concerns over the existing regulatory framework, asserting that adherence to the current code of conduct has placed them at a financial disadvantage relative to less constrained competitors.

The question of distribution fees and commissions is rejected mainly by incumbent operators. CER and SNCF argue that imposing regulated commission fees on operators could lead to rising operational costs, which may ultimately be passed on to passengers, undermining the broader policy goal of encouraging rail use. CER emphasises that vendors should focus on developing sustainable and competitive business models rather than relying on mandated remuneration mechanisms. Additionally, they warn that vague legislative language—such as references to “respecting principles on distribution fees”—creates uncertainty and risk, leading operators to anticipate worst-case financial scenarios. The claim by CER, DB and an airline association that this is particularly problematic in saturated markets, where infrastructure constraints already limit growth potential and leave little room for absorbing unnecessary costs.

15.14.8.1 References for different cost items

Among travel agents, cost burdens stem largely from the necessity to engage with multiple GDS due to incomplete or non-overlapping content availability (ECTAA). This compels agents to subscribe to more than one system, incurring duplicative subscription fees. The lack of comprehensive content in GDS also forces many intermediaries to implement technical workarounds, such as developing proprietary APIs or relying on aggregators. These solutions, however, are not cost-neutral. Aggregator licenses and fees add to operating costs, and aggregator pricing is closely tied to their infrastructure scale—an economy of scale that historically favours larger OTAs. Moreover, substantial IT investments are needed to adapt to the fragmented and ever-evolving implementation of standards such as NDC, which are not consistently deployed across airlines (ECTAA).

A rail operator cites significant internal resource demands for OSDM integration, including months of engineering time, staffing costs, and additional expenses associated with participating in the governance of these technical standards. While OSDM may offer long-term benefits, the upfront burden is non-negligible for actors without legacy infrastructure or capital reserves.

An interviewed larger rail operator highlight structural cost implications that go far beyond system integration. Deutsche Bahn underscores that the financial architecture of rail relies on large-scale, long-term investments in physical and operational assets—such as rolling stock, infrastructure, and personnel—which follow amortisation cycles extending up to 30 years. From this point, any regulation that risks "unbundling" ticketing from railway operators—such as enforced third-party sales through MDMS—could compromise revenue flows essential to sustaining these capital-intensive operations. DB fears that, in a worst-case scenario, the financial risk of such regulatory interventions would run into the billions of euros, affecting not only individual companies but the entire sector, which is already making substantial investments under the constraints of current profitability models. This position was also supported by CER and a supplier of MDMS technology.

Further reinforcing this view, Helsinki Region Transport reports unsustainable costs linked to digital interface development. The setup cost for their ticketing interface reportedly reached several million euros—**potentially around €3 million**—while annual maintenance costs remain approximately **€300,000**. This cost is not justified by the low sales volumes generated through the system, pointing to a weak return on digital infrastructure investment in certain contexts.

The anticipated costs associated with the proposed policy measures primarily fall into three categories: integration and technology costs, monitoring and enforcement costs, and regulatory compliance costs. Integration costs arise from the need to establish seamless data exchange between transport modes, particularly with the rail sector, which currently lacks standardized frameworks like those used in aviation (e.g., NDC and GDS systems); this lack of interoperability leads to expensive and complex system upgrades and development. Monitoring and enforcement costs stem from the need for airlines to oversee how their content is displayed by intermediaries, which, in the absence of clear regulatory obligations, would require significant investment in auditing systems and compliance mechanisms. Regulatory compliance costs relate to the administrative burden of reporting, adapting internal processes, and working with additional intermediaries—challenges that are particularly acute for airlines operating on thin margins. One airline, for instance, cited annual distribution costs of €300–400 million, indicating that even minor increases in complexity could result in tens of millions of euros in additional costs. The aviation sector also highlights cost asymmetries in content distribution. Airlines continue to pay significant fees to GDS for ticket processing, estimated at **€3–5 per segment**. In the past, full-content agreements, where airlines committed to providing all fares in exchange for lower GDS fees, helped reduce costs. However, airlines have become increasingly resistant to such models, preferring greater control over their distribution strategies and cost structures. While these measures may impose significant short-term financial pressures, stakeholders (two airlines/airline assoication, one new content aggregator and one rail new entrant) also note that well-designed regulation could reduce costs in the long term by clarifying roles, streamlining processes, and limiting the influence of intermediaries.

15.14.8.2 Implications on revenue

A new entrant rail operator offers a clear illustration of the market concentration in rail distribution and its implications for new entrants. They emphasise that Deutsche Bahn's digital and physical sales channels account for approximately **95% of long-distance rail ticket sales** in Germany. This overwhelming market share reflects not only infrastructure dominance but also a deeply embedded consumer habit, where DB's platforms are perceived as the default option. For the new entrant rail operator, gaining access to such a distribution network could be transformative—potentially leading to **double-digit revenue growth** and a shift from loss-making to profitability. Their testimony highlights the significant market barriers faced by smaller or new rail operators in the absence of fair and effective access to established MDMS platforms.

AllRail estimates that with a fully unbundled and transparent ticketing system, rail's share could at least double. Currently, passenger rail accounts for an average modal split of 7% across the EU, with cross-border travel at just 4–5%. They point to markets like Italy and the Czech Republic—where competition has been introduced—as examples where ridership on key routes has more than doubled. AllRail argues that regulatory frameworks

enabling independent operators to compete on fair terms, with full visibility, could significantly boost rail's modal share across Europe.

However, any regulatory measures intended to mandate such access or restructure distribution priorities are not without trade-offs. A key concern comes from the online travel agency sector, which warns of unintended consequences stemming from well-intentioned but poorly calibrated regulation. OTAs have made substantial investments in advanced digital capabilities—particularly in the area of personalisation, driven by machine learning and customer data analytics. These capabilities allow them to tailor offers, increase conversion rates, and enhance customer satisfaction. A requirement for neutral or non-discriminatory display could undercut these capabilities, effectively nullifying the competitive edge that many OTAs have spent years developing.

This tension captures a broader regulatory dilemma. On the one hand, ensuring fair visibility and access on dominant platforms is critical for fostering competition, improving consumer choice, and supporting the financial viability of emerging operators. On the other hand, overly prescriptive rules on user interface design and content ranking risk undermining commercial innovation, particularly for digital intermediaries who rely on differentiated services and user experience to maintain their market position. In this line, ADN Mobilités explained that mandatory neutral display requirements and data-sharing with public authorities will force developing and maintaining parallel interfaces that do not align with the user experience and could be expensive and undesirable.

15.14.9 Impact of policy measures on sustainable travel choices / behaviour

A central argument advanced by CER is that increasing the number of ticketing platforms, even if they are well-integrated, will have limited effect on sustainable travel behaviour unless accompanied by an expansion in rail capacity (CER, Helsinki Region Transport). In their view, structural issues such as insufficient frequency of service, long travel times, and complex transfers represent the primary barriers to modal shift. CER also argues that shifting revenues from railway operators to ticket vendors risks undermining operators' capacity for investment.

This scepticism is shared by BEUC, which similarly notes that MDMS platforms might help passengers identify better connections or facilitate minor coordination gains between operators. However, for most passengers—especially those using daily services under public service obligations where fares are fixed—improved booking interfaces are unlikely to change the fundamentals of their travel behaviour. BEUC acknowledges that ticketing platforms may encourage competition on a limited number of profitable routes, but stresses that such cases would be the exception rather than the rule.

In contrast, several other stakeholders offer a more optimistic reading of the potential of MDMS to unlock demand and support modal shift. Two rail operators, including WestBahn, the MDMS ADN Mobilités, two national authorities, and other organisations such as T&E all point to evidence suggesting that competition can materially increase access to rail services and, thus, incentivise modal shift. In liberalised markets, studies have found that the existence of additional operators has attracted passengers who would not otherwise have travelled by rail. These findings support the idea that reducing information asymmetries and improving the visibility of competitive alternatives in rail—key functions of MDMS—can play a decisive role in shifting passengers away from aviation or individual car use.

T&E, in particular, stresses that the lack of visibility for non-dominant operators significantly distorts consumer choice. In their experience, passengers frequently search for tickets only through incumbent platforms such as DB; when those platforms do not display services offered by alternative operators, such as FlixTrain or Trenitalia, travellers may assume no other options exist and instead choose to fly or drive. In this context, MDMS platforms that show all available options transparently could have a measurable impact on consumer behaviour, even in the absence of additional train capacity.

These perspectives highlight a key point of divergence in stakeholder views: while some, particularly incumbents and public authorities, emphasise infrastructure constraints and downplay the transformative potential of MDMS, others argue that improved transparency, competition, and access to information can unlock suppressed demand and shift travel patterns.

15.15 ANNEX 6.6: DATA COLLECTION TEMPLATES



MDMS SDBTR Task 1 Data collection templ MDMS SDBTR Task 1 Data collection templ MDMS SDBTR Task 1 Data collection templ MDMS SDBTR Task 1 Data collection templ MDMS SDBTR Task 1 Data collection templ MDMS SDBTR Task 1 Data collection templ

15.16 ANNEX 6.7: WORKSHOP MINUTES

First workshop Minutes

Date:	22 January 2025
Time:	10:30 to 12:30 pm CET
Location:	Online

The summary below outlines the content of the presentations made and discussion points raised during this meeting.

1. Introduction to the study

- The Commission introduced the policy context for the two proposed Regulations the impact assessment study would be looking into. These include an initiative for **Multimodal Digital Mobility Services (MDMS)**, which aims to regulate MDMS platforms and potentially require them to integrate transport operators, and the **Single Digital Booking and Ticketing Regulation (SDBTR)**, regulating rail operators and the potential obligation for them to make their services available on digital platforms. Both Regulations align with the President of the European Commission's Political Guidelines[283] 2024-2029, and Commissioner Tzitzikostas's mission letter[284]. The Commission underlined that aspects related to rail passenger rights would not be covered by this impact assessment study.

- Questions were raised regarding the **scope of the Regulations**, specifically concerning the modes of transport and trip distances included. The Commission clarified that both Regulations were planned to address long-distance and regional trips. The MDMS proposal will cover all shared long-distance transport modes, whilst the SDBTR initiative should only focus on rail, as greater challenges have been identified in this sector compared to other transport modes.

- There were questions about the rationale behind the **multimodal approach of the MDMS initiative**. The Commission reiterated that the objective was to ensure the platforms integrate as many operators from different modes as possible, to provide comprehensive travel options for consumers.

- A question was raised on **the types of tickets that would be covered under the initiatives**. The Commission acknowledged the ambition to offer passengers all available fares, including the best offer, but noted that the specific types of tickets covered are still under consideration.

[283] "To achieve our climate objectives, we also need to make it easier for people to shift to more sustainable options. This is notably the case with mobility. Cross-border train travel is still too difficult for many citizens. People should be able to use open booking systems to purchase trans-European journeys with several providers, without losing their right to reimbursement or compensatory travel. To this end we will propose a Single Digital Booking and Ticketing Regulation, to ensure that Europeans can buy one single ticket on one single platform and get passengers' rights for their whole trip".

[284] de676935-f28c-41c1-bbd2-e54646c82941_en

- A question was asked about the **goals of the Commission regarding facilitating international rail travel.** The Commission clarified that there is no specific target for the percentage of international rail travel, but the overall goal is to increase (high-speed) rail transport, including both domestic and international travel.

2. Study Methodology

- The consultant performing the study presented an **overview of the study methodology** with the different Tasks involved.

- The preliminary **problem definition, problem drivers and their identified consequences** were presented in further depth. As the study progresses, further analysis will be conducted to validate the problem definitions gathering relevant data from literature review and the stakeholder engagement tools (i.e. survey, interviews, workshops and data requests). The consultant also presented the **draft objectives** of the initiative, designed to align with the preliminary problem definition.

- The **implications of the problems** were also discussed, covering: (i) the limited ability to compare and combine travel options and fares; (ii) obstacles to market entry, lower demand for rail services than optimal, and suboptimal return on public investment; and (iii) potential distortion of competition in ticket distribution.

  A Mentimeter poll was set up to collect participants views on the problem definition and the relevance of the problem drivers (see poll results in Annex). For most problem areas/drivers there were mixed responses from participants on the significance of the problems identified. In particular, a "U" shaped response curve was identified with a significant number of poll participants either totally agreeing or totally disagreeing with the existence of the problem and the relevance of its drivers.
  The study team indicated that the varying viewpoints could be indicative of different stakeholder groups opinions and indicated that **responses would not be considered on average but nuanced** to consider what different stakeholder views are.

- In the discussion, concerns were expressed about the previous **Regulatory Scrutiny Board's (RSB) opinion**. The Commission clarified that all the concerns were considered in reworking the study approach aiming specifically to collect relevant data. This was also the rationale behind a more targeted approach on rail compared to the previous approach.

- Questions were raised on how the study will **compare the different policy options and select the preferred ones**. The study team outlined the plan to define a set of policy options by combining different policy measures, and then assess the impact of these options in comparison to the baseline to select the preferred one.

3. Stakeholder engagement programme

- The study will involve multiple stakeholder engagement options including:
  - **a survey** tailored to different stakeholder groups, including public authorities, MDMS providers, MDMS platforms, and operators.
  - **targeted interviews** to follow up on survey results and focusing on specific issues.
  - And a series of **three workshops** to communicate on study progress (the present being the first one). The second workshop is planned for March to discuss the policy measures and potential impacts.

- The survey will be launched in mid-February and run until late March. Ricardo put an emphasis on the importance of gathering data on costs and cost savings from stakeholders to support the impact assessment.

- Questions were raised about how the survey will be distributed and whether participants from the current workshop will receive the initial invitation. The study team confirmed that the survey will be distributed as widely as possible, and that participants from the current workshop will also

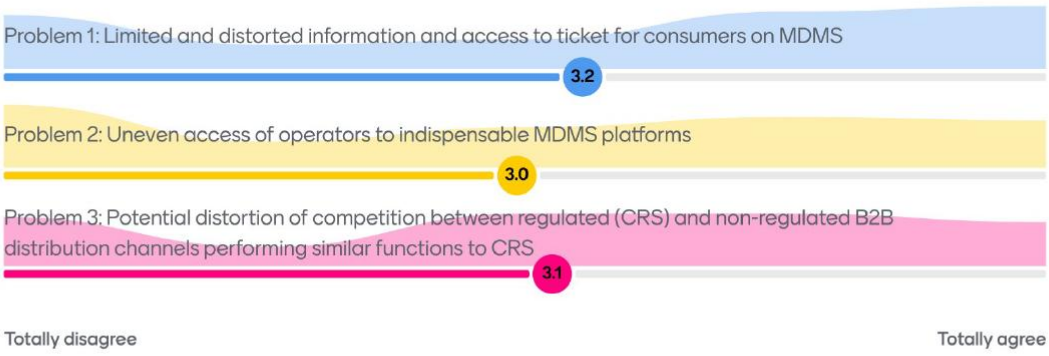
receive the initial invitation. The team further invited stakeholders to send their interest in participating in the study by email.

- Concerns were expressed about the representativeness of the stakeholder engagement process and how the study will ensure that different stakeholder groups are adequately represented. The challenge of ensuring representativeness was acknowledged by the study team who stated that they will tailor the survey questions to different stakeholder groups to capture a range of perspectives and consider the different volumes of responses coming from different stakeholder groups when analysing the survey results. However, the views gathered are unlikely to be statistically representative (except for the Eurobarometer).

Annex – Results of the Mentimeter presented during the workshop

Problem 1

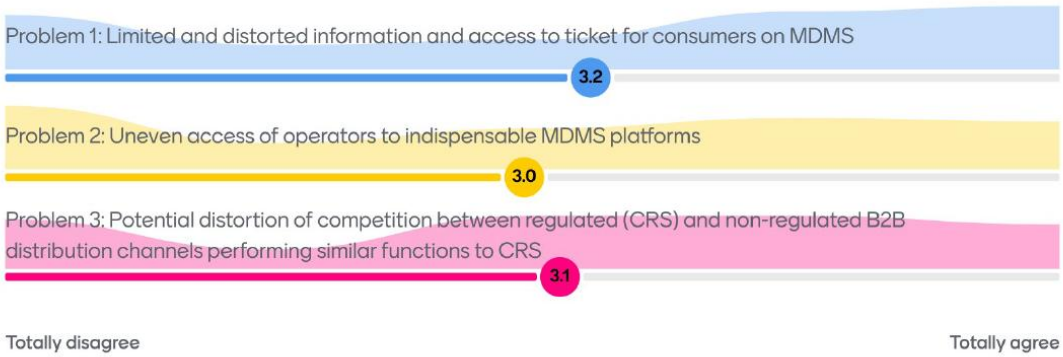
Do you agree with the problems identified?



28 140

Problem 1

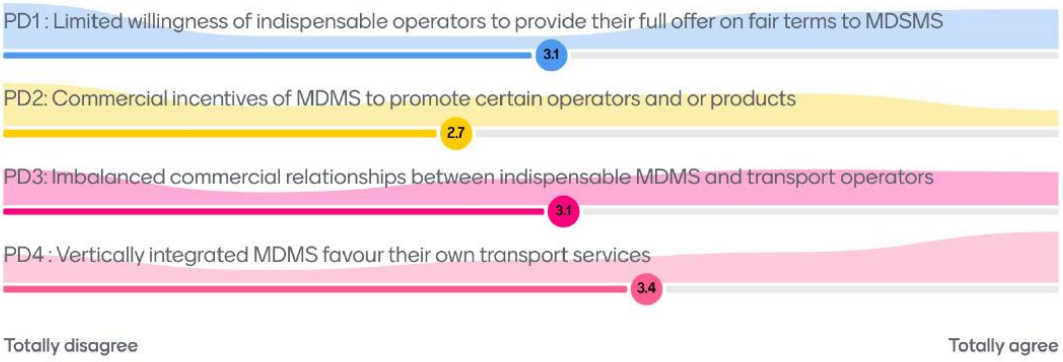
Do you agree with the problems identified?



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Problem 1

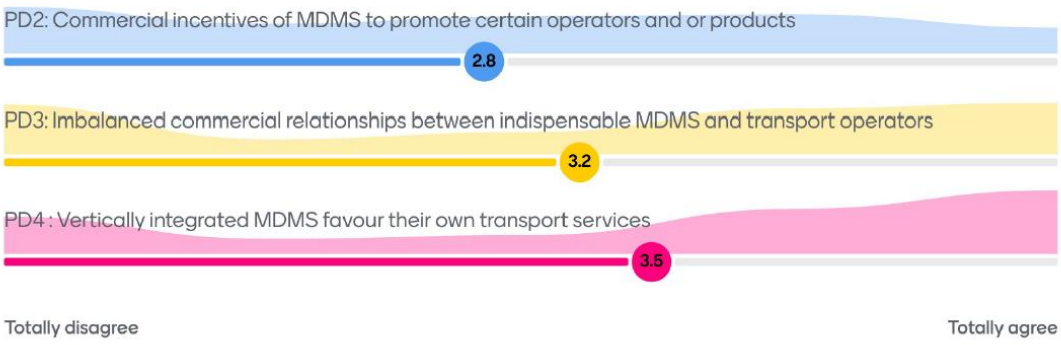
Do you agree that the Problem Drivers (PD1, PD2, PD3 and PD4) sufficiently identify the causes that lead to **Problem 1?**



11 120

Problem 2

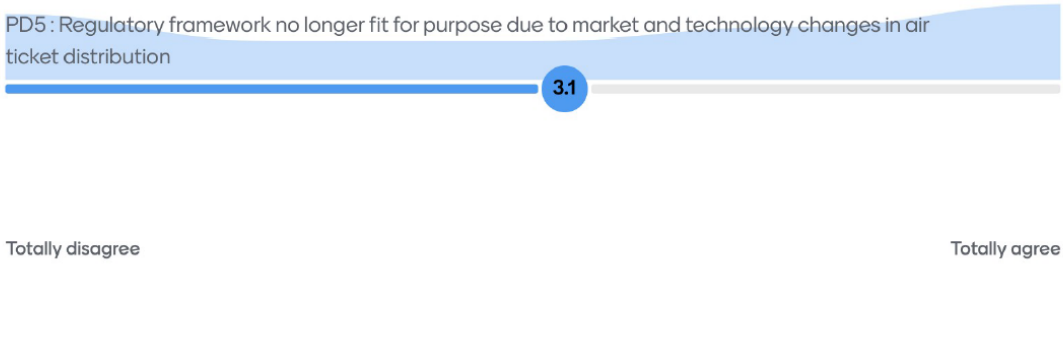
Do you agree that the Problem Drivers (PD2, PD3 and PD4) sufficiently identify the causes that lead to **Problem 2?**



11 102

Problem 3

Do you agree that the Problem Driver (PD5) sufficiently identifies the causes that lead to **Problem 3?**



Second workshop minutes

Date:	02 April 2025
Time:	10:00 to 12:30, CET
Location:	Online

The summary below outlines the content of the presentations made and discussion points raised during this meeting as well as responses to those questions.

No	Agenda Item
1	**Introduction** The Commission introduced the policy context for the two proposed Regulations the impact assessment study would be looking into. These include an initiative for Multimodal Digital Mobility Services (MDMS), which aims to regulate MDMS platforms and potentially require them to integrate transport operators, and the Single Digital Booking and Ticketing Regulation (SDBTR), regulating rail operators and the potential obligation for them to make their services available on digital platforms. Both Regulations align with the President of the European Commission's Political Guidelines 2024-2029, and Commissioner Tzitzikostas's mission letter. The Commission underlined that aspects related to rail passenger rights would not be covered by this impact assessment study.
2	**Methodology Updates** The study team presented updates to the methodology performed as part of the inception phase, alongside additional information on the timing of the study. The inception phase of the project is complete, including a draft problem definition and an initial list of policy measures for consideration. The analytical phase is now underway where the problem definition is finalised, the baseline is developed, and policy measures are finalised and grouped into policy options (March-April 2025). The assessment of the impacts of these policy measures is expected to take place between May-June 2025. Stakeholder consultation activities take place throughout the study with a focus on Q1/Q2 2025.

Question	Answer
One participant asked why term MDMS was used? Since an MDMS is a transport distribution platform which distribute one or several transport modes, and therefore can or cannot be multimodal, would it be considered to drop entirely the term "MDMS", turning to a more descriptive appellation (transport distribution platform, digital mobility platform, travel platform, travel intermediaries…)? MDMS is a term not used by any market player and calling "multimodal" platforms which are not multimodal can only bring unnecessary confusion, on a topic which may already be confusing.	DG MOVE explained that the first impact assessment developed a typology of MDMS. The term is intended to simplify reference to such platforms. The scope of this term is to look at platforms including several operators, both within modes and including different modes. Both B2B and B2C platforms are included. Within B2C, both platforms directly selling tickets and those that are relinking ("meta-search") are considered. **A list of the platforms considered is added in Annex of these minutes.**
One participant asked if urban route planners are within the scope of MDMS platforms, in case you can purchase a ticket for more than one transport modes on these platforms?	Only platforms selling tickets for regional and long-distance services are in scope of the MDMS and SDBTR Regulations. Tickets for services on wholly urban or suburban routes are not included. The exact scope of regional services is currently under discussion.

Is car rental in scope of the upcoming initiatives?	At the moment, the scope considered for the MDMS regulation covers maritime / bus & coach / rail / aviation services. The scope for SDBTR is rail only.
Does the study also take into account data from the field of inland waterway transport (e.g. inland ferries)? As within the presentation the other modes of transport have been mentioned (air, bus and coach, maritime, rail), but there have been no information in reference to inland waterway transport.	Yes, inland waterway transport is included.

3	**Market Research – data collection** **<u>Data Collection Methodology:</u>** A combination of direct data collection (from existing sources or data collection questionnaire) and indirect sources is being used to address all the parameters identified as relevant to describe the market status. Where data is not available through existing and openly available (statistical) sources, indirect sources (e.g. past studies) and analytical models (correlation/regression analysis, econometric models, extrapolation) are being used to fill gaps. Stakeholder consultation is also being used, with targeted surveys complementing data gaps and data provision via NDAs are made available securing protection of sensitive commercial information. **<u>Data Sources and Current status</u>** The study team already have access to a large portion of the required data, but there are still gaps (shown below). Attendees were kindly asked to support the study by sharing these data where possible and available. 

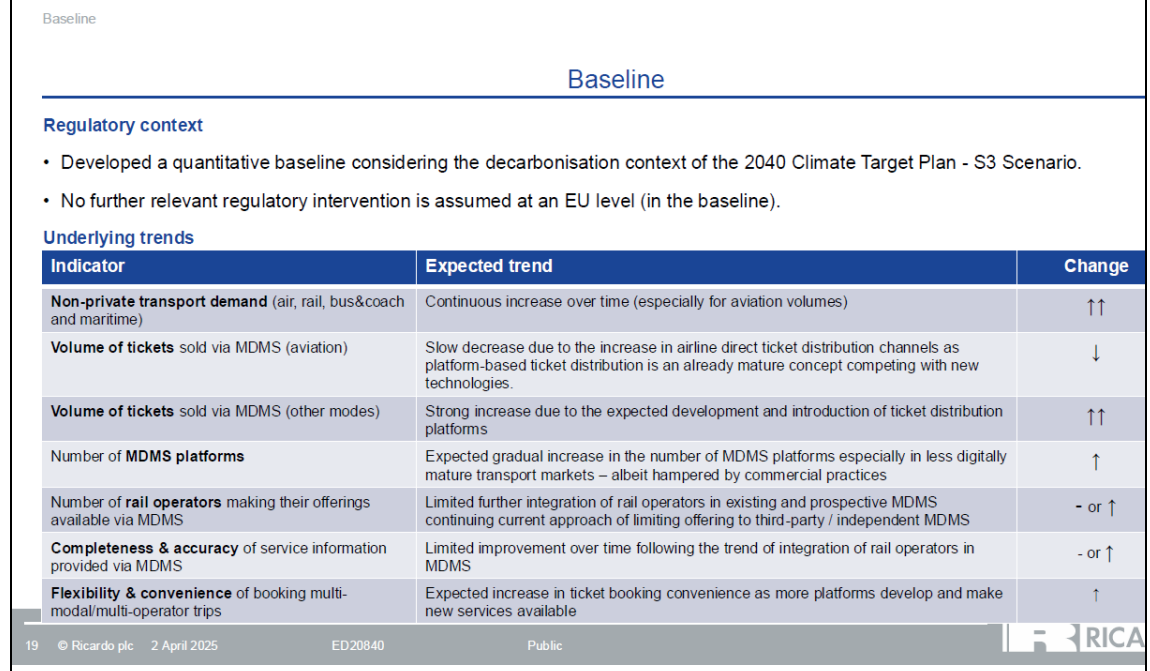
Question One participant asked to confirm that the consultant has not received any data from so-called MDMS providers.	**Answer** Ricardo explained that data from a selection of MDMS providers (as defined in the project) were received, but gaps still exist.

4	**Baseline** **<u>Regulatory context:</u>**

The study team has developed a quantitative baseline considering the decarbonisation context of the 2040 Climate Target Plan (S3 Scenario). No further intervention is assumed at EU level in that baseline.

Underlying trends:

The slide below was presented showing a number of key indicators and their expected development in the baseline.



Baseline

Baseline

Regulatory context

- Developed a quantitative baseline considering the decarbonisation context of the 2040 Climate Target Plan - S3 Scenario.
- No further relevant regulatory intervention is assumed at an EU level (in the baseline).

Underlying trends

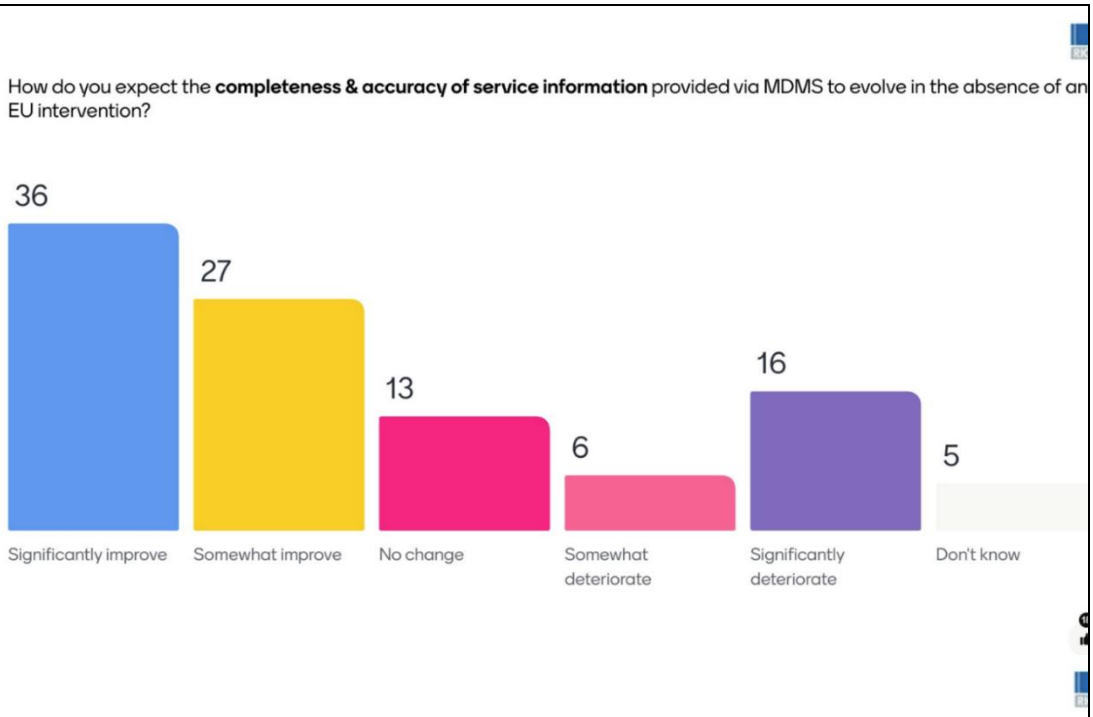
Indicator	Expected trend	Change
Non-private transport demand (air, rail, bus&coach and maritime)	Continuous increase over time (especially for aviation volumes)	↑↑
Volume of tickets sold via MDMS (aviation)	Slow decrease due to the increase in airline direct ticket distribution channels as platform-based ticket distribution is an already mature concept competing with new technologies.	↓
Volume of tickets sold via MDMS (other modes)	Strong increase due to the expected development and introduction of ticket distribution platforms	↑↑
Number of **MDMS platforms**	Expected gradual increase in the number of MDMS platforms especially in less digitally mature transport markets – albeit hampered by commercial practices	↑
Number of **rail operators** making their offerings available via MDMS	Limited further integration of rail operators in existing and prospective MDMS continuing current approach of limiting offering to third-party / independent MDMS	- or ↑
Completeness & accuracy of service information provided via MDMS	Limited improvement over time following the trend of integration of rail operators in MDMS	- or ↑
Flexibility & convenience of booking multi-modal/multi-operator trips	Expected increase in ticket booking convenience as more platforms develop and make new services available	↑

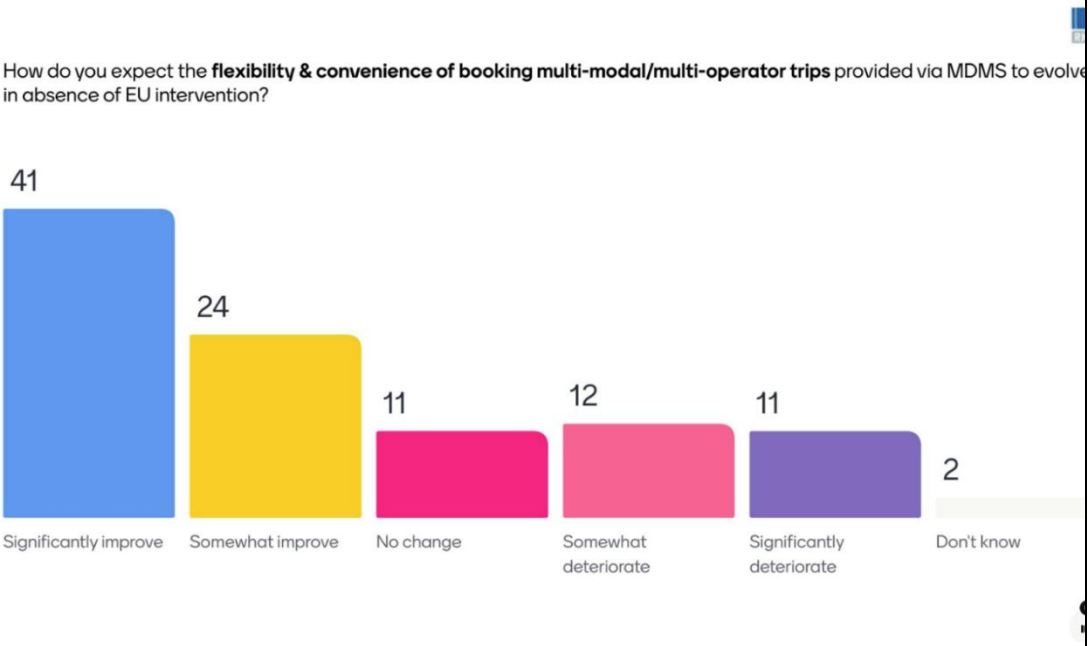
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Gathering of stakeholder views on the baseline via Mentimeter:

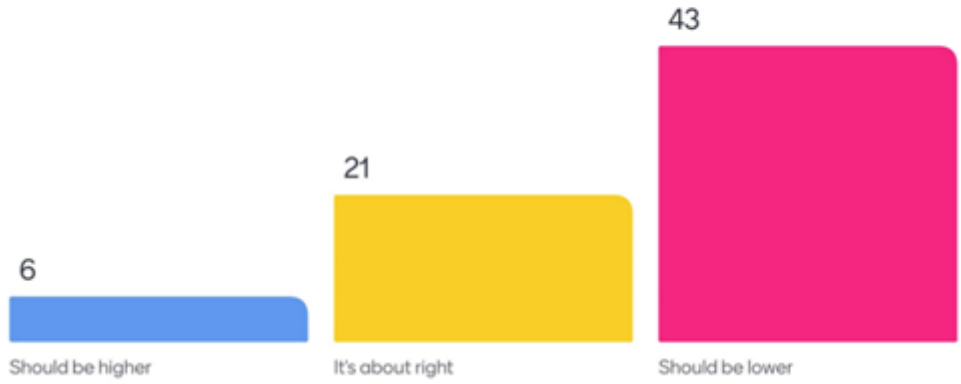
Attendees were asked to vote via an online survey in Mentimeter on expected trends in key parameters affecting European passengers' choice of transport mode. The questions and answers are presented in the figures below. Although this voting is not considered fully representative as the participation and responses proportion from different stakeholder groups cannot be checked. However, this is used as secondary evidence in the impact assessment study representing workshop participants.

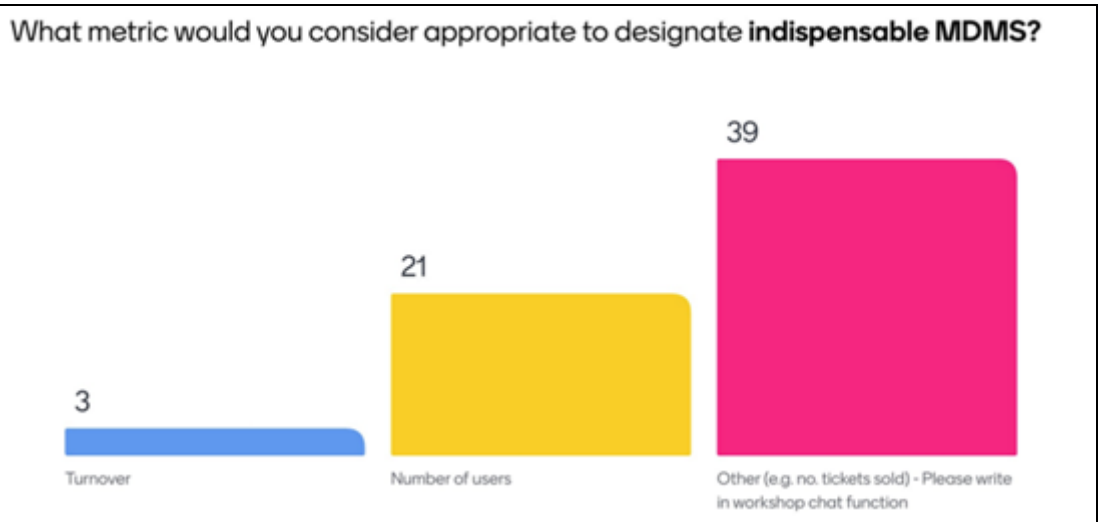
The majority of respondents to the workshop suggested that, in the absence of any EU intervention, they expected an improvement (significant or somewhat improvement) of the current situation of multi-modal travel in the EU, both in terms of "completeness & accuracy of service information" (63 out of 105 respondents) and in terms of "flexibility & convenience of booking multi-modal/multi-operator trips" (65 out of 101 respondents). In both cases, just over one fifth of respondents indicated they expected a deterioration.



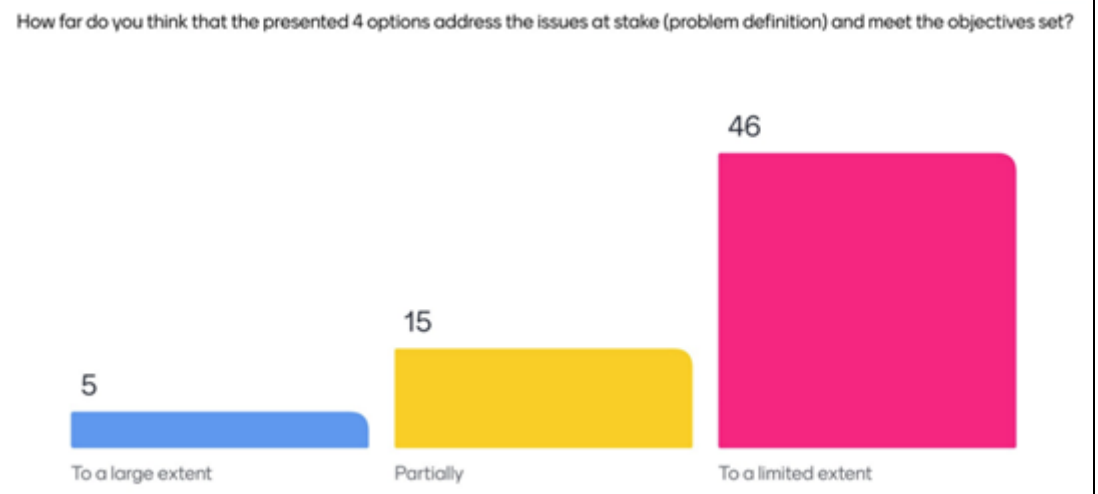


Question	Answer
The baseline is rightly stating that the volume of tickets sold via MDMS for aviation will decrease. If status quo will lead to further decrease, then why do you need to regulate the market power of so-called "indispensable" MDMS? The market will seemingly take care of it. What justifies the regulatory intervention? How can MDMS providers have such market power that	The slow decrease in tickets sold via MDMS aviation does not necessarily mean there will be decreases in other modes. Today we see quite a competitive market with air tickets being sold on B2B and B2C platforms. The predicted decrease is more related to the B2B side. The IA study is also looking to update understanding on the position of MDMS platforms in the value chain. The air ticket market structure is such that airlines still need to be on B2B platforms to sell tickets. Some of those are still indispensable to get tickets to travel agents and eventual end consumers.

	they are indispensable and yet lose market share?	
5	**Policy Options** Four distinct policy options have been formulated, aiming to address all problem drivers and policy objectives. These comprise different combinations of 18 distinct policy measures which were presented during the workshop (can be found in the workshop presentation). In short, these are: Policy Option 1 - principles for commercial agreements for indispensable rail operators and indispensable MDMS (B2C MDMS with significant market power and B2B MDMS). Policy Option 2 - principles for all rail operators and all MDMS. Policy Option 3 - PO1 + obligation to enter into commercial agreements for indispensable rail operators and indispensable MDMS (B2C MDMS with significant market power and B2B MDMS). Policy Option 4 - PO1 + obligation to enter into commercial agreements for indispensable rail operators + unbundling obligation for vertically integrated MDMS with significant market power. **Gathering of stakeholder views on policy measures via Mentimeter:** Attendees were asked to vote via Mentimeter on some design elements of certain policy measures. The questions and answers are presented below. Regarding the threshold to designate a rail operator as indispensable, 43 out of 70 respondents indicated that threshold for the rail market services (in passenger-kilometres) operated by the operator should be lower than 50% of the total. How do you view the proposed threshold for indispensable rail operators: **50% share of the total rail services** operated in a Member State (annual pkm)?  Related to the second question, since workshop participants indicated that another metric would be suitable to designate indispensable MDMS rather than turnover or number of users, they were then asked to indicate what these other metrics might be. No other specific metric was suggested during the workshop. One stakeholder indicated “the very notion of a MDMS with significant market power whose market power would not be assessed is the issue here, beyond the metric.” One stakeholder suggested that users in each Member State could be a better indicator than EU-level users. Another suggested that tickets sold would not be relevant since it does not correlate to income.	



The majority of workshop respondents also indicated that they considered the presented policy options addressed the issues at stake only to a limited extend (46 out of 66 respondents).



Question	Answer
One participant asked if for neutral display (**PM1**), the discussions of the MPMF expert group will be taken into account? It had come to a consensus among all market players.	Yes, the Commission is aware of the MPMF expert group and will take these discussions into account.
One participant asked to clarify what is meant by 'obligation to apply data accuracy rules' (**PM1**)?	The Commission explained that this PM is meant to ensure that operators that are sharing data with ticket vendors have to make sure that the data that they share is accurate (this comes directly from the CRS Code of Conduct Regulation).
One participant asked to explain **PM2**, where it states to "load and process data provided with equal care and timelines"?	These measures ensure no bias is exhibited in the way that MDMS treat operator's data.

	One participant asked whether there is a reason why the CRS CoC rules (**raised in relation to PM1-5**) do not include the obligation for parent carriers to share their fares with competing CRSs?	The Commission is considering removing old rules on parent carriers as CRS's are no longer owned by airlines and they are no longer fit for purpose, but there will be new rules adapted to the new market reality drawing inspiration from the parent carrier rules.
	One participant suggested that for multi-EU-Members State MDMS, a European authority could also be established in addition of national authorities, due to e-commerce directive, Members States have no power of enforcement on MDMS established in another member state **(PM6)**	The Commission is considering aligning to the approach taken in the Data Act, where there would be an enforcement authority in each MS. Beyond, as there is also a need to ensure harmonised approach to enforcement, EC is considering to establish an EU network as DG COMP has done (enforcement competition network).
	One participant asked how the reporting measures comply with the current deregulation/Omnibus initiatives of the EC? **(PM7-8)**	The Commission clarified that there is no obligation to report, work is mostly being carried out by the enforcement authorities, when you reach a certain threshold, you will need to notify these authorities.
	One participant asked the following question: the policy measures **(PM9-12)** mention that B2B MDMS and B2C with significant market power (SMP) are to be subject to additional obligations. However, the policy measures only include provisions to determine SMP for B2C MDMS. How will this be determined for B2B MDMS? One participant underlined that significant market power is evidently a relative concept; market power only exists in relation to other market participants and consumers. Why should SMP for B2C MDMS then be determined by absolute thresholds and not by market share thresholds as is the case for rail operators? **(PM9-11)**	For B2B players, the Commission considers that they have a strategic position on the market. Therefore, all B2B platforms are considered indispensable regardless of thresholds, as they are the gateway to a huge network of travel agents and travel management companies and end customers. The rules that are being considered for application to B2B platforms (including rules for new content aggregators) mirror the measures discussed in the past. These measures aim to improve the level playing field and allow all operators to gain access to B2B distribution channels. Absolute thresholds are currently being considered for MDMS as there is not an established market monitoring mechanism. In rail there is such a scheme (RMMS) – it is therefore easier in rail to have in legislation a percentage market share and compare players directly. Absolute thresholds for MDMS platforms would make it easier to notify authorities. The IA study is helping to understand the market and determine these thresholds. Different proxies are being considered throughout the course of the study, this is subject to change.
	One participant asked if the rationale for imposing specific obligations on rail operators operating PSO services is based on how such services are funded with public money? Why does such a rationale not apply to other transport modes? Aren't they also receiving public money? Why would they have less	The rationale for including PSO services for rail is based on how, as noted in the last Rail Market Monitoring Report, 64% of rail travel (by passenger km), on average in EU MS, is performed by PSO services. This shows the importance of such services in ensuring connectivity across the Union.

	obligations than rail operators? What make rail services specific in this regard?	
	One participant outlined that with only one rail operator in Ireland, which is an island without any borders with another EU country, the question as to the share of rail services is irrelevant (**PM9-11**)	This initiative concerns connectivity across the Union. A citizen trying to travel from, for e.g., Cherbourg to Rosslare Harbour by ferry, and then onwards to Wicklow by rail should be enabled to easily find the rail ticket they need to complete their journey.
	The following definitions for (**PM9-11**) were asked: What is the exact definition of "vertically integrated MDMS?" What's the definition of an "indispensable" MDMS? How do they differ from vertically integrated MDMS? What is the rationale to discriminate vertically integrated MDMS in comparison from MDMS with SMP?	A **vertically integrated** MDMS is a mobility platform displaying offers from multiple operators not belonging to the same group of transport operators, that is owned or controlled by a transport provider, allowing it to both operate the platform and provide its own transport services. **Indispensable MDMS** include both vertically integrated MDMS with SMP and B2C MDMS with SMP. The study team is aiming to define both the proxy measurement and the threshold for determining SMP, and welcome input from stakeholders on this. Evidence now (competition cases) is mostly on vertically integrated players. Specifying obligations for vertically integrated players is expected to prevent undue obligations on independent platforms with SMP in future. These measures are ex-ante (preventive) rather than ex-post – this exercise is not intended to be a thorough analysis of market shares in the past or present.
	One participant asked what is meant by "principles on distribution fees"? **(PM12-15)**	These principles essentially highlight values promoting competition and non-discrimination. The goal is to set guideline criteria to ensure objective and transparent distribution fees. These guiding principles would aim to facilitate negotiations with dominant players in the market (operators or MDMS) who may have stronger bargaining position, to promote a level playing field. The Commission is still reflecting on these criteria, to be established with the enforcement authorities.
	One participant asked if the marketing clauses cover everything, or can operators have some restrictions, such as not advertising on adult sites? **(PM12-15)**	The rationale and overall goal is to not allow unfair or unjust restrictions, but if there were some restrictions that were reasonable to include in a contract then the Commission would consider these in drafting, if the measure were to be selected.
	Where do the rules/principles on distribution fees apply? If an MDMS is	Rules to determine MDMS dominance are considered at both national and European level.

	dominant in one country and enters into an agreement with an operator in another Member State, would the MDMS also be considered dominant when entering agreements with that operator in a different country? **(PM12-15)**	If dominant at national level, the rules would only apply nationally. However, if dominant at European level, then the rules would apply also when entering into agreement with an operator from another Member State.
	What's the threshold for cross border [rail] services? Is there supposed to be a significant presence? **(PM12-15)**	For cross-border services there are no thresholds for SMP. All cross-border services would be governed by these principles.
	What do you mean by "to unbundle vertically integrated MDMS from its parent operator"? (**PM18**)	This is inspired by what has been done in the energy sector – to separate distribution from operation.
	Several related questions on the focus on rail: If the Eurobarometer study shows that passengers have more issues with multimodal booking than with 2 leg multi-operator in rail, why is only rail in the scope? Regarding the scope MDMS being "multimodal": in view of the possible overlapping or even negative effects of ticketing regulations "rail-only" on the business models of the railways, there is a real danger that rail as a mode in Europe will ultimately not be strengthened but weakened. Why have the measures been designed in such a way that many will impose obligations on MDMS across all transport sectors, but on the operator side obligations are only proposed to apply to rail operators? Are you not concerned this will lead to a distortion of the market (especially in air, where, as discussed earlier, you have already identified that the share of MDMS distributed tickets is falling) which will ultimately make it more difficult for consumers to find and compare options? How will all of these measures on rail improve consumer access to information on multi-modal offerings?	On the rail focus: according to Eurobarometer survey, of those who had booked travel via rail, 25% of respondents found in difficult to book rail-rail journeys. This is quite concerning, particularly as responses were not specific to age brackets – 28% of people aged 15-24 found it difficult to book tickets. There are also competition cases in rail that are ultimately leading to difficulties for passengers to purchase tickets, showing that this is a problem for this transport mode. Analysis of these competition cases are underway as part of the IA. The response “I could not find a suitable connection” was under the set of options for passengers that had not booked rail-rail in the past 2 years. Those not able to find a suitable combination were therefore not included in the 25% above. For those that booked multi-modal journeys, 36% found it difficult to complete the booking. 35% found it difficult for multi-operator bookings. This justifies measures affecting MDMS across transport sectors. In the context of SDBTR, this was limited to rail offers as it was identified that this is where there are the most ticketing market issues. Similarly, with MDMS, the Commission believe there is a need to act on the rail sector to unlock combined ticketing with other modes. Data is being gathered on the market as part of this study to update understanding on whether this assumption is correct. By contrast, there is a more mature and liberalised market for tickets in air than in rail. Bringing in rules on e.g. neutral display for all MDMS will bring in more opportunity to compare ticket options. Airlines are increasingly willing to

	Several questions were related to the Eurobarometer survey: One participant underlined that the ease of booking tickets is only the 6th factor influencing citizens' choices of travel according to the Eurobarometer study: "Cost (ticket price, price of fuel, etc.) is the top ranking factor, selected by 61% of respondents. Nearly half of the respondents (47%) mention total travel duration; this factor is followed by departure or arrival time (36%) and comfort (seat space, noise, etc.) (29%). These factors are again followed by ease of finding travel options (17%), ease of booking tickets (16%) and number of connections (14%)." One participant also highlighted that the biggest issue identified by the survey [cost, travel time] —which DG MOVE has repeatedly stated would form the basis for the legislation—is not addressed in the PMs presented.	co-operate with MDMS, and this process is quite competitive, but there is of course room for improvement and the study should improve understanding here. DG MOVE explained that cost and time are indeed important factors influencing decision making, however this does not mean that other factors should not also be addressed. Ease of finding travel options and ease of booking are still important factors that can help many citizens.
6	**Assessment of Impacts** **Mechanisms of change:** The Policy Options proposed aim to improve the integration of information and ease consumer access to ticket combinations via MDMS platforms. This improved access to travel option combinations is expected to lead to: • Reduced travel time (combining better synchronised or direct services). • Reduced travel costs (combining cheaper options). • Modal shift (from air/car to rail etc.) due to the above reductions in travel time/costs. • Modal shift due to improved travel information completeness & accuracy AND improved ease of booking. **Selected economic impacts expected:** A number of expected impacts were presented for consideration and discussion: • Improved regulatory environment and ticket sales streamlining could (indirectly) facilitate the development/deployment of newrail/public transport services → Modal shift. • Impact on SMEs to depend on thresholds established for the MDMS (and rail) compliance. • Improved travel options and possibly reduced travel costs → (positive) impact on consumers and households.	

	• Improved functioning of the internal market and competition for MDMSs and public transport operators, as a result of the PMs proposed → Qualitative assessment. • Indirect improvement to EU competitiveness due to more efficient transport offerings and potential increase in platforms being developed?

Question	**Answer**
One participant asked how we would demonstrate the impact on modal shift? In France train occupancy rates are already very high and we do not see the link with the ease of booking - which is anyways high in France.	Unless the actual infrastructure is completely saturated, trains being full is just a sign that railway operators manage their load factors efficiently. New trains could be added, by incumbents or new companies and also by companies that use other routes and lines (e.g. Flix runs on cheaper conventional lines, rather than high speed). The PMs aim to reduce barriers to entry for new entrants, making it easier to sell tickets and therefore increase modal shift.

7	**Next Steps** The study team presented next steps of the study where stakeholder inputs would be required. • **Targeted survey** – deadline extended by two weeks to facilitate responses to 11/4: o Single survey, with sections tailored to different stakeholders. o Focus on substantiating the problem, the problem definition, the potential policy measures, baseline and impacts. • **Targeted interviews**: o Complement the survey by exploring issues in more depth, particularly in relation to information on costs. o Undertaken from early March until end of April – please respond to invites if interested. • **Three workshops**: o First workshop (22 January 2025) to inform stakeholders of the project, present and discuss the problem definition and policy objectives. o Second workshop (today – 2 April 2025) to seek feedback on the proposed policy measures; discuss and inform baseline and impacts. o Third workshop (June 2025) to validate the draft findings of the study. Ad hoc data requests: Used to follow up on outstanding queries from other consultation activities and to fill outstanding gaps – please follow up on data requests & NDA options.

Third workshop minutes

Date:	Thursday, 15 April 2025
Time:	10:00 to 12:30 am CET
Location:	Online

The summary below outlines the content of the presentations made and discussion points raised during this meeting as well as responses to those questions.

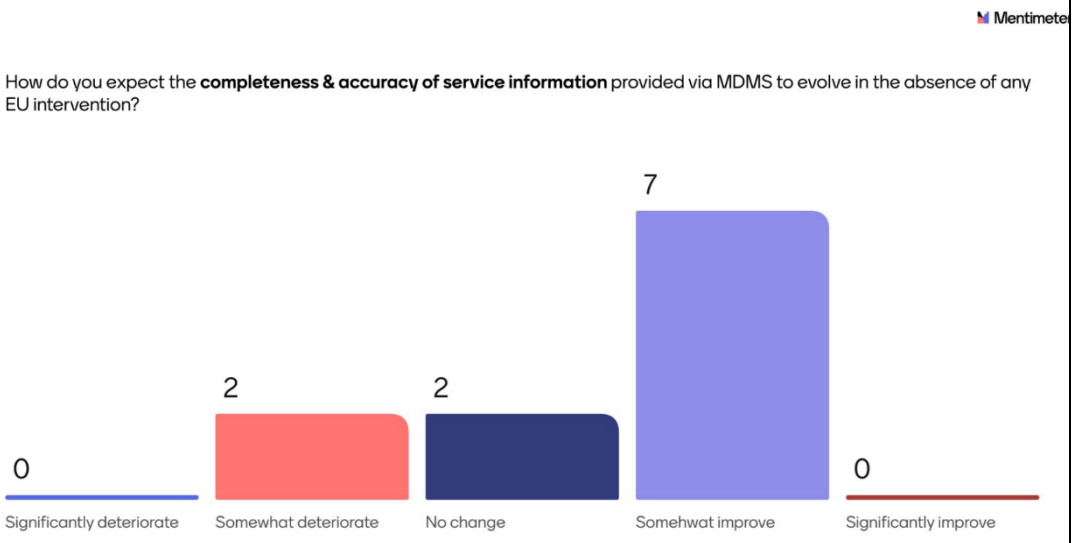
No	Agenda Item
1	**Introduction** The European Commission introduced the policy context for the two proposed Regulations the impact assessment study would be looking into. These include an initiative for Multimodal Digital Mobility Services (MDMS), which aims to regulate MDMS platforms and potentially require them to integrate transport operator service offerings, and the Single Digital Booking and Ticketing Regulation (SDBTR), regulating rail operators and the potential obligation for them to make the booking of their services available through digital platforms. Both Regulations align with the President of the European Commission's Political Guidelines 2024-2029, and Commissioner Tzitzikostas's mission letter.
2	**Methodology Overview** The study team presented the methodology implemented in the impact assessment support study alongside and shared the timeline of the study. The design phase of the project is complete, including a draft problem definition and an initial list of policy measures for consideration. The analytical phase is now underway where the problem definition, the qualitative baseline, the policy measures and their grouping into policy options are drafted. The quantitative baseline also currently being developed. The assessment of the impacts of these policy options is now underway and expected to be drafted by June 2025. Stakeholder consultation activities, including a targeted survey, interviews, data collection exchanges and a series of workshops, take place throughout the study with a focus on Q1/Q2 2025.
3	**Baseline** **<u>Regulatory context:</u>** The study team is currently finalising the quantitative baseline considering the decarbonisation context of the 2040 Climate Target Plan (S3 Scenario). In this, no further intervention is assumed at an EU level beyond initiatives already planned. **<u>Underlying trends:</u>** A qualitative description of baseline was shared for discussion during the meeting. The slide below was presented showing how a number of key indicators and their expected development in the baseline.

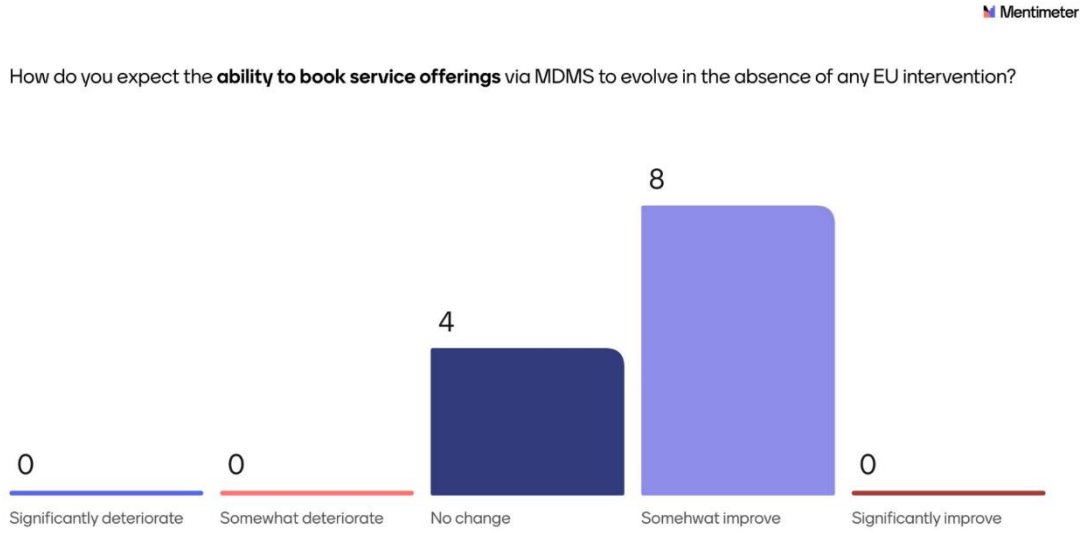
Indicator	Expected trend	Change
Non-private transport demand (air, rail, bus&coach and maritime)	Continuous increase over time (especially for aviation volumes)	↑↑
Volume of tickets sold via MDMS (aviation)	Slow decrease in the CRS share due to the increase in airline direct ticket distribution channels and other platform-based ticket distribution	↓ (CRS) ↑ (others)
Volume of tickets sold via MDMS (other modes)	Increase due to the expected development and introduction of ticket distribution platforms	↑
Number of **MDMS platforms**	Expected gradual increase in the number of MDMS platforms especially in less digitally mature transport markets – albeit hampered by commercial practices	↑
Number of **rail operators** making their offerings available via MDMS	Limited further integration of rail operators in existing and prospective MDMS continuing current approach of limiting offering to third-party / independent MDMS	- or ↑
Completeness & accuracy of service information provided via MDMS	Limited improvement over time following the trend of integration of rail operators in MDMS	- or ↑
Flexibility & convenience of booking multi-modal/multi-operator trips	Expected increase in ticket booking convenience as more platforms develop and make new services available	↑

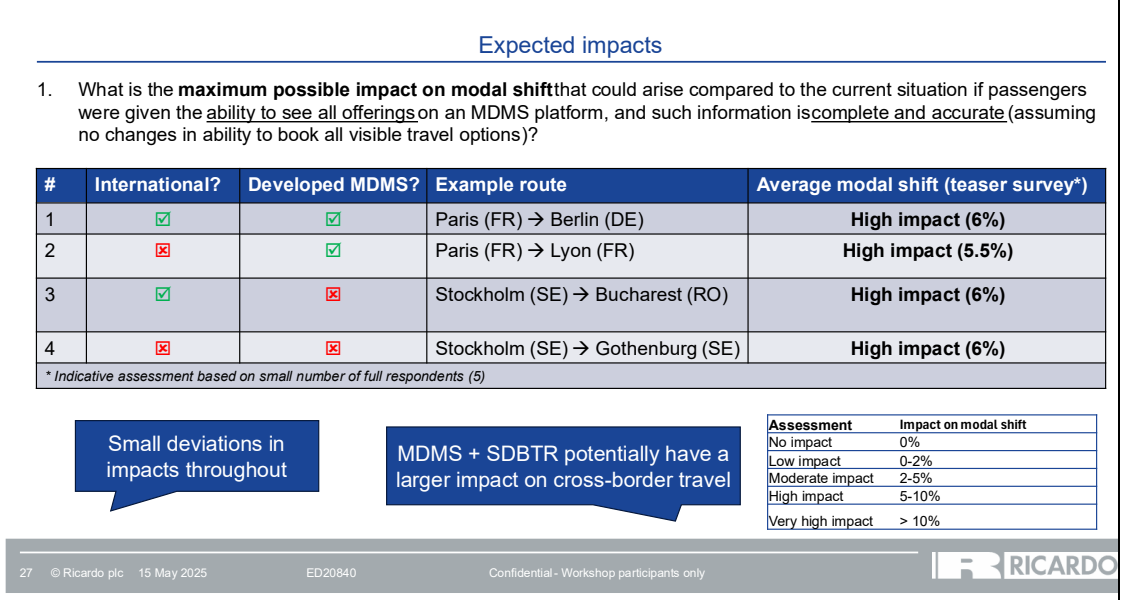
Gathering of stakeholder views on the baseline via Mentimeter:

Attendees were asked to vote via an online survey on expected trends in key parameters affecting passengers' choice of transport mode and particularly the two qualitative parameters considered relevant for this initiative achieving modal shift.

The majority of respondents to the workshop suggested that, in the absence of any EU intervention, a (somewhat) improvement of the current situation of multi-modal travel in the EU can be expected, both in terms of "**completeness & accuracy of service information**" (7 out of 11 respondents) and in terms of the "**ability to book service offerings via MDMS**" (8 out of 12 respondents). For the "completeness & accuracy of service information", a minority of respondents expressed that this may somewhat deteriorate (2 out of 11 respondents).



	
4	**Impact scoring** **<u>Workshop purpose and format:</u>** The primary goal of the workshop was introduced, which was to gather expert views on the extend to which an MDMS + SDBTR initiative could result in modal shift across the EU. This will assist the study team in quantifying the impacts of the policy initiatives. Participants were sent a preparatory survey before the workshop inquiring about the expected modal shift of the initiative and how this would differentiate under different conditions for trips including whether a trip is national or international and the level of advancement of MDMS platforms. The study team presented the results of this survey during the workshop and then invited attendees to react and comment on these results, facilitating further discussions. Finally, attendees were asked to vote again on the expected modal shift, incorporating any new insights from the discussion. Attendees generally expressed that these questions were very difficult to answer and rely on many simplifying assumptions. The study team and the European Commission acknowledged he difficulty of the questions and that they necessitated the gathering of expert views. They further indicated that the goal of this workshop was to improve the understanding of the order of magnitude of possible modal shift changes, rather than extracting specific assumptions for use in the impact assessment modelling. **<u>Presentation of survey results and related discussions:</u>** The study team presented the survey results for the different clusters with example routes presented for each cluster as an example, although acknowledging that each route would present very specific issues. The results and ensuing comments are shown below. Regarding question one (written in full below), the survey responses indicated that an **improvement in the completeness and accuracy of information** on MDMS platforms could result in up to 5.5%-6% modal shift, with little differentiation between clusters. A slightly larger impact could be expected on cross-border trips.



Reactions from attendees during the workshop initially focused on the potential impact on the specific routes presented as examples:

- Cluster 1 (e.g. Paris → Berlin) – passengers would be unlikely to travel by bus because it's too slow, so the choice is likely to be between air and rail travel. The problem passengers face is that booking via different platforms (SNCF Connect vs Deutsche Bahn) shows different tickets. A multimodal platform would therefore have to be able to compare prices from both operators fairly to guarantee a rail passenger the best price. Trainline might do this to some extent, but this is not certain. We might already be close to a complete comparison / data sharing between air and rail.
- Cluster 2 (e.g. Paris → Lyon) – indicated impact (5.5%) may on the high side. Two train operators are on this route, SNCF and TrenItalia. They only show their own tickets on each app. SNCF do not share the live running data of TrenItalia's trains. There is a need for price comparison websites showing both of these offerings allowing passengers to make better choices. Not many passengers are flying on this route - high speed rail already has a significant market share and trains are relatively full so it is hard to imagine how a further modal shift could be facilitated.
- Cluster 3 (Stockholm → Bucharest) – this route is too far and too complicated for anyone to do by any means other than flying. The impact of a multimodal platform is therefore likely to be zero as well as in other similar routes.
- Cluster 4 (Stockholm → Gothenburg) – questioned the level of MDMS advancement being assessed as limited here because there are multiple platforms that compare rail (multiple operators) and bus travel options in SE. MTRX, a rail operator, doesn't share its data very well to allow passenger comparison with SJ, another operator. So, there is some opportunity here for modal shift with greater data sharing. However, rail already has a significant market share on this OD pair.
- General – greatest potential for modal shift is where the time needed for rail is competitive to air, but for whatever reason people are not finding all the competitive train options. Potentially this is more likely on cross-border routes where passengers are just not considering rail as a viable option e.g. Brussels to Cologne.

Regarding question 2 (written in full below), similar levels of impact (5%-7% modal shift) were expected from an **improved ability to book**, with slightly greater impact on international routes.

Expected impacts

2. What is the **maximum possible impact on modal shift** that could arise compared to the current situation if passengers were given the ability to book all visible travel options on an MDMS platform (assuming that the level of information on the platform remains the same as it is currently)?

#	International?	Developed MDMS?	Example route	Average modal shift (teaser survey*)
1	☑	☑	Paris (FR) → Berlin (DE)	**High impact (6%)**
2	☒	☑	Paris (FR) → Lyon (FR)	**Moderate impact (5%)**
3	☑	☒	Stockholm (SE) → Bucharest (RO)	**High impact (7%)**
4	☒	☒	Stockholm (SE) → Gothenburg (SE)	**Moderate impact (5%)**

** Indicative assessment based on small number of full respondents (5)*

Higher impact in cross-border routes

Slightly more impactful in less MDMS-advanced countries

Assessment	Impact on modal shift
No impact	0%
Low impact	0-2%
Moderate impact	2-5%
High impact	5-10%
Very high impact	> 10%

Responses to question 3 indicated the impacts of improved information and improved ability to book are not additive, with similar impacts on modal shift (5.5%-8%) anticipated in question 3, compared to question 2.

Expected impacts

3. What is the **maximum possible impact on modal shift** compared to the current situation, if passengers were given a combination of (1) and (2), meaning
   - i) complete and accurate information? and
   - ii) the ability to book all visible travel options, on an MDMS platform?

#	International?	Developed MDMS?	Example route	Average modal shift (teaser survey*)
1	☑	☑	Paris (FR) → Berlin (DE)	**High impact (7%)**
2	☒	☑	Paris (FR) → Lyon (FR)	**High impact (6%)**
3	☑	☒	Stockholm (SE) → Bucharest (RO)	**High impact (8%)**
4	☒	☒	Stockholm (SE) → Gothenburg (SE)	**High impact (5.5%)**

** Indicative assessment based on small number of full respondents (5)*

Not fully additive effect of the two improvements

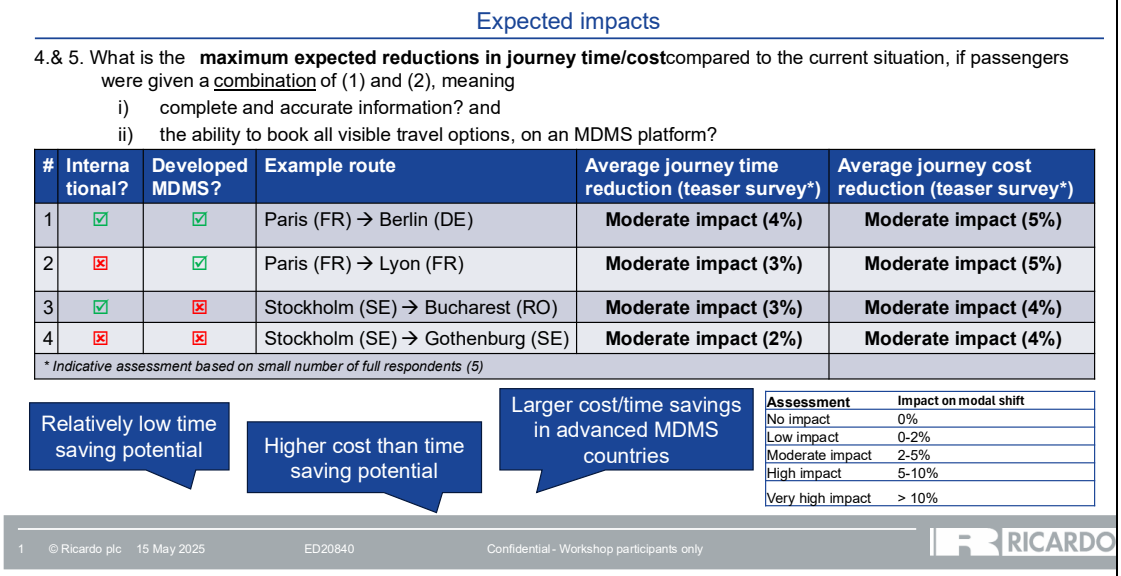
Higher impact in cross-border routes

Assessment	Impact on modal shift
No impact	0%
Low impact	0-2%
Moderate impact	2-5%
High impact	5-10%
Very high impact	> 10%

Reactions from attendees during the workshop were as follows:

- BE expected a high impact of between 5-10% (noting the difficulty in answering such a question). They conducted a survey of a representative sample of the Belgian population on travel behaviour. Four out of ten respondents indicated that they would change their travel behaviour if they had a Mobility as a Service (MaaS) solution, which can be seen as a combination of travel information and a booking/ticketing service, and without any changes in journey price or the physical offering of the operators. Within these travellers changing their behaviour, a net decrease in car usage of 15% was expected. The sample included both 'digital natives' (those who are familiar with the use of digital apps) and those who are less familiar. Moreover, the nature of the journey was not stipulated, so the assessment is likely to include both national trips and cross-border trips.

Responses to questions 4 & 5 (full wording below) indicated moderate modal shift **impacts expected on journey time** (2%-4%) **and costs** (4%-5%), with a potentially smaller impact on journey time compared to journey cost. There may again be a greater potential for impact in cross-border journeys due to MDMS providing a format and structure to compare costs and times for multi-operator journeys where such comparison may not have been available before.



Expected impacts

4.& 5. What is the **maximum expected reductions in journey time/cost** compared to the current situation, if passengers were given a combination of (1) and (2), meaning

i) complete and accurate information? and

ii) the ability to book all visible travel options, on an MDMS platform?

#	International?	Developed MDMS?	Example route	Average journey time reduction (teaser survey*)	Average journey cost reduction (teaser survey*)
1	☑	☑	Paris (FR) → Berlin (DE)	**Moderate impact (4%)**	**Moderate impact (5%)**
2	☒	☑	Paris (FR) → Lyon (FR)	**Moderate impact (3%)**	**Moderate impact (5%)**
3	☑	☒	Stockholm (SE) → Bucharest (RO)	**Moderate impact (3%)**	**Moderate impact (4%)**
4	☒	☒	Stockholm (SE) → Gothenburg (SE)	**Moderate impact (2%)**	**Moderate impact (4%)**
* *Indicative assessment based on small number of full respondents (5)*					

Relatively low time saving potential

Higher cost than time saving potential

Larger cost/time savings in advanced MDMS countries

Assessment	Impact on modal shift
No impact	0%
Low impact	0-2%
Moderate impact	2-5%
High impact	5-10%
Very high impact	> 10%

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Reactions from attendees during the workshop were as follows:

- Cluster 2 (e.g. Paris → Lyon): since this specific example is a direct connection, very little impact on journey time would be expected as nothing is changing from a technical perspective – the train is still travelling at the same speed. If a different national route were considered involving multiple legs, then the impact on journey time could be much higher than 3% (perhaps even 20%) as consumers may be presented with a better connecting option. The average is therefore likely to be somewhere in the middle, and higher than the 3% indicated. Some impacts on cost reduction could be expected even on direct routes as a result of modal shift and this could even be higher than the 4-5% indicated, but this is purely hypothetical.

Responses to question 6 (full wording below) indicated that **total modal shift potential** (4.5%-7%) including time and cost impacts, was more moderate than those indicated for question 3 (possibly after considering the more moderate expected impact on time and costs). Again, cross-border impacts were expected to be higher, and routes involving less developed MDMS were also anticipated to present larger impact potentially as there is room for development of more advanced services.

Expected impacts

6. What is the **maximum possible impact on modal shift** considering also the time & cost saving potential?

#	International?	Developed MDMS?	Example route	Average modal shift (teaser survey*)	*Average modal shift (reminder from Q3)*
1	☑	☑	Paris (FR) → Berlin (DE)	**High impact (6%)**	*High impact (7%)*
2	☒	☑	Paris (FR) → Lyon (FR)	**Moderate impact (4.5%)**	*High impact (6%)*
3	☑	☒	Stockholm (SE) → Bucharest (RO)	**High impact (7%)**	*High impact (8%)*
4	☒	☒	Stockholm (SE) → Gothenburg (SE)	**Moderate impact (4.5%)**	*High impact (5.5%)*
* Indicative assessment based on small number of full respondents (5)					

Lower modal shift than in Q3?

Slightly more impactful in less MDMS-advanced countries

Higher impact in cross-border routes

Assessment	Impact on modal shift
No impact	0%
Low impact	0-2%
Moderate impact	2-5%
High impact	5-10%
Very high impact	> 10%

Attendees did not have any reactions to this final question.

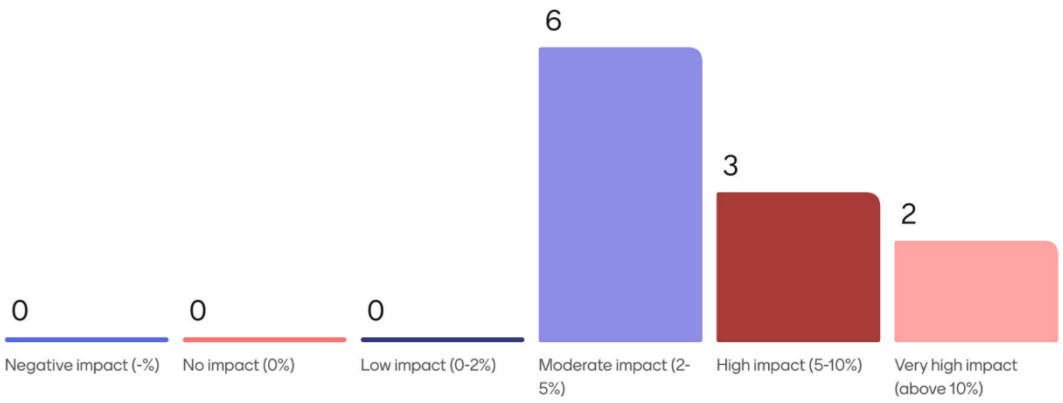
Gathering of stakeholder views on policy measures via Mentimeter:

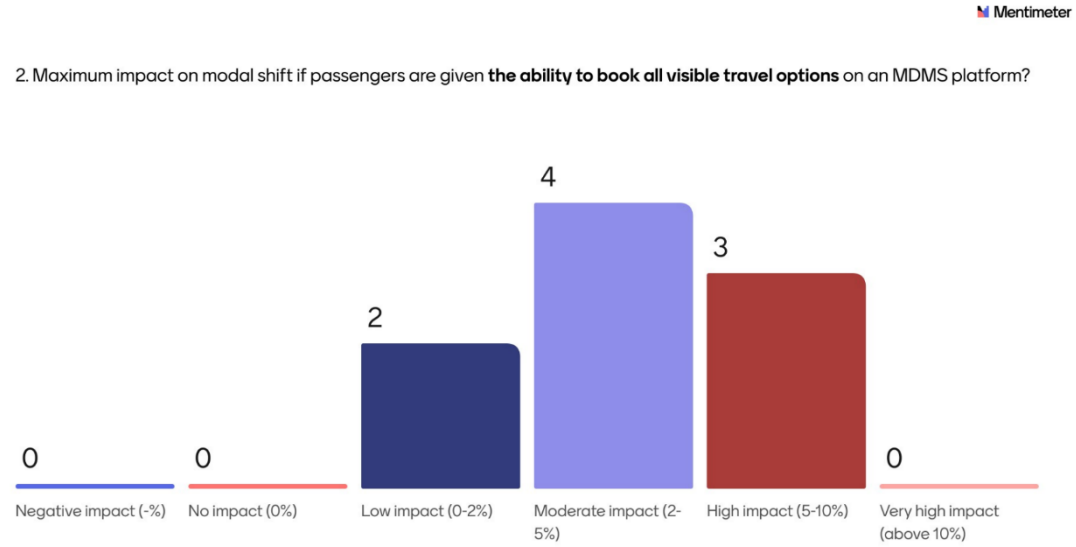
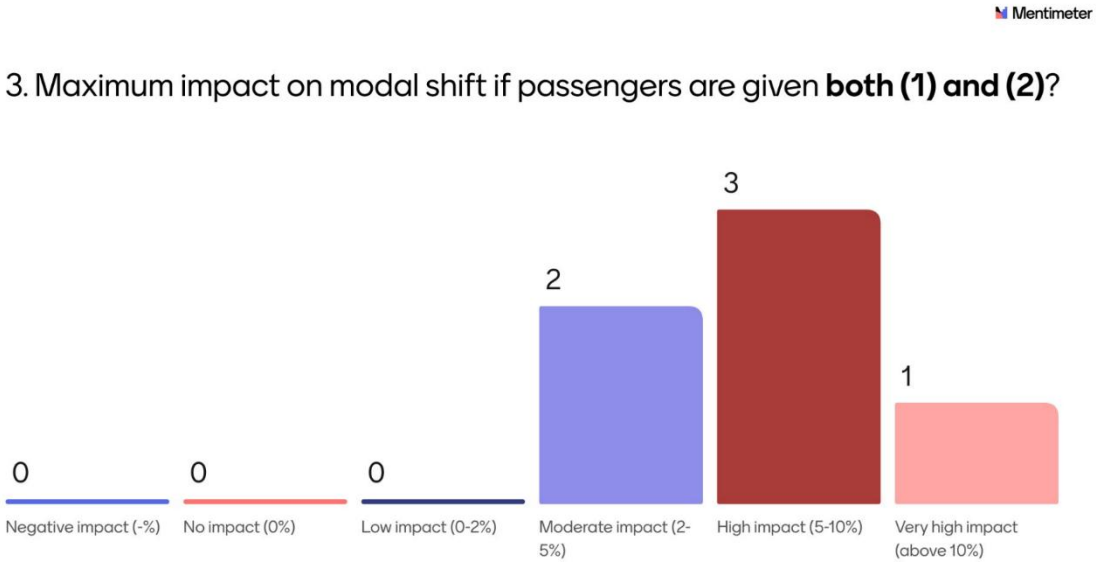
Attendees were asked to vote via Mentimeter on the same questions listed above, following the expanded understanding from the workshop discussions. The questions and answers are presented below.

Most respondents to the workshop expect a moderate maximum impact on modal shift (2-5% modal shift) resulting from improvements to the **completeness and accuracy of information** on MDMS platforms (6 out of 11 respondents) and the **ability to book service offerings** on MDMS platforms (4 out of 9 respondents). However, the response distributions differed between the two questions. A greater potential for modal shift was expected from improvements to completeness and accuracy of service information, with 2 respondents indicating the impact could be very high (above 10% modal shift), while for the ability to book, 2 respondents indicated this impact could be low (less than 2% modal shift).

Mentimete

1. Maximum impact on modal shift if passengers are given **the ability to see all offerings on an MDMS platform**, and information is complete + accurate?



	 Fewer respondents voted in the poll for the third question, but all those that responded expected that the **combined impact** of (a) improved completeness and accuracy on information on MDMS platforms, and (b) an improvement in the ability to book service offerings, would have at least a **moderate impact of 2-5% modal shift**. Half of the respondents (3 out of 6) expected that the maximum potential impact on modal shift would be high (5-10% modal shift), and one even expected the maximum impact would be very high (greater than 10%). 
5	**Next Steps** The study team explained that the summary of the workshop and key take-aways would be distributed to all participants. They requested participants to share any relevant information or evidence on the modal shift potential of such an initiative that could help inform the assessment of impacts. Next steps for the study were also laid out: the assessment of impacts and draft findings is scheduled for Q2 2025, and a third workshop is planned to share and validate the draft findings of the study for the end of June 2025.

Fourth workshop minutes

Date:	Thursday, 12 June 2025
Time:	14:30 to 16:45 CET
Location:	Online

The summary below outlines the content of the presentations made and discussion points raised during this meeting as well as responses to those questions.

No	Agenda Item
1	**Introduction** The Commission started the workshop and reminded participants what the context related to the two initiatives was – Multimodal Digital Mobility Services (MDMS), which aims to regulate MDMS platforms and potentially require vertically integrated MDMS platforms with significant market power to integrate requesting transport operators, and the Single Digital Booking and Ticketing Regulation (SDBTR), regulating rail operators and the potential obligation for indispensable rail operators to make their services available for sale on requesting digital platforms. The focus of this third workshop was to validate the impacts that the different policy options that were developed could have on modal shift.
2	**Study progress & short reminder: policy options** The study team presented a short summary of the study and its methodology, alongside additional information on the timing of the study, now on its final phase: the assessment of impacts. The study team then outlined the different policy options under consideration, along with the policy measures included on each one. This included: • Common policy measures across all options ○ Repeal some, no longer relevant, provisions of the Regulation on a Code of Conduct for computerised reservation systems (CRS). ○ All B2B and B2C MDMS need to comply with aspects such as to respect general rules including the neutral display of offers on MDMS platforms and the obligation to fairly load and process data provided by operators. ○ Respect the obligation to feedback MIDT (marketing information data tapes) to operators. ○ Appoint an enforcement body to settle potential disputes. • Policy Option 1 ○ Respect for the specific rules that govern commercial agreements between MDMS and transport operators, applicable to indispensableMDMS and indispensable rail operators. ○ Set thresholds to identify B2C MDMS providers and rail operators subject to obligations: • Policy Option 2 ○ Respect for the specific rules that govern commercial agreements between MDMS and transport operators; applicable to all MDMS and all rail operators. • Policy Option 3 ○ Policy Option 1 + Obligation to enter, upon request, into commercial agreements to enable a) the sale of tickets of Indispensable rail operators, and b) access to MDMS platforms which are vertically integrated. • Policy Option 4 ○ Policy Option 1 + Obligation to enter, upon request, into commercial agreements to enable the sale of tickets of indispensable rail operators. ○ Unbundling obligation for MDMS providers vertically integrated with a transport operator and with SMP.

Policy Option summary

Common policy measures

- **Repeal some, no longer relevant, provisions** of the Regulation on a Code of Conduct for computerised reservation systems (CRS).
- All B2B and B2C MDMS need to:
  - Respect general rules including the **neutral display** of offers on MDMS platforms.
  - Respect the obligation to **fairly load and process data** provided by operators.
  - Respect the obligation to **feedback marketing data** to operators.
  - **Fairly treat their subscribers** (only for B2B MDMS).
  - **Display information on GHG emissions** of trips (where these data are provided by the operators).
  - Share non-personal **data for mobility management** with authorities.
- Appoint an **enforcement body** to settle potential disputes.

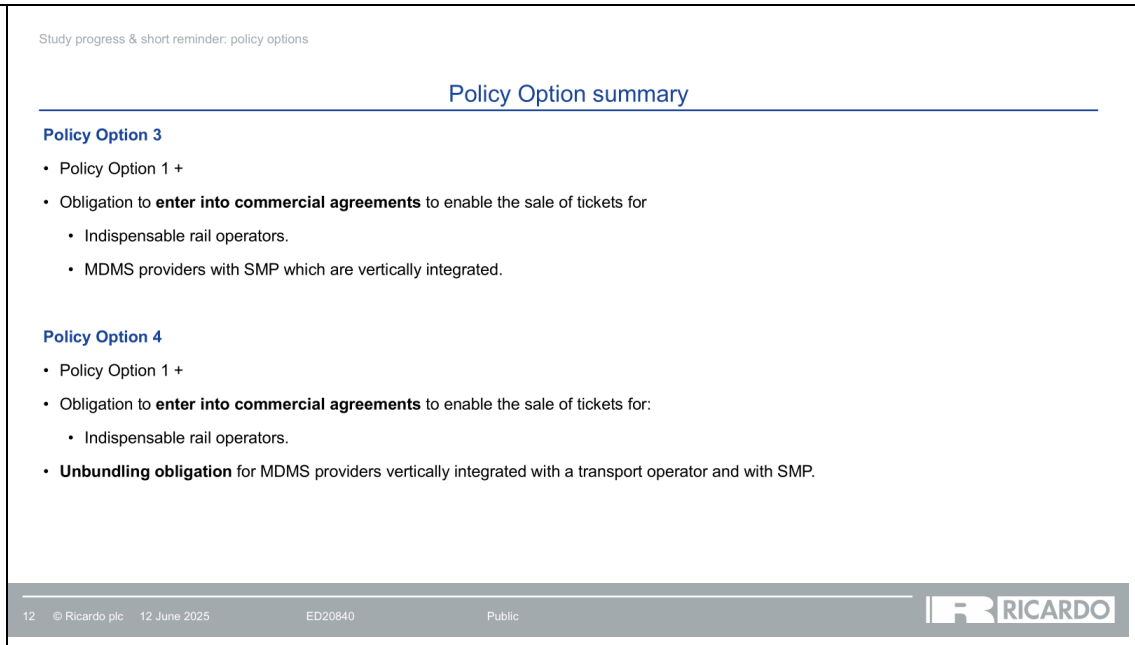
Policy Option summary

Policy Option 1

- Respect for the specific rules that govern commercial agreements between MDMS and transport operators; applicable to:
  - **B2B MDMS and B2C MDMS with SMP.**
  - **Indispensable rail operators** (rail PSO, cross-border rail services and rail operators with SMP).
- Set thresholds to identify MDMS providers and rail operators with SMP subject to obligations:
  - EC and national enforcement bodies tasked to designate MDMS providers and rail operators with SMP.

Policy Option 2

- Respect for the specific rules that govern commercial agreements between MDMS and transport operators; applicable to:
  - **All B2B MDMS and B2C MDMS.**
  - **All rail operators.**



Question	Answer
Is aviation included in the scope of the MDMS initiative?	Yes, aviation is included in the MDMS initiative, but not in the SDBTR initiative, which focuses on rail.
What is the rationale behind policy option 3 applying obligations only to vertically integrated platforms?	The rationale is based on the potential conflict of interest when platforms are vertically integrated with operators. These platforms may prioritise their own services, so the obligation ensures fairer access for other operators.
Why does policy option 3 not apply the same obligations to all platforms?	It aims to address the specific issue of vertically integrated platforms potentially disadvantaging competitors. Independent platforms are generally impartial and already offer broad access.
Are urban public transport modes like metro, tram, and urban buses included in the scope?	No, urban modes are excluded. Regional buses are included. The delineation is still being refined, and stakeholder input is welcomed by the Commission.
Are waterborne passenger services included?	Yes, passenger non-urban ferry connections are included, although they represent a smaller share of traffic.
How are operators with significant market power defined?	Currently, the threshold is set at 50% market share , expressed in passenger kilometres, in national markets.
Are platforms operated by public authorities subject to the same rules?	If they do not have significant market power at the national level, they are not subject to the same obligations.
Stakeholder comments on the chat	
Policy Option 4 was seen as unbalanced by some, as it imposes obligations on rail operators but not on independent MDMS. Clarification was requested and given that aviation is in scope of the MDMS initiative, and some CRS Code of Conduct provisions will be integrated.	

3	**Methodology for assessing modal shift**

The study team outlined the modelling framework that was set up to estimate quantitative impacts:

- Using stakeholders' and desk research inputs a set of 100 routes were selected and aggregated in 10 different clusters, which aim to capture the full range of impacts the policy options will result in. These clusters were compiled based on the route geography (national vs. international), level of MDMS deployment, and node attractiveness.
- Then, a multi parameter analysis model was created, where policy measures are scored for each cluster depending on their capability of induce change both on the completeness of the service offerings and the easiness to book an offer. These parameter scores are then combined into a single metric representing the progress each policy option makes to induce a modal shift for a percentage of travellers calculated based on the Eurobarometer.
- Based on these impacts, the potential modal shift is fed to the Interface and ASTRA models, which together translate these cluster-level impacts to all corresponding routes, scaling the impact to the EU level.
- These results feed into a cost-benefit analysis which balances costs of implementation of the policy measures vis-à-vis the benefits from modal shift and other factors.

Question	Answer
How were the 100 origin-destination pairs selected for analysis?	They were chosen to represent a range of trip types, lengths, levels of attractiveness and MDMS development. Popular routes and those with varying levels of competition were included.
How is the advancement of MDMS in Member States assessed?	Based on the number of active MDMS platforms and usage levels, informed by Eurobarometer results.

4 **Modal shift potential**

Analysis of modal shift started with a workshop with about 20 participants where transport experts from Member States were asked to rate what would be the potential model shift impact. Most identified a moderate or high modal shift impact potential. These inputs were used as indicative.

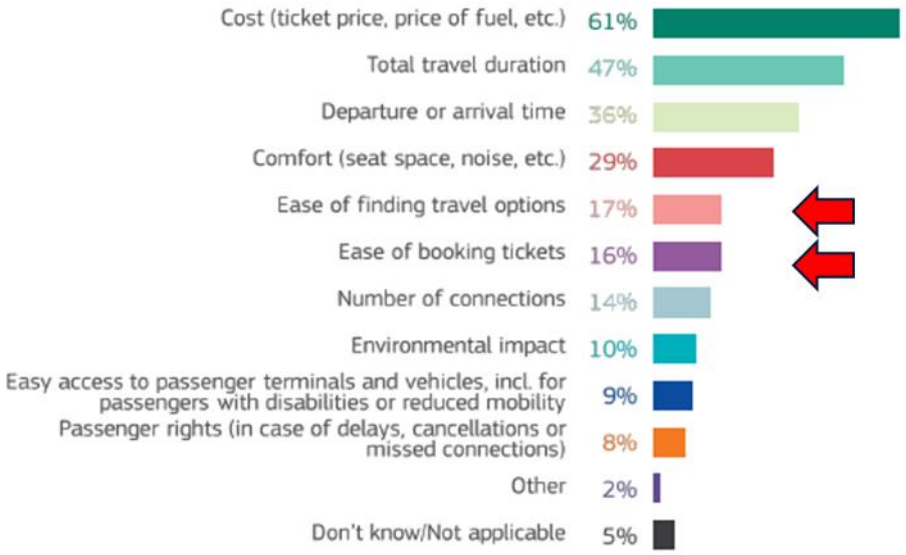
Expected modal shift	Q1 (QP1)	Q2 (QP2)	Q3 (QP1+2)
Very high impact (>10%)*	2	0	1
High impact (5-10%)	3	3	3
Moderate impact (2-5%)	6	4	2
Low impact (0-2%)	0	2	0
No impact (0%)	0	0	0
Negative impact (-%)	0	0	0
Total responses	11	9	6
Weighted average modal shift	**5.8%**	**4.3%**	**6.6%**

- Member State experts surveyed during a workshop on "maximum possible impact on modal shift if passengers had
  - i. The ability to see all offerings on an MDMS platform (QP1).
  - ii. The ability to book all visible travel options on an MDMS platform (QP2).
  - iii. Combination of i. and ii. above.

The study team also used on the findings of the Eurobarometer survey of more than 25,000 people across the EU (a representative sample). Cost and travel duration were identified as the first and

second most important factors in planning regional/long-distance trips. Ease of finding tickets and ease of booking are the 5th and 6th most important factors identified by 17% and 16% of respondents (Q3).

Q3 Which are the most important factors for you when planning a regional or long-distance journey? You can select up to three factors. [MULTIPLE ANSWERS]

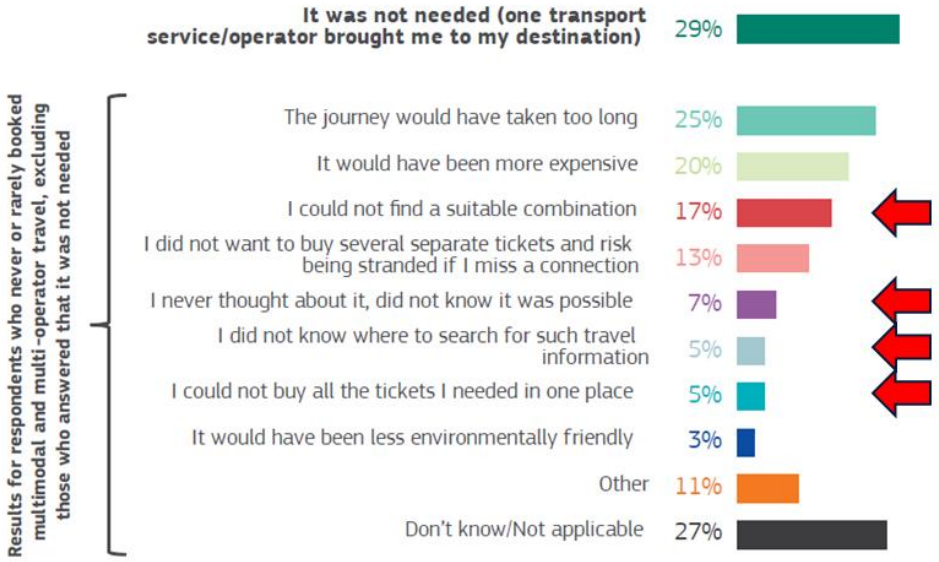


(%, EU27) Base: n=25 805 – All respondents

Barriers identified by passengers that never or rarely combine different collective modes or transport operators, include a number of issues the MDMS+SDBTR initiative may affect (Question 11):

- Inability to find suitable combinations (17%).
- Lack of knowledge of relevant possibility (7%).
- Lack of knowledge of where to search for such information (5%).
- Inability to buy all tickets in one place (5%).

Q11 Why have you never or rarely booked journeys combining different collective transport modes and journeys combining different transport operators within one mode to reach your final destination? [MULTIPLE ANSWERS]



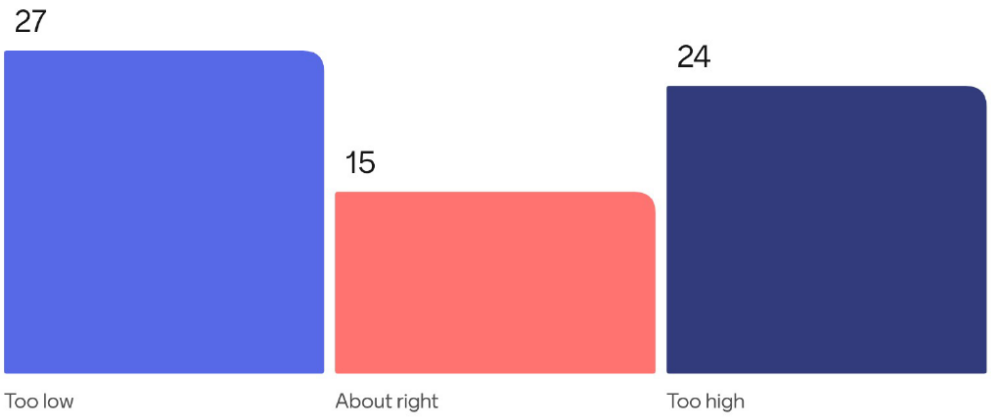
(%, EU27) Base: n=9 680 - Respondents who never or rarely combined different collective transport modes and never or rarely combined different transport operators within one mode

As a conservative assumption, only the most relevant cause the policy measures can most directly address is used: "inability to buy all tickets on one place" (5%). Scaling up from the subset of passengers to the whole population leads to a weighted share of all transport users' of 1.7%. As such, the study team is considering 1.7% as the ceiling of the theoretically possible modal shift achieved by addressing this barrier within the scope of the policy options.

Gathering of stakeholder views on this modal shift ceiling via Mentimeter:

Attendees were asked on their views of this "ceiling" of 1.7%. Around two-thirds of attendees responded, with very disparate views (see picture below). A majority thought the value was either too low or too high.

Q1. Is the **maximum value of 1.7% of users willing to shift their behaviour towards more sustainable modes of transport:**

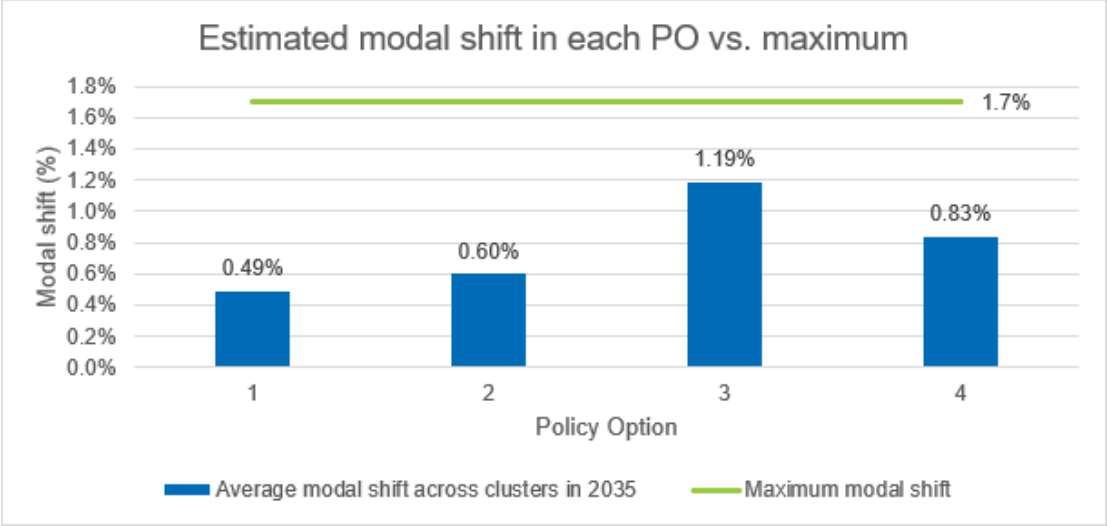


Question	Answer
Why is the modal shift potential capped at 1.7%?	This is a conservative ceiling based on Eurobarometer survey data. It reflects the share of respondents who cited the inability to book all tickets in one place as a barrier. It's not the

		expected shift, but the theoretical maximum from addressing specific booking and information barriers.
	Could the actual modal shift be higher than 1.7%?	Yes, potentially. The 1.7% is a conservative estimate. Other factors like improved service attractiveness or pricing could lead to higher shifts, but they are outside the scope of this specific assessment. The study team will also run sensitivity analyses on their results to test this.
	1.7% seems a low value and the added regulatory burden from the initiative could mean that the modal shift is negative.	Assessing regulatory costs will also be part of the assessment. It should be noted that the 1.7% means that 1.7% of all trips could shift away from cars/aviation to more sustainable modes, so it is not such a small figure. For example, for rail the increase in such a scenario will be much more than 1.7%.
	Is any assessment of impacts performed at the measure level or only at the policy option level?	The impacts (in all dimensions) of the measures will be presented to the extent possible separately. In the modelling exercise, this is done at the policy option level because a lot of the SDBTR measures and MDMS measures are meant to work in combinations so the impact will be combined.
	Stakeholder comments on the chat	
	The 1.7% modal shift estimate was seen as too low by some stakeholders, especially for long-distance trips. Others argued it might be too high for overall trips. Factors like ticket availability, service frequency, and infrastructure were highlighted as more influential than ticketing alone.	
5	**Policy Options scoring & modal shift** In this final session the study team presented the assessment of each policy options and how close they get to the 1.7% “maximum” discussed in the section above. Bottom-up scoring of the Policy Measures was done with aggregation into Policy Options capacity to induce change in: • QP1) The completeness & accuracy of service information; and • QP2) The ease of booking an offering. Modal shift is meant as shift of trips from air/private cars to more sustainable modes (such as rail/buses/coaches). With this, PO2 presents higher potential than PO1 due to its increased scope. PO3, followed by PO4, present the highest performance potential, since they force partial integration of offerings in MDMS.	

Cluster short description				Capture PO modal shift potential			
Cluster	Route	MDMS	Attractiveness	PO1	PO2	PO3	PO4
A	National	Leader	Both attractive	35%	35%	70%	60%
B	National	Planned adopter/follower	Both attractive	28%	50%	80%	50%
C	International	At least one leader	Both attractive	34%	34%	80%	50%
D	International	Planned adopters/followers	Both attractive	30%	40%	80%	60%
E	National	Leader	Hybrid	40%	40%	60%	40%
F	National	Planned adopter/follower	Hybrid	27%	40%	70%	50%
G	International	At least one leader	Hybrid	20%	30%	60%	50%
H	International	Planned adopters/followers	Hybrid	20%	30%	80%	50%
I	National	Any	Both moderately attractive	33%	33%	60%	40%
J	International	Any	Both moderately attractive	20%	20%	60%	40%

In terms of how this translates into overall modal shift potential in each policy option in comparison to the 1.7% theoretical maximum, PO3 achieves the greatest shift with 1.19%. PO1 generates the lowest modal shift at 0.49%.



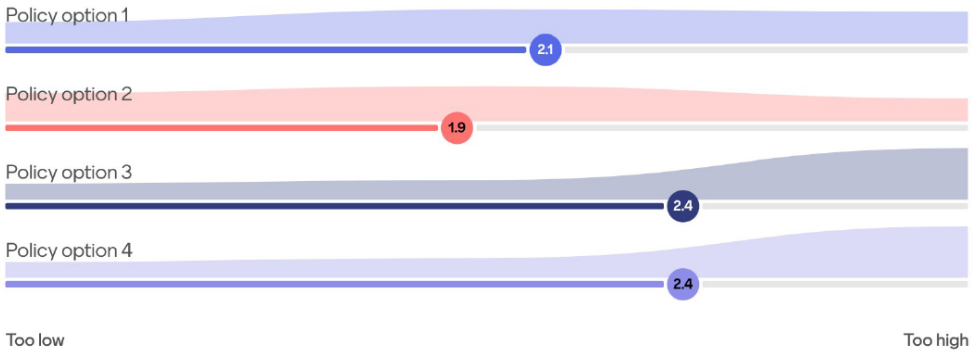
Finally, the study team also indicated that on the assumption of a general modal shift being away from private car and aviation and towards more sustainable modes of travel, some directional qualitative assumptions are being developed. These aim to indicate within these reductions and increases which particular modes might experience the most change within this, differentiating these assumptions by cluster. Overall, most shift is expected away from cars in national routes (less shift in aviation) and towards high-speed rail in attractive routes (less shift in conventional rail and bus/coach).

Cluster	Short description	Mode (single mode only, combinations omitted for brevity)				
		car	air	HS rail	coach	rail conv
A	National, Leader, Both attractive	- - -	-	+++	+	+
B	National, Planned adopter/follower, Both attractive	- - -	-	+++	+	+
C	International, At least one leader, Both attractive	-	- -	+++	+	+
D	International, Planned adopters/followers, Both attractive	-	- -	+++	+	+
E	National, Leader, Hybrid	- - -	-	++	++	++
F	National, Planned adopter/follower, Hybrid	- - -	-	++	++	++
G	International, At least one leader, Hybrid	-	- -	++	++	++
H	International, Planned adopters/followers, Hybrid	-	- -	++	++	++
I	National, Any, Both moderately attractive	- - -	-	+	+++	+++
J	International, Any, Both moderately attractive	-	- -	+	+++	+++

Gathering of stakeholder views on modal shift impact via Mentimeter:

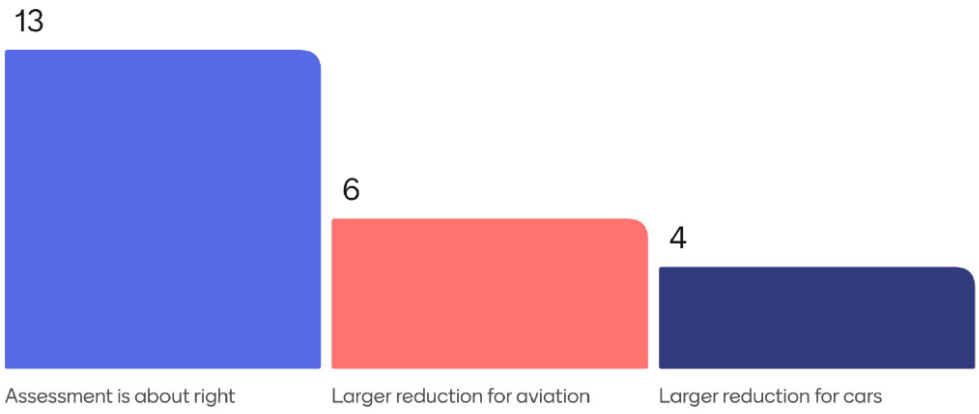
Attendees were asked to present their views on this impact on modal shift. Around half of attendees replied to the questions. For PO1 and PO2, on average attendees agreed with the assessment, while for PO3 and PO4 on average they thought it was too high.

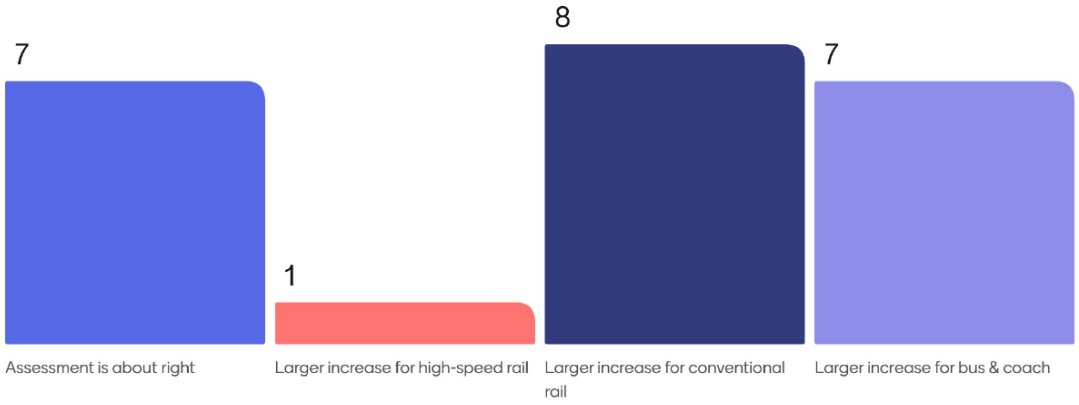
For each policy option, do you agree with the average **modal shift impact considering the potential for passengers to choose more sustainable modes?**



Attendees were also asked to answer on the assumptions related to which modes would gain more or less from this modal shift. Perhaps signalling the difficulty in assessing this, only around one-quarter of attendees replied to these questions. While on the first question most attendees agreed that the assessment "is about right", for the second questions votes were split between that option and the ones indicating larger increase for conventional rail and bus&coach, at the detriment of the high-speed rail option.

Q3a. For transport modes that are expected to be **used less** due to an increase in MDMS usage, do you agree on the assessment of the modes affected?



	Q3b. For transport modes that are expected to be **used more** due to an increase in MDMS usage, do you agree on the assessment of the modes affected? 
	Stakeholder comments on the chat
	There was criticism that aggregating policy measures prevents clear evaluation of individual impacts. Stakeholders requested absolute numbers of trips affected and sensitivity analysis. There was debate over whether transparent ticketing would increase costs or prices. Some argued competition would keep prices low; others feared added costs for operators. Concerns about discriminatory obligations on vertically integrated platforms were also made. Several stakeholders noted that infrastructure improvements (e.g., more frequent, faster trains) are more critical for modal shift than ticketing reforms. Stakeholders requested separate impact assessments for MDMS and SDBTR.
6	**Next steps** The study team noted that this workshop was the conclusion of the stakeholder consultation, but they remain available to consider any specific feedback. The Commission thanked everyone for the input given during the life of the study. The two legal proposals are expected by the end of the year.

15.17 ANNEX 6.8: ANALYTICAL SUMMARY OF THE INPUT TO THE IIA

This annex provides an analysis of the submissions received in response to the publication of the Commission's Inception Impact Assessment (IIA), which was open for comment between 5 October and 2 November 2021[285].

There were 40 separate responses to the IIA, spilt by stakeholder type as indicated in Table 15-6[286]. Industry respondents (from 'company/business organisations' and 'business associations') contributed over half of the submissions, with the remaining responses spread over a number of different stakeholder categories.

Table 15-6: Classification and number of stakeholders responding to the IIA

Stakeholder group	Number of responses	% of responses
Company/business organisation	12	30%
Business association	11	27.5%
EU citizen	4	10%
Public authority	3	7.5%
Consumer organisation	2	5%
Non-governmental organisation (NGO)	2	5%
Other	6	15%

By country of origin, respondents from Belgium, Germany and France contributed over half of the responses, with over a quarter overall coming from Belgium, reflecting the number of EU-level trade associations based in Belgium (see Table 15-7).

Table 15-7: Geographical distribution of responses received to the IIA

Country of origin	Number of responses	% of responses	Country of origin	Number of responses	% of responses
Belgium	11	27.5%	Czechia	1	2.5%
Germany	7	17.5%	Finland	1	2.5%
France	5	12.5%	Norway	1	2.5%
Spain	4	10%	Poland	1	2.5%
Netherlands	2	5%	Portugal	1	2.5%
Austria	2	5%	Switzerland	1	2.5%
Romania	2	5%	UK	1	2.5%

The remainder of this annex analyses the submissions by topic, as mentioned in the IIA. It is important to note that the respondents were commenting on the objectives, problem drivers and policy measures that were set out and described in the IIA, not those that have evolved in the course of the study (as presented in the main report). Hence, relevant text is replicated below from the IIA, where it is appropriate to do so.

Objectives

The specific objectives (SOs) mentioned in the IIA were:

- "*SO1: provide certainty and transparency for business-to-business commercial agreements for services reselling mobility products for land-based modes, waterborne and maritime transport, as well as for agreements on journey continuation.*
- *SO2: Prevent harmful market effects which may arise from discriminatory behaviour of MDMS against operators, and ensure that the deployment of MDMS is not hampered by discriminatory practices.*
- *SO3: ensure that MDMS enhance the efficiency and sustainability of the transport system.*"

There were several general comments in support of the proposed initiative, which underlined the need for a level playing field between modes and the importance of delivering modal shift away from private car use. In a joint response, UITP, EMTA and POLIS[287] underlined that the development of MDMS had to support, rather

[285] EU's 'Have your say' website

[286] One response (from a Portuguese public authority) was submitted twice.

[287] Representing public transport operators, metropolitan authorities and cites, respectively.

than undermine public transport, while *Wiener Stadtwerke*[288] suggested that it was more appropriate to integrate MDMS from the bottom-up as was already happening, rather than top-down. UITP, EMTA and POLIS also noted that there needed to be a strong case to justify EU intervention in local transport, as this was a Member State competence, and also that the rights of citizens to affordable and accessible transport services should not be diluted by MDMS. Passenger rights were also raised by consumer organisation, BEUC, which underlined that there needed to be continuous and extended passenger rights to cover cross-border rail services and multimodal journeys.

From the perspective of public transport operators, *Wiener Stadtwerke* noted that they were already increasingly facilitating and integrating a wider range of modes into a single mobility platform. CER[289] also noted that railway operators had already committed to providing up-to-date tariff information, standardised APIs, real-time travel information and journey disruption support for international passengers by 2025, and for multimodal travel by 2030.

Specifically in relation to SO1, VDV[290] underlined that it would not be acceptable for public transport authorities and operators for MDMS to be able to resell their tickets at different prices. In response to SO3, UITP, EMTA and POLIS underlined that without an effective governance framework, the business interests of those developing commercial MDMS would not naturally align with sustainable mobility goals. *Wiener Stadtwerke* and VDV underlined that it was important to communicate to passengers the contribution of different journeys to CO_2 emissions reductions, while ECTRI[291] underlined that the means of delivering information to passengers needed to be carefully considered. VDV also supported MDMS providers sharing mobility data with public transport authorities.

On the other hand, a consultancy was concerned that regulating MaaS risked undermining innovation, while a consortium leading a relevant EU-funded project called for other issues to also be considered including: business models; infrastructure use; enabling supporting technologies; integrated planning; measures to address the digital divide; integrated customer support; incident management; insurance; and the monitoring of standards for multimodal offerings.

Problem driver 1

In the IIA, the first problem driver was defined as '*opaque conditions for combining and reselling mobility products in land-based modes, waterborne and maritime transport*'.

A number of public transport operators and city representatives underlined that MDMS should not have an adverse effect on policy, and so public transport authorities should remain central to regulating mobility. In relation to public service obligations (PSOs), a number of operators suggested that these should be the framework in which local MDMS were developed, while UITP, EMTA and POLIS underlined that any legislation on ticketing should not weaken PSOs and should recognise the specific nature of the contracts between public transport authorities and public transport operators. ALLRAIL[292] called for liability to fall on the causer of the delay (as in the UK), while EPF[293] underlined that sufficient protection was needed for passengers that used a combination of different modes. The fact that currently the rights of consumers who combine different modes for a trip, even if they have a single ticket, are covered by different pieces of EU legislation was also identified as an issue by BEUC.

They were a number of responses from established public transport operators that underlined the challenges faced by MDMS. ČD[294] noted that they had had negative experiences with ticket resellers manipulating or increasing the price of their tickets, which had had a negative impact on consumers and reflected badly on the operator. CER suggested that issues around the transparency of data collection and analysis had not yet been addressed. CONFEBUS[295] argued that there should be no separation of the marketing and operation of services, as a result of the specific conditions around the delivery of the services, while SNCF[296] argued that

[288] Representing mobility providers in the Austrian capital Vienna.
[289] Representing European railway and infrastructure companies.
[290] Representing German transport companies.
[291] European Conference on Transport Research Institutes.
[292] Representing independent passenger rail companies.
[293] Representing passengers.
[294] Dutch national rail operator.
[295] Representing Spanish bus operators.
[296] French national rail operator.

a distinction was needed between open data and booking and ticketing services in order to ensure certainty and transparency. The *Bundesverband CarSharing*[297] believed that there was currently no business model for fully integrated MaaS applications, and so called for any reference to the provision of data and / or APIs to support a full integration to be non-binding. The Norwegian Rail Directorate proposed that the standardisation of APIs be required to ensure that it was not only the large actors who would have the capacity to integrate all services.

On the other hand, ALLRAIL argued that there was no evidence that data had been misappropriated, while Trainline, a comparison and booking website, argued that there was a power asymmetry in negotiations, which prevented market entry and innovation on the part of MDMS providers. Both EPTO[298] and Move EU[299] underlined the importance of ensuring the commercial freedom of MDMS providers to choose whether or not to enter into any agreement, while also underlining that stakeholders should not be overburdened. OMIO, another comparison and booking website, argued that the standardisation of data points across borders and between modes was needed to enable tickets for a wider range of journeys to be sold. They also suggested that access to, and the transfer of, live data from operators to platforms needed to be free as both parties had an economic interest in such transfers.

Problem driver 2

The second problem in the IIA was specified as *'difficulty to ensure that incumbent MDMS do not adopt anti-competitive practices or that deployment of MDMS is not limited by anti-competitive practices'*. A sentiment that was raised by a number of respondents was that it is a challenge to create a fair MDMS eco-system for both public and private companies.

From the perspective of incumbents, UTP[300] and SNCF both noted that public transport authorities and operators were already able to develop MDMS, as long as they respected competition law. Public transport operator OTW[301] underlined that the actions undertaken by MDMS, and their relationship with subsidised public transport operators, needed to be defined, including in relation to the sharing of travel and commercial information, rules for the resale of tickets and the sharing of information transmitted to customers for the purpose of managing services. From the perspective of the railway sector, CER noted that the sector was already facilitating through ticketing between different railway undertakings and ticket vendors, as well as implementing an Agreement on Journey Continuation (AJC) and the *Hop On The Next Available Train* (HOTNAT) initiative. NS[302] underlined the importance of ensuring that there were more than one or two online MDMS platforms, otherwise these would effectively become the gatekeepers for MDMS. In relation to buses, CONFEBUS called for the harmonisation of the approach taken towards data protection and commercial information for operators when sharing information with platforms. The *Bundesverband CarSharing* noted that mobility service operators needed to be able to determine the prices and conditions of use for their services at all times, and for the selling via MaaS applications of tickets at lower prices without prior agreement to be forbidden.

Data issues were of particular concern for new entrants. Trainline, Amadeus IT group and EU travel tech argued that legal certainty and enforceability were needed for MDMS on access to relevant data. Move EU underlined that there needed to be free and fair market access and competition principles in order to overcome the current fragmentation in the market. From the perspective of passengers, EPF noted that access to data, including to real-time information on disruptions, was an enabler of MDMS, while UNIFE[303] noted that access to mobility data was the main challenge for suppliers. Amadeus also suggested that it was important for intermediaries to have information on the different price components of fares in order to enable consumers to effectively compare different options. The focus of EU MDMS regulation should be on operator-owned MDMS, according to EU travel tech, particularly in relation to self-preferencing and neutral display. They also called for independent distributors to be able to market and price as they wished to, as long as they accepted the

[297] German car sharing association.
[298] Representing major private sector public transport operators.
[299] Representing on-demand mobility.
[300] Representing French public transport operators.
[301] Public transport operator from the Belgian region of Wallonia.
[302] Dutch national rail operator.
[303] Representing the rail supply industry.

economic risk. Perhaps more controversially, ALLRAIL called for incumbent MDMS to rebrand, so that they were not able to make use of the high level of awareness of their brand that already existed in the market.

Finally, a consultancy proposed that data should be organised in such a way as to only allow the actual participants in a mobility transaction to access the data. GIDAS[304] suggested that legislation on its own would not be able to prevent discriminatory behaviour on the part of MDMS, as a result of the possibilities that exist for digital manipulation.

Problem driver 3

The third and final problem driver, as worded in the IIA, was *'difficulty to ensure that multimodal digital mobility services support transport sustainability objectives'*.

There were differing views on the importance of providing information on the CO_2 emissions of trips to passengers, with UNIFE arguing this was essential, whereas the Finnish Public Transport Association did not believe that this would have an impact on passengers' decision-making. UTP underlined that MDMS should promote alternatives to the private car, and so argued that transport route planners should be controlled by public operators. UITP, EMTA and POLIS underlined that MDMS should promote active travel, rather than being driven by economic considerations, as well as noting that passenger rights should be at the core of MDMS. The Norwegian Rail Directorate noted that if MDMS were able to freely negotiate prices, this could undermine the achievement of sustainability goals.

Amadeus and EU travel tech called for air travel to be included in MDMS, otherwise air travel would remain the default option for long-distance travel, while another response underlined the importance of supporting the use of sustainable travel options to airports.

Policy measures

A number of responses identified different policy measures that might be considered. *Wiener Stadtwerke* called for minimum requirements for interoperability for ticketing-related APIs, based on two conditions: that the obligation should apply to all actors, not only to public transport operators; and that it was left to the service provider to decide which tickets to sell via the API. They also supported the creation of a level playing field in which every service provider had to integrate the same information relating to other transport providers.

From the perspective of the rail sector, CER wanted sector-based solutions to be supported and taken as the starting point when improving multimodal ticketing and for data exchange to continue to be based on voluntary contractual agreements. They also believed that data sharing should be undertaken on a level playing field and that the principle of reciprocity should be applied to such sharing, as long as the protection of trade secrets and intellectual property rights was respected. CER also called for mobility providers to be able to freely negotiate their pricing policy, and for tickets not to be able to be resold at different prices without prior agreement, as well as for the rights of data generators to be explicitly recognised in the relevant EU legal framework. ČD underlined that it was important for operators to retain control over the data that they generated, and that operators had guarantees that these data would not be misused. They also noted that purchasing a ticket from a multimodal vendor should not lead to a loss of a passenger's rights.

Consumer organisation BEUC called for passengers' rights to be regulated through a binding legislative framework, rather than in continuation agreements, and for any through-ticketing obligation to cover all parts of a passenger's journey. In relation to data, BEUC believed that a minimum set of static and dynamic data should be shared and circulated, and that all market players should have access to the same quality of data under fair conditions. They also underlined that data sharing should benefit public authorities to help them manage mobility. BEUC called on the Commission to develop guidelines to enable operators to conclude agreements that were fair and allowed non-discriminatory competition, as well as for a common methodology to be used to inform consumers about the environmental impacts of their trips.

GIDAS suggested that one-off tax breaks should be given to kick-start an EU Digital System, as proposed by the Institute, which should be set up as a cooperative in each of the EU's language areas. In addition, they called for every EU citizen over the age of 10 to be given a personal digital system to access such an EU-wide system.

[304] Global Institute for Structure relevance, Anonymity and Decentralisation.

Impacts

Several responses noted at a high level that there could be beneficial impacts from the deployment of MDMS in terms of modal shift, as long as MDMS worked with public transport to provide information and services to all travellers. VDV noted that MDMS providers would benefit from regulation, while the costs for public transport authorities and operators would increase, so the source of these increased funds needed to be considered. It was also underlined that it was important to consider the economic impacts of MDMS on commercial transport services and on public service contracts.

Other comments

UITP, EMTA and POLIS suggested that the scope of the IIA was not sufficiently clear, e.g. whether it covered only long-distance transport, or also local transport services.

15.18 ANNEX 6.9: ANALYTICAL SUMMARY OF THE 2021 OPEN PUBLIC CONSULTATION

Introduction

The Commission launched a 12-week OPC on 23 February 2021, which closed on 18 May 2021. The OPC invited all citizens and organisations to provide input on the potential revision of the CRS Code of Conduct and targeted mainly members of the general public and non-experts, as a complement to the targeted consultation. This public consultation was designed to support the impact assessment and to consult in addition to the organisations and individuals directly involved in the implementation or subject to the requirements of the CRS Code of Conduct, wider stakeholder groups and the general public.

In this section, we present the responses of the stakeholders participating in the OPC, with a focus on those responses and views that are not already reflected in the study's stakeholder consultation.

Profile of the respondents

A total of 23 responses were received. Table 15-8 presents the list of stakeholders that took part in the survey, as part of the targeted consultation. The stakeholders included business associations (four), companies or business organisations (nine), environmental organisations (one), EU citizens (six), public authorities (two) and one other stakeholder. Those respondents that were not EU citizens were asked what the size of their organisation was. The responses are shown in Figure 15-54.

Table 15-8: Stakeholders that submitted responses to the 2021 OPC

Stakeholder group	Stakeholders that submitted responses
Business association	EU Traveltech Global Business Travel Organisation (GBTA) ECTAA VLARA
Company/business organisation	BEUC (The European Consumer Organisation) European Passengers' Federation České dráhy, a.s. (ČD) Finnair Plc Revidio Limited Lufthansa Group Amadeus IT Group, S.A. Robert Arrigo & Sons Limited AERTiCKET GmbH
Environmental organisation	Bundesvereinigung gegen Fluglärm e.V.
EU citizen	Six EU citizens
Public authority	Autorités françaises Latvian Ministry of Transport
Other	Aviation and Competition Law Research
Total	**23**

Figure 15-54: Organisation size of responding organisations

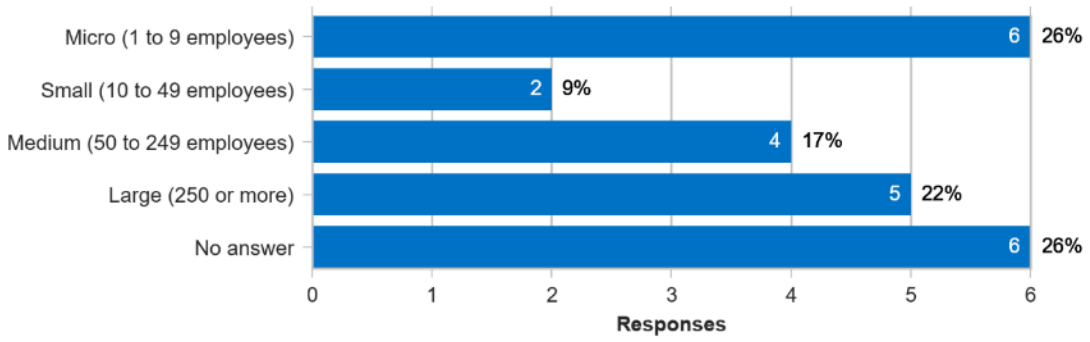
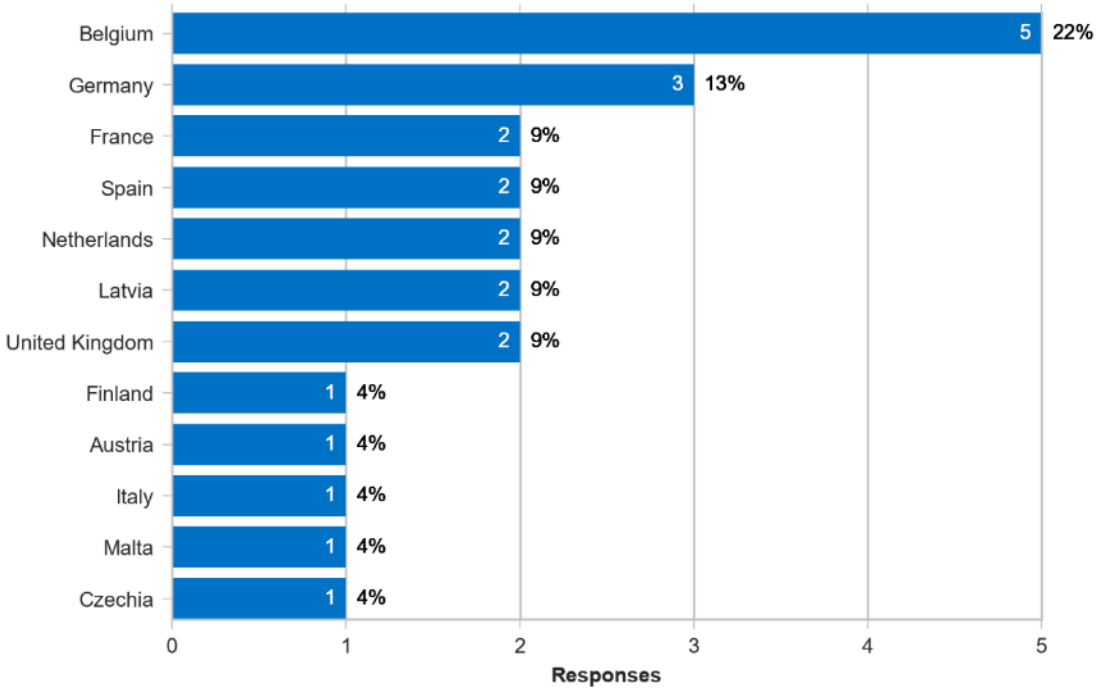


Figure 15-55 shows the country of origin of the respondents.

Figure 15-55: Country of origin of the respondents



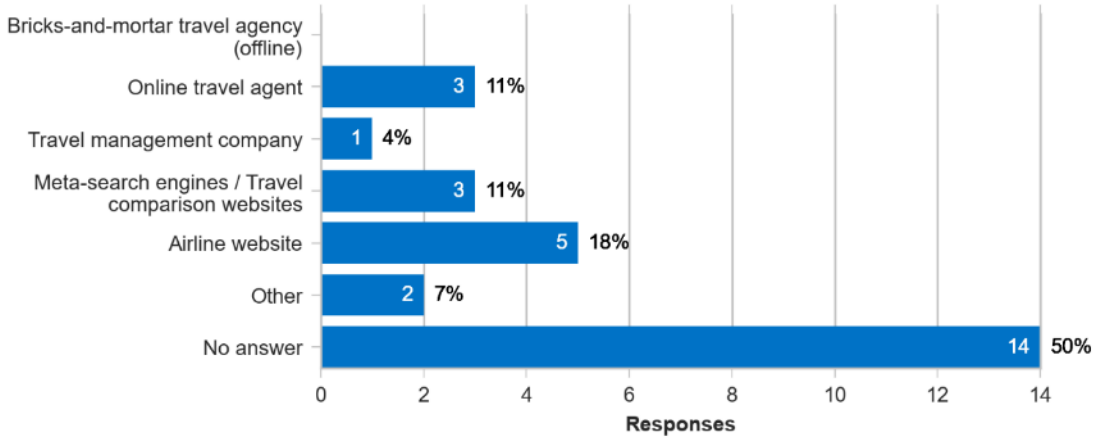
Analysis by question

Section A

Section A of OPC posed questions on respondents' experiences with booking services and was therefore aimed at respondents that do not fall into the following categories: "GDS / CRS / CRS association", "airline/airline association", "travel agency/travel agency association", "technology provider" or "meta search engine". Eleven stakeholders provided responses to this section.

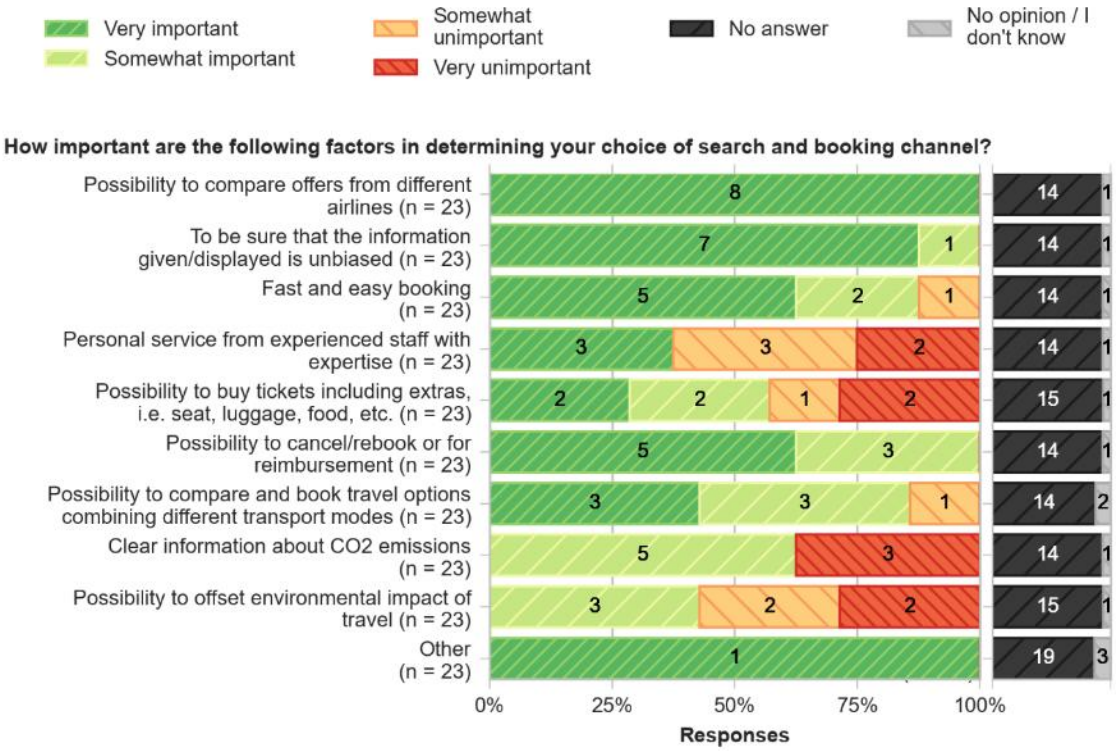
Stakeholders were asked to list the two most common channels used when searching for and booking air tickets during the last 24 months. The responses are shown in Figure 15-56.

Figure 15-56: Responses to “Please list the two most common channels used when searching for and booking air tickets during the last 24 months.”



Stakeholders were asked to assign an importance to different factors in determining the choice of search and booking channel. As displayed in Figure 15-57, all stakeholder (eight of eight) that provided responses agreed that the possibility to compare offers from different airlines was a very important factor. This was followed by the importance of unbiased information being given or displayed. The least important factors were deemed to be personal service from experienced staff and the possibility to offset environmental impact of travel, for which the majority of responses (five of eight) were “somewhat unimportant” and “very unimportant”.

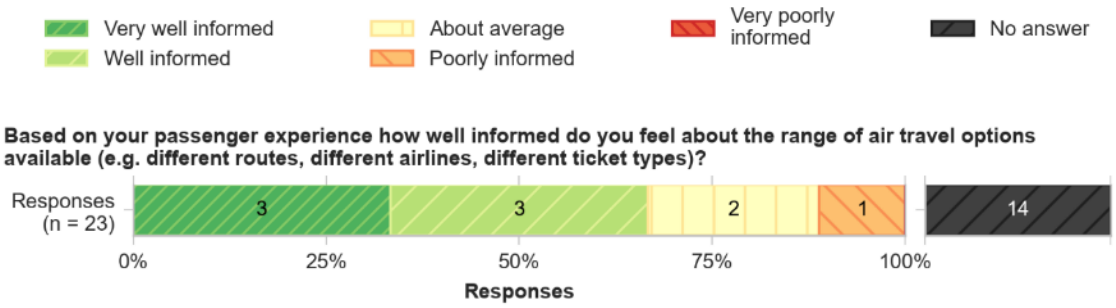
Figure 15-57: Responses to “How important are the following factors in determining your choice of search and booking channel?”



In a follow-up question, stakeholders were asked if any other factors may affect their choice of search and booking channels. Points mentioned included layover information, transparency over terms and costs, accessibility information, accessibility of the information and booking platform and, for corporate travellers, the compliance with the company's internal travel guidelines and policies.

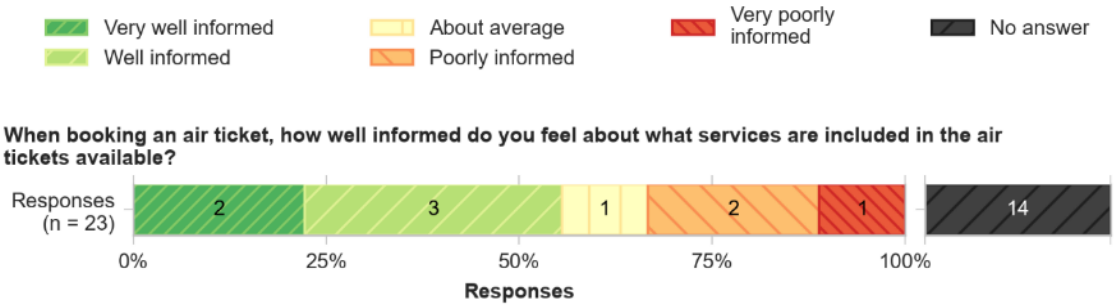
Stakeholders were asked how informed they felt about the range of air travel options available. The responses are shown in Figure 15-58 and indicate that most respondents (six of nine) feel well or very well informed about options available.

Figure 15-58: Responses to: "Based on your passenger experience how well informed do you feel about the range of air travel options available (e.g. different routes, different airlines, different ticket types)?"



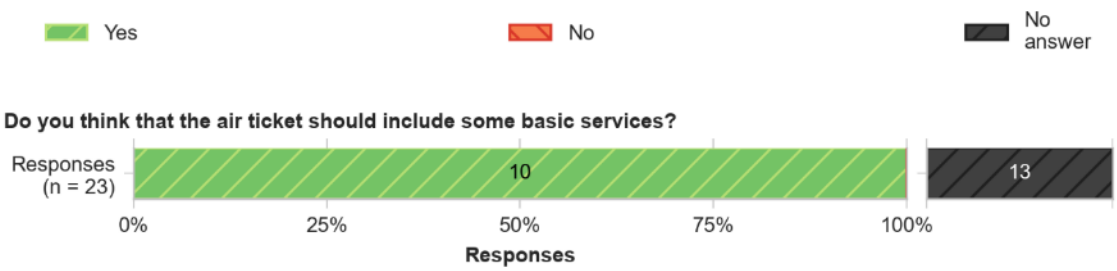
The same question was asked about how well stakeholders felt informed about what services were included in the air tickets. Figure 15-59 shows that most respondents (five of nine) feel well or very well informed about what is included in tickets.

Figure 15-59: Responses to "When booking an air ticket, how well informed do you feel about what services are included in the air tickets available?"



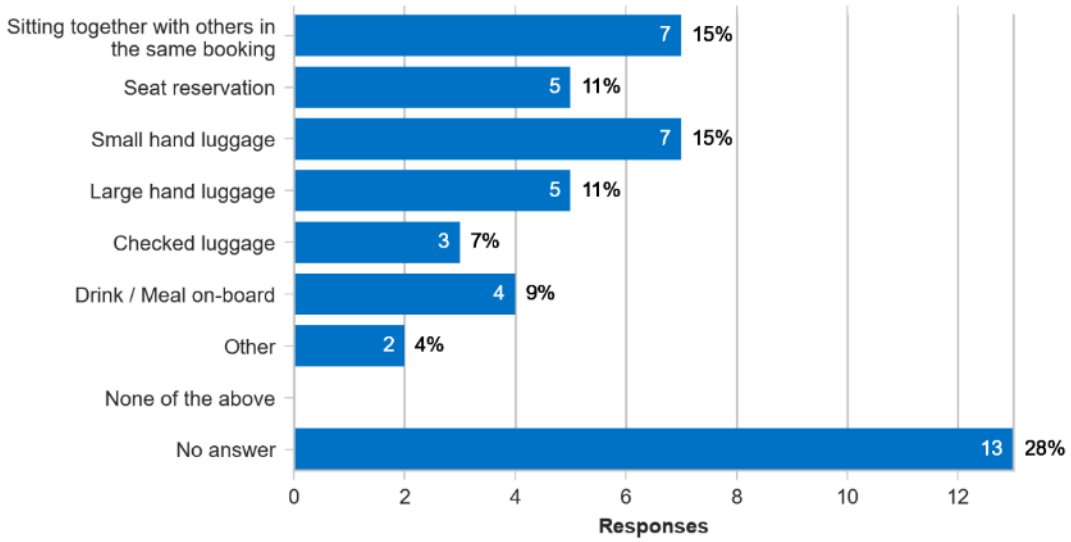
Stakeholders were asked if they believed that air tickets should include some basic services. All stakeholder (10 of 10) responding to the question agreed that basic services should be included, as shown in Figure 15-60.

Figure 15-60: Responses to "Do you think that the air ticket should include some basic services?"



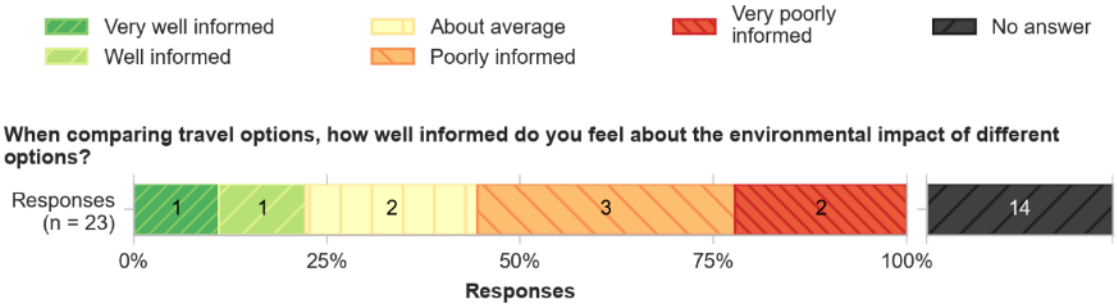
Stakeholders were asked next what services they believe should be included. As shown in Figure 15-61, the options most chosen were 'sitting together with others in the same booking' and 'small hand luggage'.

Figure 15-61: Responses to "what services do you think should be included in the most basic air ticket available?"



Stakeholders were questioned on how informed they felt regarding the environmental impact of different flight options. As shown in Figure 15-62, most respondents (five of nine) felt poorly or very poorly informed.

Figure 15-62: Responses to: "When comparing travel options, how well informed do you feel about the environmental impact of different options?"



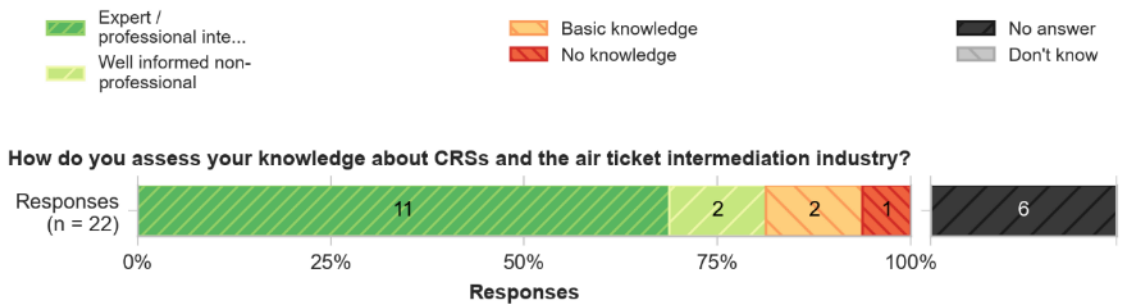
Section B

Section B of the OPC posed questions on the problem definition, objectives and policy options for the future of the Code of Conduct. The section introduced the three potential problems in the field of air ticket distribution, summarised as follows:

- No need for a specific sectoral treatment of traditional CRS services.
- There is a risk of uneven regulatory treatment between B2B air ticket intermediation services as a result of new air ticket distribution channels not being covered by the CRS Code of Conduct.
- Not a fully level playing field for access to and use of CRS services.

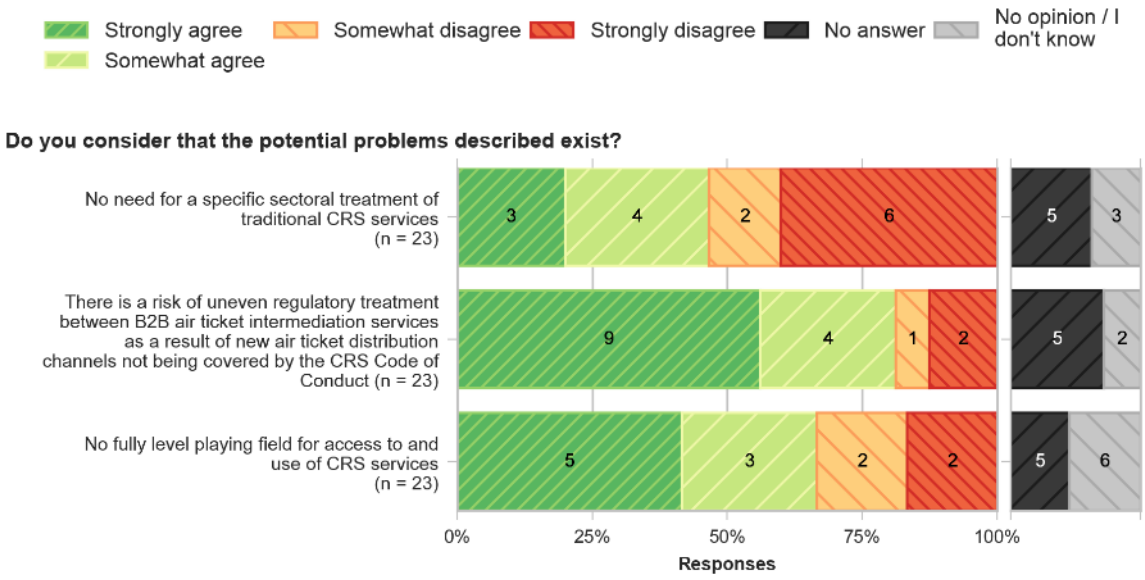
The first question of the section asked stakeholders to assess their knowledge about CRSs and the air ticket intermediation industry. The responses illustrated in Figure 15-63 show that the majority of respondents (11 of 16) assessed their knowledge as 'expert / professional interest'.

Figure 15-63: Responses to “How do you assess your knowledge about CRSs and the air ticket intermediation industry?”



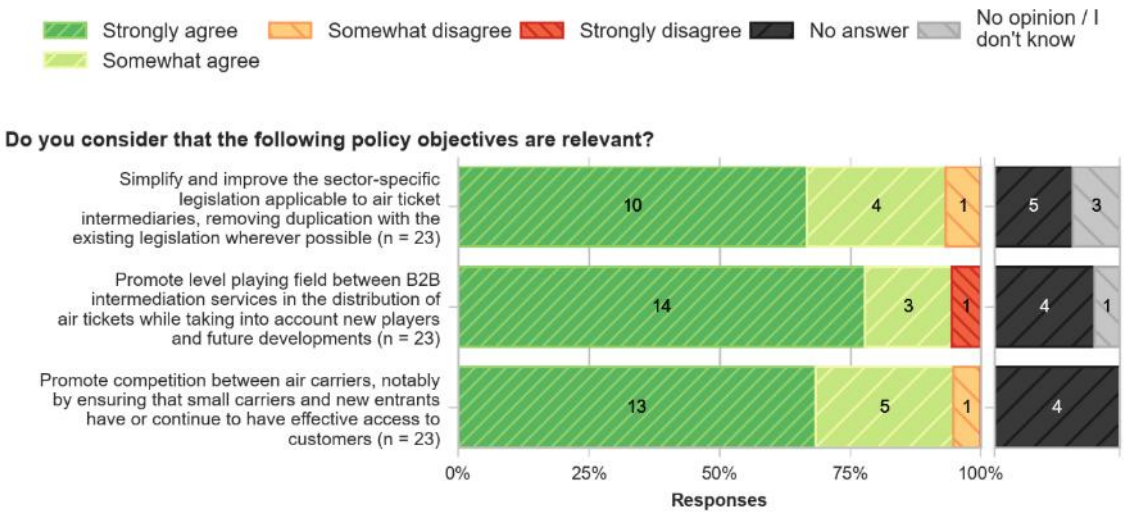
Stakeholders were subsequently asked for their agreement with the potential problems outlined above. The responses are shown in Figure 15-64. Most respondents somewhat or strongly disagreed with the first problem (8 of 15). There was most agreement with the second potential problem, with 13 of 16 respondents indicating they somewhat or strongly agreed. The third potential problem found agreement with 8 of 12 respondents. Stakeholders were asked to justify their responses. These justifications reflected the views laid out in the targeted consultation analysed in section **Error! Reference source not found.**.

Figure 15-64: Responses to “Based on your experience, do you consider that the potential problems described exist?”



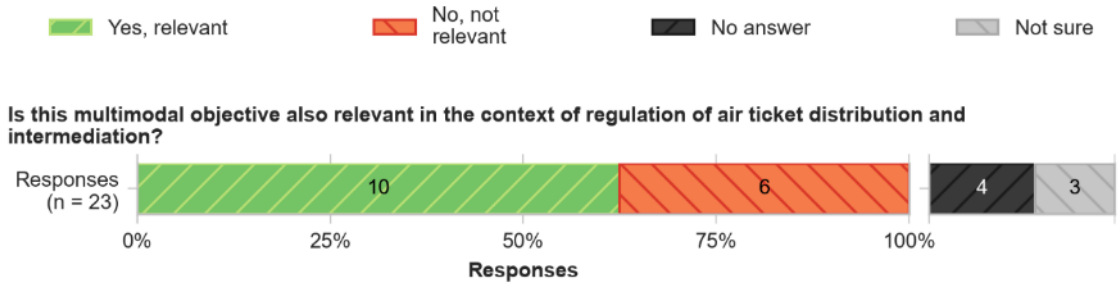
The following question of the OPC asked stakeholders about their agreement with three policy objectives, as shown in Figure 15-65. In all three cases, the majority of stakeholders agreed with the policy objectives, with 14 of 15, 17 of 18 and 18 of 19 somewhat and strongly agreeing with the policy objectives, respectively. Again, the comments provided here reflected those provided by the stakeholders in the targeted consultation. One stakeholder suggested that one of the objectives of the Code should be supporting the use of climate-friendly transport modes.

Figure 15-65: Responses to “Based on your experience, do you consider that the following policy objectives are relevant?”



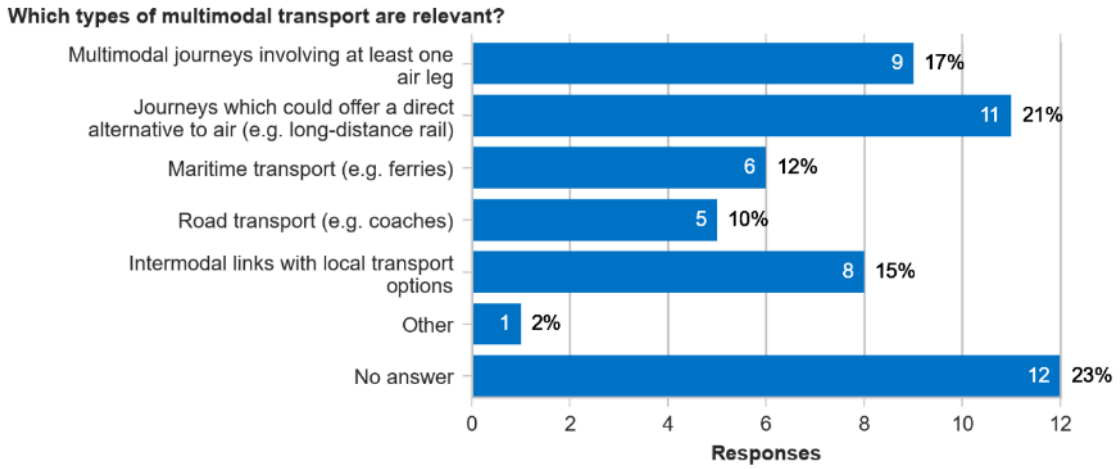
Following the questions on the problem definition and policy objectives, the OPC considered multimodal transport. Stakeholders were introduced to the Code’s provision to encourage rail and multimodal transport and were asked if it was relevant in the context of air ticket distribution and intermediation. The majority of respondents (10 of 16) believed that it was relevant, as shown in Figure 15-66.

Figure 15-66: Responses to “Is this multimodal objective also relevant in the context of regulation of air ticket distribution and intermediation?”



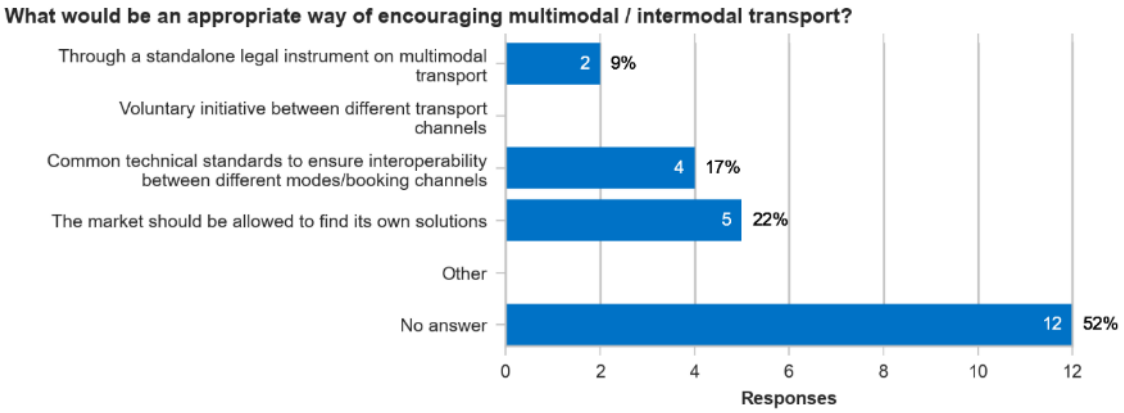
Subsequently, stakeholders were asked which types of multimodal transport were relevant if they believed that the multimodal objective was relevant. The responses are shown in Figure 15-67. The most relevant type of multimodal transport picked was ‘journey which could offer a direct alternative to air (e.g. long-distance rail)’.

Figure 15-67: Responses to “which types of multimodal transport are relevant?”



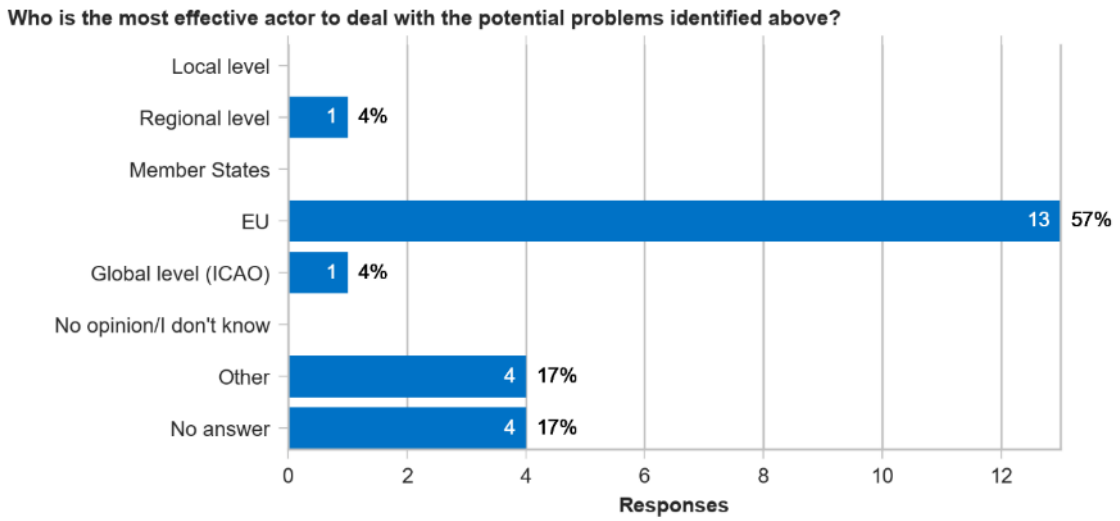
Respondents that did not believe that the multimodal transport objective was relevant were asked what they saw as an appropriate way of encouraging multimodal or intermodal transport. As shown in Figure 15-68, the most popular response was that ‘the market should be allowed to find its own solutions’.

Figure 15-68: Responses to “what would be an appropriate way of encouraging multimodal / intermodal transport?”



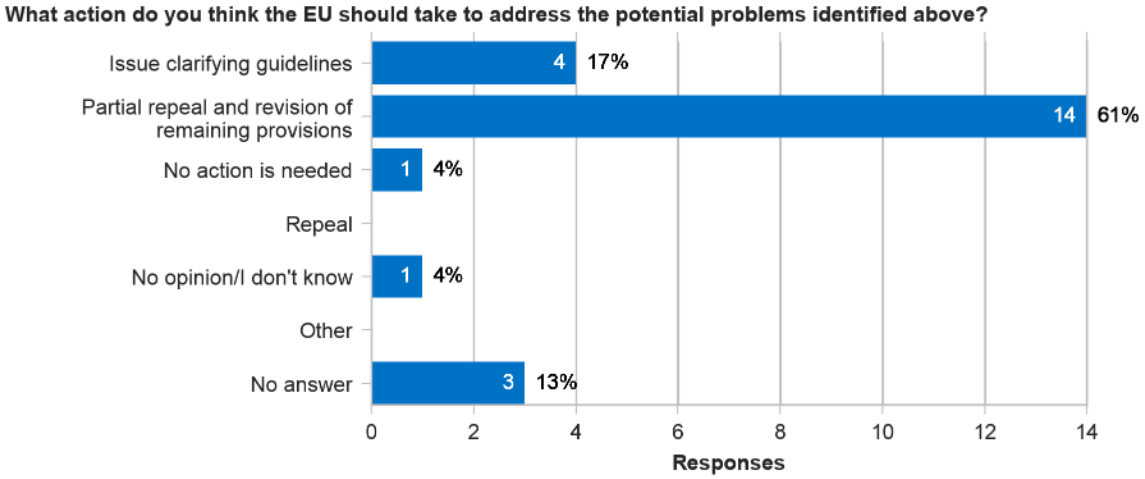
Stakeholders were subsequently asked which actor they saw as most effective to deal with the potential problems named above. As shown in Figure 15-71, the by far most popular actor was the EU.

Figure 15-69: Responses to “In your opinion, who is the most effective actor to deal with the potential problems identified above?”



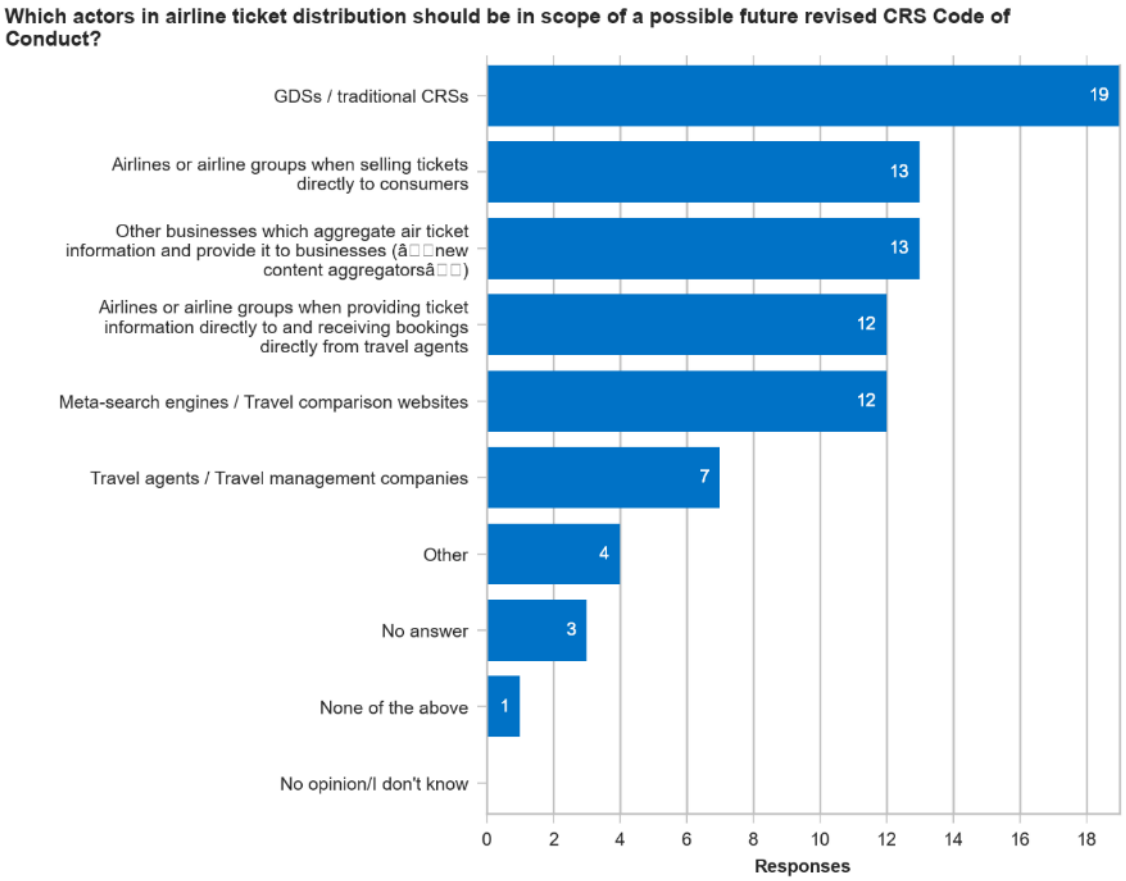
Next, stakeholders were asked what actions they thought the EU should take to address the identified potential problems. As shown in Figure 15-70, the most popular action was a partial repeal, alongside a revised scope and provisions, to take into account market developments and recent EU policy objectives.

Figure 15-70: Responses to “What action do you think the EU should take to address the potential problems identified above?”



Stakeholders were asked to note which actors they believed should be in the scope of a possible future revised CRS Code of Conduct. Figure 15-71 shows the responses of the stakeholders. The majority of respondents agreed that traditional CRSs should be included. The reasoning provided for including or excluding certain players echoed that provided in the targeted consultation and will therefore not be repeated here.

Figure 15-71: Responses to “Which actors in airline ticket distribution should be in scope of a possible future revised CRS Code of Conduct?”



Finally, stakeholders were asked if they wished to provide any further information or comments. Most comments were a summary of previous comments. One stakeholder underlined that ticket distributors only offer a limited amount of rail tickets, although multimodal and intermodal transport should be boosted. A further stakeholder noted that the discussion should put more consideration on business travel. One comment noted that a standard should be considered to limit the reduction of legroom in planes.

15.19 ANNEX 6.10: ANALYTICAL SUMMARY OF THE 2022 OPEN PUBLIC CONSULTATION

This annex provides an analysis of the submissions in response to the 2022 OPC. The OPC was open from 01 December 2021 to 23 February 2022. A total of 336 responses were received.

Table 15-9 presents the number of stakeholders that completed the OPC, split by stakeholder group, as asked in the OPC (first column). For easiness in presentation, these categories were group into four main stakeholder groups, shown in the second column.

Table 15-9: Classification and number of stakeholders responding to the 2022 OPC

Stakeholder group	High level grouping	Number of responses	% of responses
Business association	Industry	17	5.1%
Company/business organisation	Industry	62	18.5%
EU citizen	Citizen	173	51.5%
Non-EU citizen	Citizen	6	1.8%
Public authority	Public authority	40	11.9%
Academic/research institution	Other	3	0.9%
Consumer organisation	Other	6	1.8%
Environmental organisation	Other	3	0.9%
Non-governmental organisation (NGO)	Other	17	5.1%
Other	Other	9	2.7%

In terms of geographical/Member State distribution, the majority of respondents indicated that their country of origin was one of the EU Member States (336 respondents). Seventeen respondents were based outside of the EU. The number and percentage of respondents by country of origin are shown in Table 15-10.

Table 15-10: Geographical distribution of responses received

Country of origin	Number of responses	% of responses	Country of origin	Number of responses	% of responses
Germany	133	39.6%	Romania	2	0.6%
Italy	35	10.4%	Slovakia	2	0.6%
Belgium	30	8.9%	United States	2	0.6%
Austria	23	6.8%	Australia	1	0.3%
France	22	6.5%	Bulgaria	1	0.3%
Spain	17	5.1%	Canada	1	0.3%
Sweden	11	3.3%	Croatia	1	0.3%
Netherlands	8	2.4%	Cyprus	1	0.3%
Czechia	7	2.1%	Denmark	1	0.3%
Norway	7	2.1%	Greece	1	0.3%
United Kingdom	6	1.8%	Ireland	1	0.3%
Portugal	5	1.5%	Lithuania	1	0.3%
Finland	4	1.2%	Luxembourg	1	0.3%
Hungary	4	1.2%	Poland	1	0.3%
Latvia	3	0.9%	Russia	1	0.3%
Estonia	2	0.6%	Switzerland	1	0.3%

The analysis of the responses to the OPC covers the responses to the closed questions, which have been analysed quantitively and presented in graphs, the responses to the open questions, which have been

analysed qualitatively, and any ad hoc contributions that were submitted. The OPC was divided in two sections, one aimed at travellers and citizens (questions 1 through 3, section 0) and one aimed at experts and stakeholders (questions 4 through 12, section 0). All respondents could choose to answer any or both sections, regardless of type of respondent they were. However, given the focus on questions 4 through 12 on experts and stakeholders, it was decided to present the analysis not only by the main stakeholder groups represented (citizens, industry, public authorities, other) but, in the case of industry, also by their sub-stakeholder categorisation. This sub-categorisation of the industry category allows for a finer analysis of the views represented in each question. The subcategories used were:

- Urban transport service provider.
- Other road transport service provider.
- Other rail service provider.
- Waterborne transport provider.
- Air transport provider.
- Cycling or micro-mobility transport provider.
- MDMS provider.
- Digital map provider.
- Technology provider.
- Travel agents.
- Other.

In order to understand how many, if any, coordinated responses were submitted, a clustering tool developed by Ricardo was used[305]. This analysis uncovered four potential set of coordinated responses across around 15 different stakeholders. The interests represented in these coordinated responses were:

- Traditional rail operators and their EU-level associations.
- German public transport operators and their MS-level associations.
- Cycling operators and their EU-level associations.
- Cycling users and their EU-level associations.

The analysis of the OPC is presented below.

General section for travellers and citizens

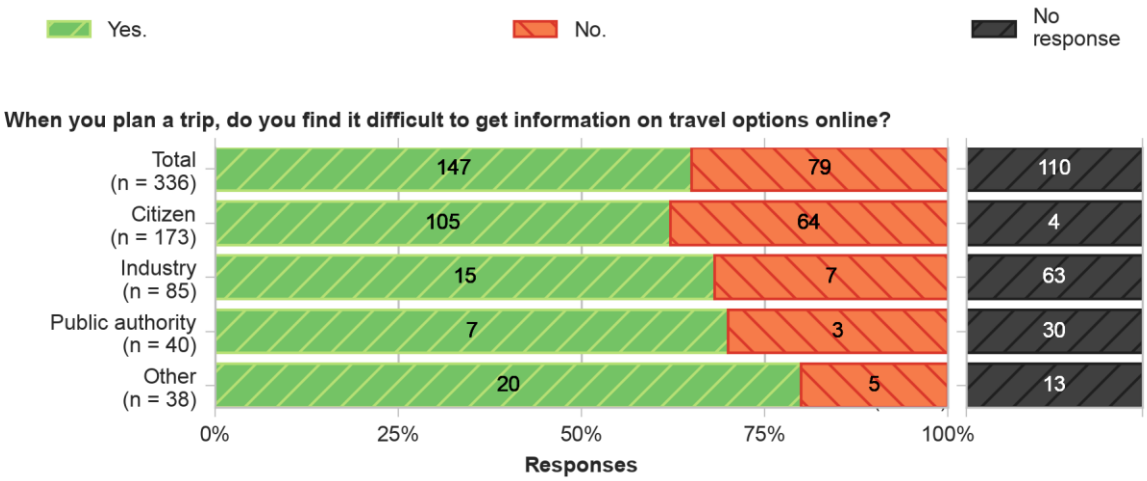
This section aimed to better understand the use of digital services when planning, booking and purchasing multimodal transport services in the EU.

Question 1: When you plan a trip, do you find it difficult to get information on travel options online?

Respondents were asked if they found it difficult to get information on travel options online when planning a trip. From those that responded to the question, 65% (147 out of 226) said that was the case, with no important differences between stakeholder groups.

[305] For each open text question selected from the OPC, the clustering tool outputs groups of responses that are the same or very similar to one another. These groups/clusters are identified using the mean shift algorithm and must have two or more similar responses to be valid. Each outputted cluster shows the open text responses and the desired respondent metadata for identification purposes.

Figure 15-72: When you plan a trip, do you find it difficult to get information on travel options online?



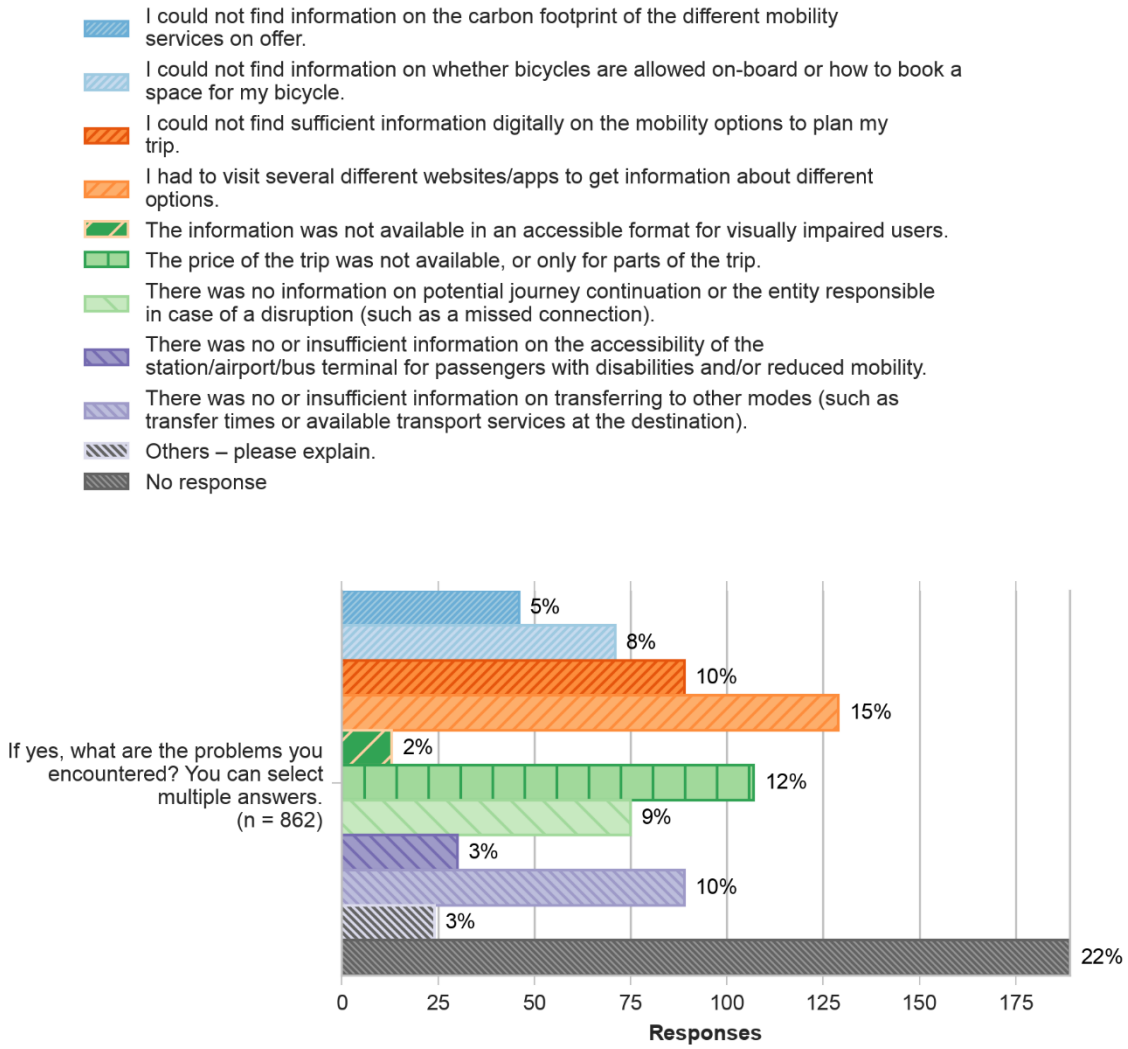
Question 1a: If yes, what are the problems you encountered?

Respondents were then asked about what sort of problems they have encountered. The most common issue, identified by 15% of respondents, was that they had to visit multiple sites to find the information needed about the different options. Next on the most common issues, was the difficulty in finding information about price (12% of respondents selected this option). With 10% of responses each, the next most common issues related to lack of digital information about the trip and lack of information about transfer to other modes. The least common issue (2% of respondents) was related to unavailability of information in an accessible format for visually impaired users.

A follow-up question asked for respondents that chose “other” to explain their choice. Issues highlighted in these responses included (type of stakeholder in parentheses):

- Different geographical scope of the different online options and fragmentation of offerings (public authority and a citizen).
- Too much information available (public authority, urban transport service provider, other rail service transport provider and a citizen).
- Unreliable information with different information shown in different online platforms (citizen).
- Information only available in the local language (citizen).
- Difficulties with information about cross-border travel (NGO and two citizens).
- No information on environmental impact of trips (public authority).

Figure 15-73: Q1a: If yes, what are the problems you encountered?



Question 2: Have you experienced difficulties when booking and purchasing tickets/mobility services for a trip combining different modes of transport (bus, rail, air, ship/ferry) online?

Respondents were then asked whether they had experienced difficulties when booking and paying for mobility services online for trips which combined multiple modes of transport. In every category, more respondents answered yes than no. Overall 77% of respondents had experienced difficulties (174 out of 226). The category with the greatest proportion of respondents who had *not* experienced difficulty was that of citizens at 25% (43 out of 169). Responses across the different stakeholder groups of citizens, industry, public authority or other were broadly similar in that the majority of survey respondents had experienced difficulties.

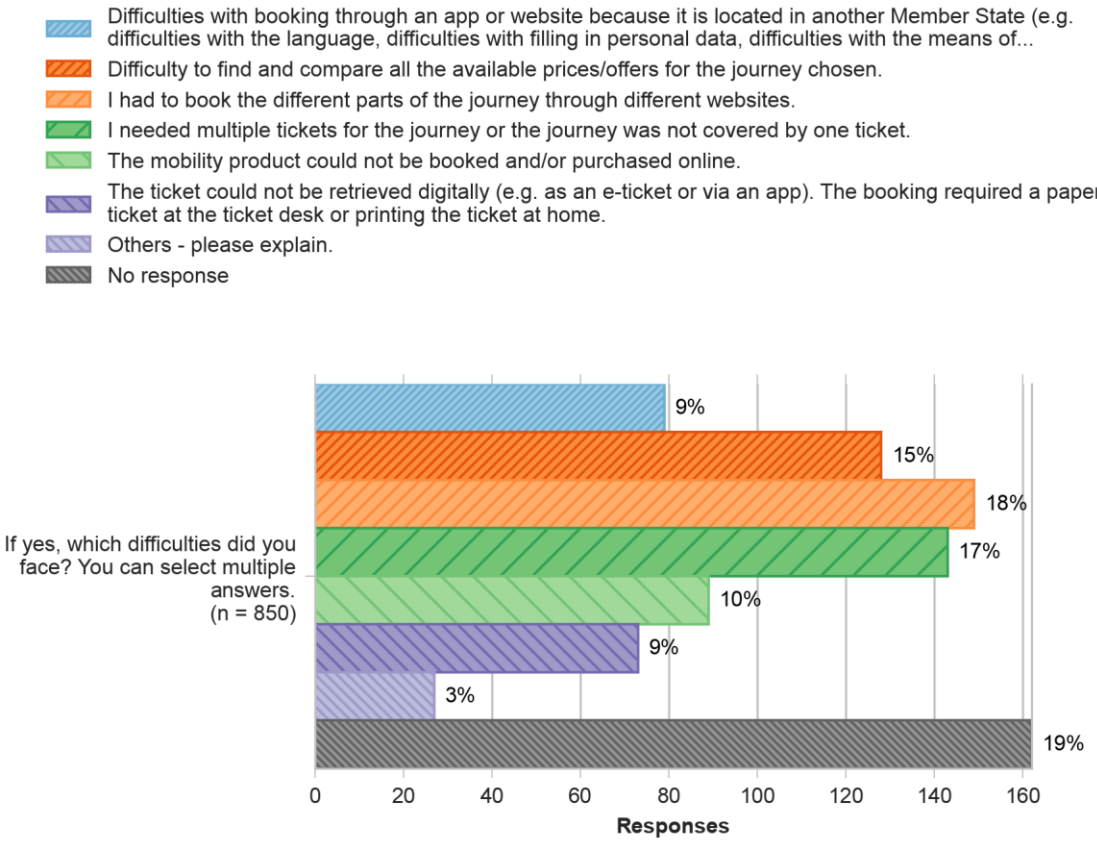
Figure 15-74: Q2: Have you experienced difficulties when booking and purchasing tickets/mobility services for a trip combining different modes of transport (bus, rail, air, ship/ferry) online?



Question 2a: If yes, which difficulties did you face?

Subsequently, respondents were asked to define which difficulties they had been faced with in this process. The need to book sections of a journey through multiple websites was the most frequently selected response overall (with multiple selections possible) – this was selected by 18%. Needing multiple tickets for a journey or the journey not being covered by one ticket was the next most selected option and received 17% of responses. Difficulty to find and compare all the available prices/offers for the journey chosen received 15% of responses. The remaining choices hovered around 10% each except for the choice “other” which was chosen by 3%.

Figure 15-75: Q2a: If yes, which difficulties did you face?



Of the respondents who selected “other”, a range of difficulties were highlighted when asked to explain further.

The difficulty of booking assistance through different apps, websites and contact points was drawn attention to as a significant barrier to the accessibility of journeys in an NGO response. The inaccessibility of digital services for transport users with vision impairment using a screen reader also acted as a significant barrier and was highlighted in responses from citizens and an NGO.

The need to repeatedly ensure bookings are available with a bicycle for each section of a journey was noted as making the booking process more tedious for the customer, this was particularly relevant for respondents when making cross-border journeys and was highlighted in responses from citizens, NGOs and an environmental organisation.

Some citizens had experienced difficulties when trying to book journeys with children or tickets only being available through on-site booking facilities. A lack of clarity surrounding what a family ticket means when booking an overnight train was highlighted. A response from a citizen in Germany also brought attention to not being able to reserve seats at a station for a group of three, when each passenger is entitled to a different discount through the BahnCard scheme, despite this service being possible when booking online.

In a citizen’s response the possibility for travel connections to be disrupted by delays without passenger rights being ensured by a specific provider was noted as a problem when organising travel chains with multiple connections. In addition, the lack of flexibility in defining the adjustable time needed to catch a train connection was pointed out, citizen respondents were typically able to define one standard time period between all changes rather than varying this allotted time based on the frequency of the train connection.

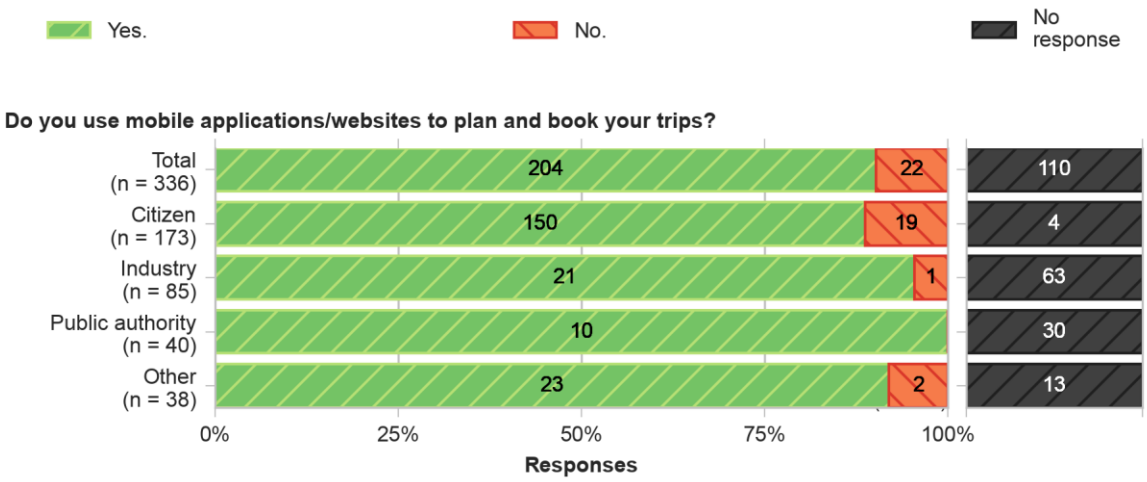
Although a citizen’s response stated that generally good data aggregators exist, they nonetheless find it difficult to trust that a complete range of all possible journey options is displayed, this limits their capacity to rely solely on the service.

Difficulties were also encountered by respondents when trying to book rail journeys to minor stations that were run by state-subsidised operators, sometimes these bookings are not able to be made on open-access railway operators.

Question 3: Do you use mobile applications/websites to plan and book your trips?

When asked whether mobile applications/websites were used to plan and book trips, 90% of total respondents (204 out of 226) stated that they were. Out of the 336 participants in the survey 110 chose to give no response to this question.

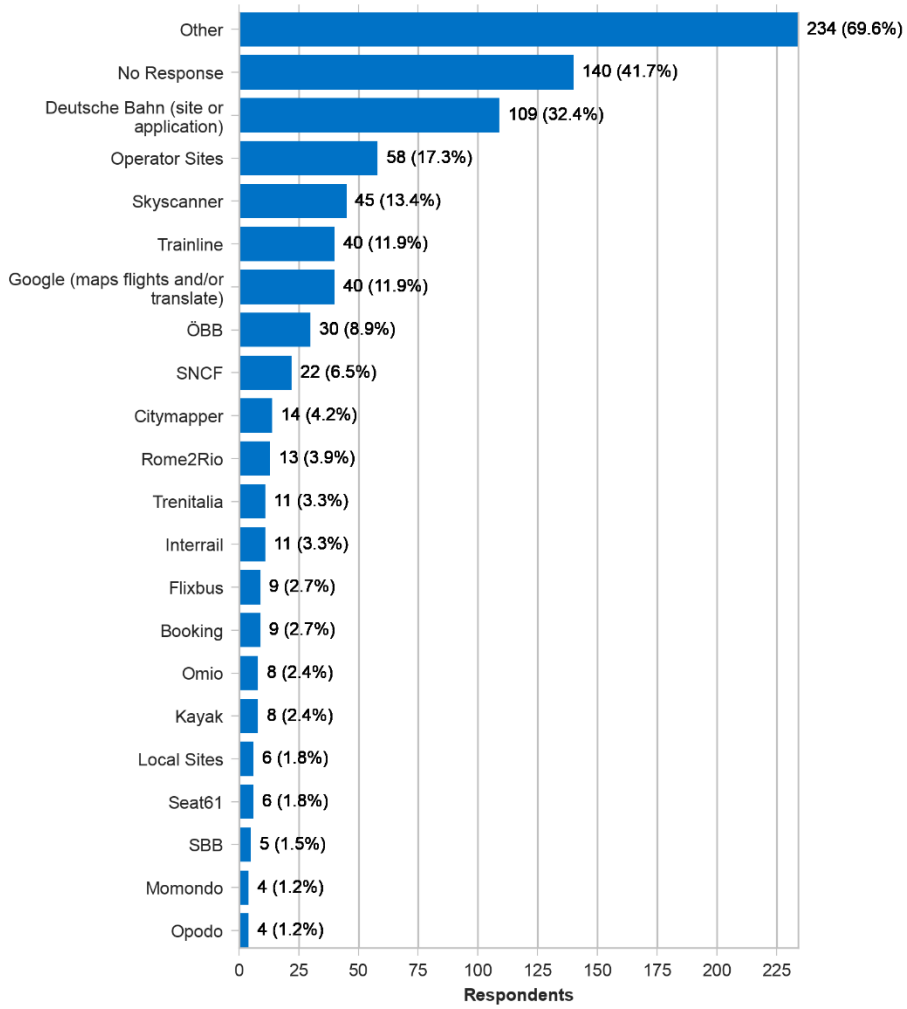
Figure 15-76: Q3: Do you use mobile applications/websites to plan and book your trips?



Question 3a: If yes, which applications and websites do you use for trips within the EU?

Respondents were asked which applications and websites they used for trips within the EU. In the replies to this question 70% of all responses chose “other”; any response with three or less responses was grouped within “other”. The second most selected option was to provide no response, chosen by 42%. The third most chosen response was the Deutsche Bahn site or application with 32%. Operator sites received 17% of selections. After these top four most selected options Skyscanner received 13%, Trainline and Google both received 12% of selections each. Following on from this, 15 further options received less than 10% of selections each. Momondo and Opodo received 1% of responses each, representing the joint smallest share in response to this question.

Figure 15-77: Q3a: If yes, which applications and websites do you use for trips within the EU?

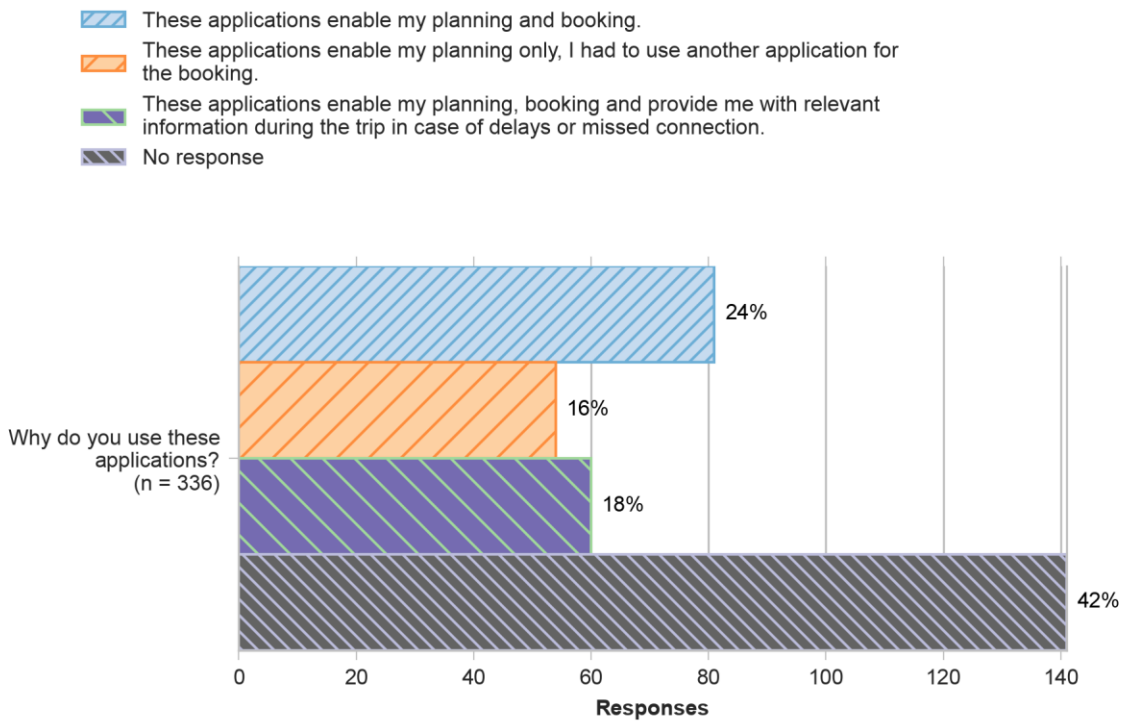


Note: Any response with three or less responses was grouped within “other”.

Question 3b: Why do you use these applications?

Respondents were then asked for what purpose they use the applications they had identified in the previous question. The option stating these applications enable “planning and booking” was chosen by 24% of respondents, representing the category chosen more than any other besides “no response”. The remaining options stating that these applications enable “planning only” and “enable planning, booking and provide relevant information” were both chosen in between 15% and 20% of responses.

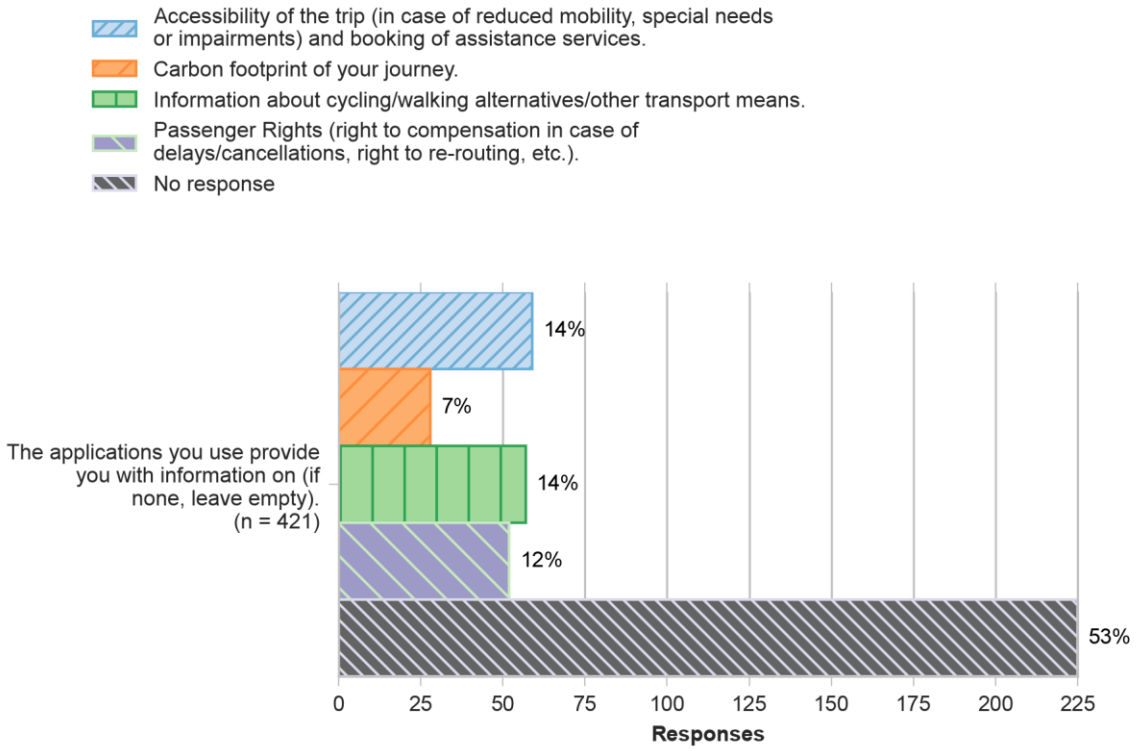
Figure 15-78: Q3b: Why do you use these applications?



Question 3c: The applications you use provide you with information on:

Respondents were asked to choose a definition of what information was provided to them through the applications they use. The two most frequently selected choices after “no response” covered the accessibility and assistance services of the trip at 14%, and information on cycling/walking alternatives or other transport means which also received a 14% share of responses. The next most selected response was 12% which stated that passenger rights information was provided to them, while the response selected least frequently at 7% related to information on the carbon footprint of the transport user’s journey.

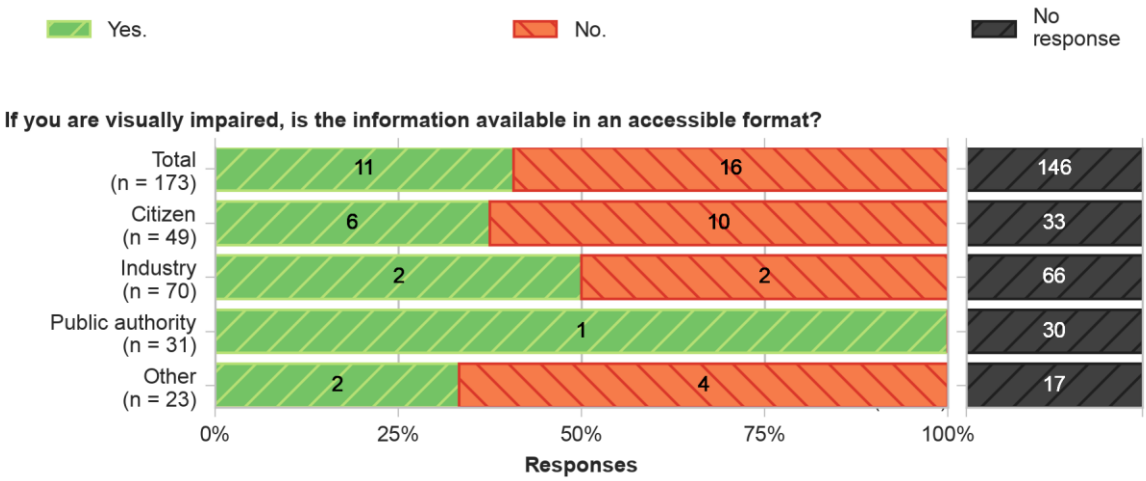
Figure 15-79: Q3c: The applications you use provide you with information on:



Question 3d: If you are visually impaired, is the information available in an accessible format?

Survey respondents were then asked whether the information provided in such applications is available in a format that is accessible to them. Only 27 respondents (out of 336) chose to give an answer to this question, 146 respondents chose to give no response and 163 stated that this question is not relevant to them. Of the yes/no responses that were given 16 out of 27 respondents stated that information was not available in an accessible format.

Figure 15-80: Q3d: If you are visually impaired, is the information available in an accessible format?



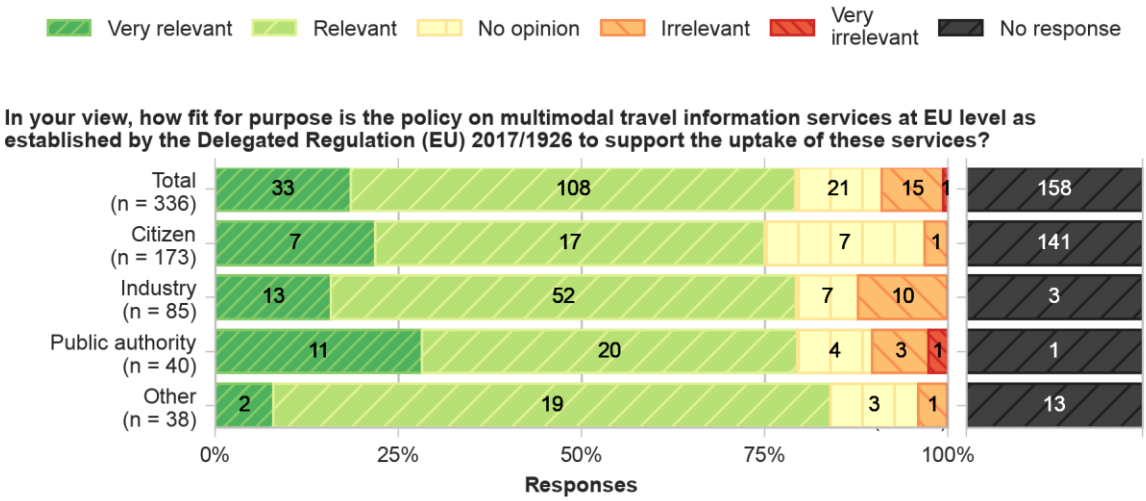
Detailed section for experts and stakeholders

This section, while open to all participants, addresses mainly expert views with specific questions on the current legislation and the different objectives and options.

Question 4: In your view, how fit for purpose is the policy on multimodal travel information services (MMTIS) at EU level as established by the Delegated Regulation (EU) 2017/1926 to support the uptake of these services?

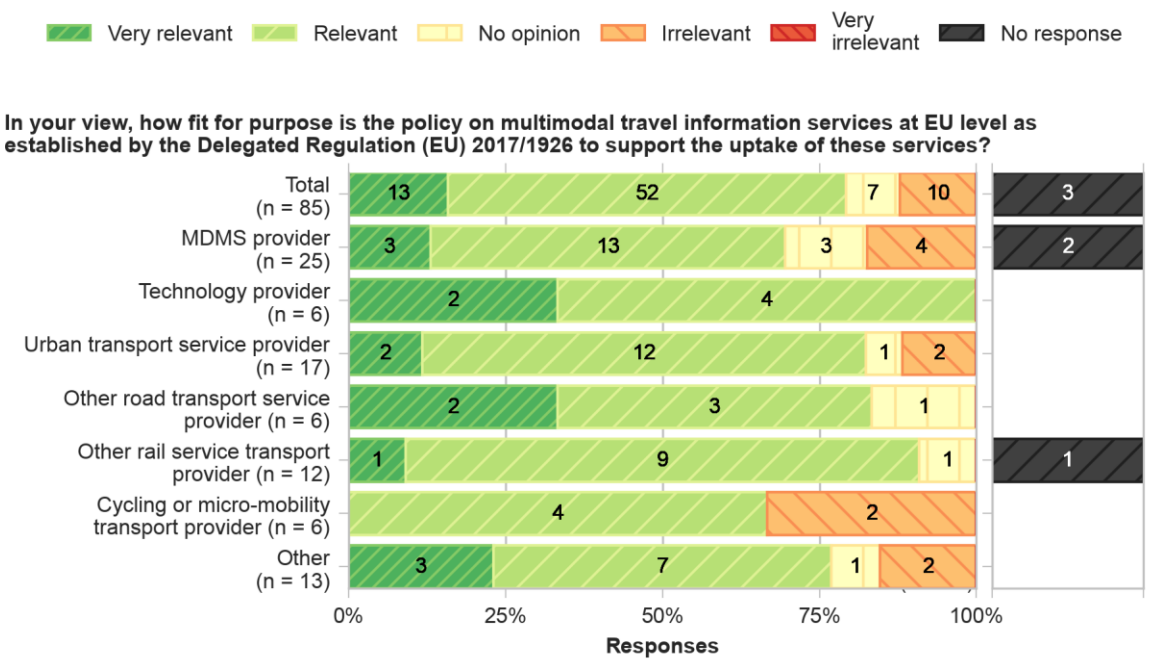
The first question aimed at experts and stakeholders enquired about how fit for purpose is the policy on multimodal travel information services at EU level as established by the Delegated Regulation (EU) 2017/1926 to support the uptake of these services. Overall, 79% of respondents (141 out of 178) indicated that the MMTIS Delegated Regulation was either relevant or very relevant . No stakeholder group deviated from that overall trend – it should be noted that a vast majority of citizens (82%, 141 out of 173) did not answer this question.

Figure 15-81: Q4: In your view, how fit for purpose is the policy on multimodal travel information services at EU level as established by the Delegated Regulation (EU) 2017/1926 to support the uptake of these services?



The same trends were seen amongst the industry stakeholders, with all industry sub-categories indicating that they viewed the MMTIS Delegated Regulation as either relevant or very relevant. Only 10 out of 82 of industry stakeholders indicated that they saw the Delegated Regulation as irrelevant (four MDMS providers, two urban transport service providers, two cycling or micro-mobility transport provider and two other).

Figure 15-82: Q4: In your view, how fit for purpose is the policy on multimodal travel information services at EU level as established by the Delegated Regulation (EU) 2017/1926 to support the uptake of these services? (industry respondents only)



Question 5: In your view, what is the EU-added value of the Delegated Regulation (EU) 2017/1926 in comparison with what could be achieved at Member States national and/or regional level activities?

This question enquired on the added value of the MMTIS Delegated Regulation compared to what could be achieved at the national or regional level by Member States.

Overall, stakeholders agreed that there is indeed added value of EU action in this area.

This support was, for example, shown by all four sets of coordinated responses. Eight responses from the German public transport operators and their MS-level associations noted that the Delegated Regulation ensures the availability, via standards, of similar/comparable data across the EU. The traditional rail operators and their EU-level associations (four responses) indicated that the added value related to the consistent implementation across the EU, which facilitates EU-wide multimodal mobility solutions. For three cycling operators and their EU-level associations, the added value comes from the reduced burden that the existence of standards provides to reduce start-up costs for companies operating in multiple MS. This strengthens the single market, these responses added. Finally, three responses from cycling users and their EU-level associations noted that while it is true that the Delegated Regulation has the potential to standardise and increase the availability of data, at the moment implementation across the EU is lacking.

Most of the comments supporting the EU added value of the Delegated Regulation mentioned the positive impact of the existence of standards and supporting the existence of a level playing field across the EU and reducing fragmentation. This was the case of several stakeholders, spread over a wide range of stakeholder groups. These included 23 public authorities, eight MDMS providers, six urban transport service providers, and at least one in each of the following stakeholder groups: academic/research institutions, air transport providers, citizens, digital map providers, NGOs, other industry, other rail service transport providers, other road transport service providers, technology providers and travel agents.

Other stakeholders highlighted additional benefits of the Delegated Regulation, including the availability of public-accessible data for public transport operators without the need to enter into commercial agreements to access it (a comment made by an urban transport service provider).

On the opposite side, some stakeholders highlighted some shortcomings of the current Delegated Regulation:

- One NGO and a stakeholder in the “other” category highlighted the cost burden it imposes on local authorities and that ways to support data owners should be sought, particularly as it is expected that more data access and higher data accuracy will be required in the future.
- Another NGO noted that while the Delegated Regulation is the right starting point, there now need to be ways to enable booking multimodal journeys easily, otherwise the Delegated Regulation will not achieve its goals.
- A third NGO noted that while recital 22 of the Delegated Regulation refers to the accessibility requirements of the European Accessibility Act “to maximise the foreseeable use of travel information services by persons with functional limitations”, this is not included in the main text of the Delegated Regulation.
- An association of other road transport service providers indicated that while current rules achieve a basic level of harmonisation, they do not take into proper account the concerns of the commercial road transport operators, and that voluntary data sharing of commercially sensitive data needs to be considered. Two urban transport service providers and a cycling/micro-mobility transport operator had a similar concern, and stressed the need for different solutions at different levels of governance and different types of journeys.
- An MDMS provider called for EU-wide API standards. An association of travel agents stressed that currently the Delegated Regulation has limited value, as it only mandates the exchange of static data and not dynamic data. Lack of standardisation of data formats and exchange of the various NAPs is also stopping entities like Global Distribution Systems (GDSs) from connecting to NAPs. An NGO also mentioned this point about the need to include dynamic data in the NAPs.
- An urban transport service provider asked for data on taxis and private vehicles with drivers to be included in the scope of the Delegated Regulation.

Question 6: If you make use of multimodal travel data, please rank these access points of data in terms of importance to your work?

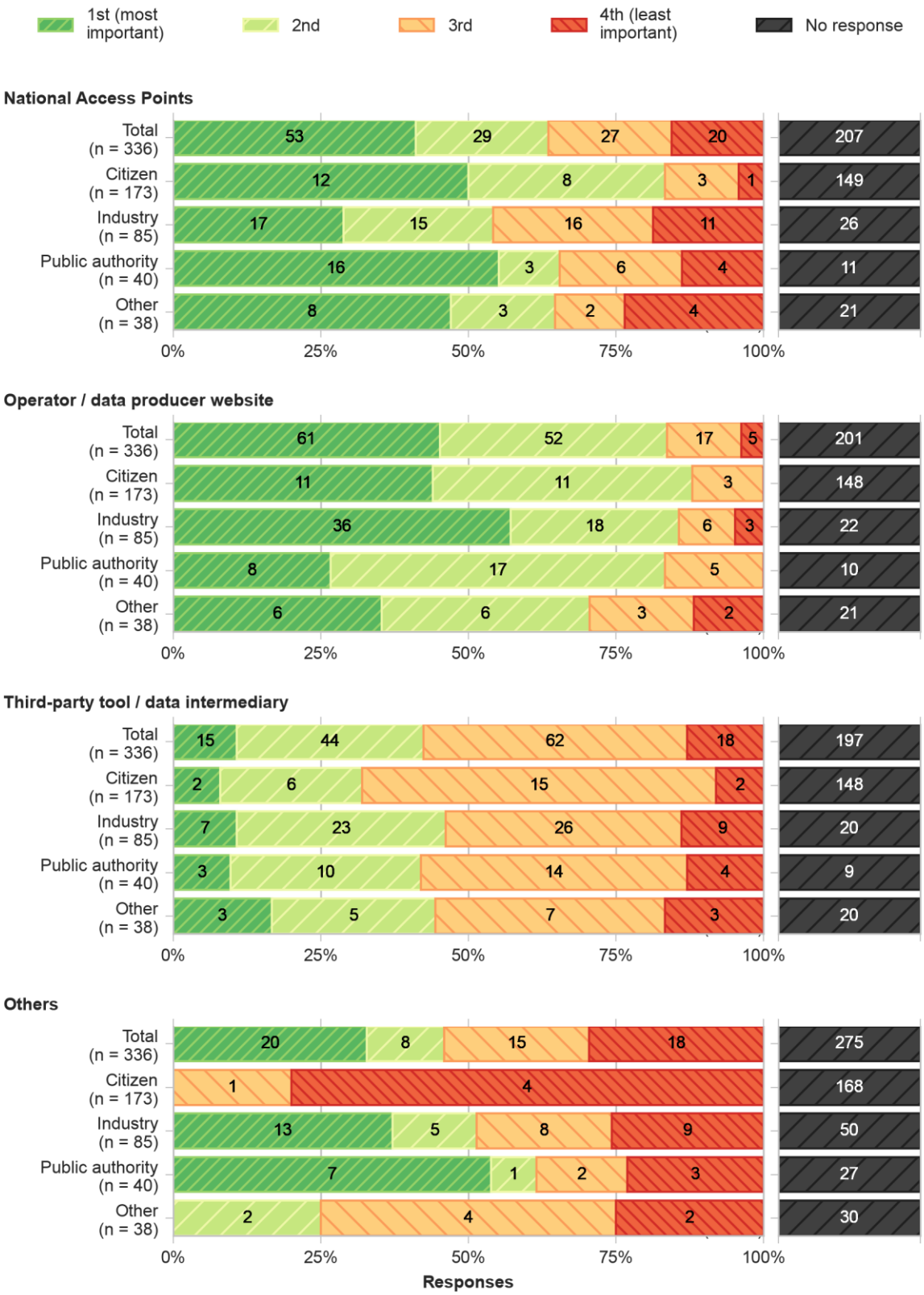
Respondents were then asked to rank a range of data points in terms of their importance to their work, if they made use of multimodal travel data. Public authorities had the highest proportion of responses that chose national access points as first (most important) (16 out of 29), industry had the highest proportion of choices determining that National Access Points were fourth (least important) (11 out of 59). Responses beyond these two categories of respondent were broadly similar in regard to National Access Points.

The proportion of responses across sectors that selected “operator/data producer website” as either first choice or second choice was relatively high and broadly similar within a range of 20 percentage points.

A majority of responses across all sectors of respondents selected “Third party tools” as the third most important access point.

“National access points” and “operator / data producer websites” were chosen most frequently as the first (most important) choice for EU citizens and industry respondents. A range of responses were recorded in the “other category” with all citizen responses stating that other access points were either third or fourth (least important) to them.

Figure 15-83: Q6: If you make use of multimodal travel data, please rank these access points of data in terms of importance to your work?



The responses to this question when split by the sub-categories of industry respondents demonstrated a range of perspectives. Across industry, 59 out of 85 respondents chose to answer this question. All cycling or micro-mobility providers ranked national access points as the least important source of multimodal travel data. Besides this particular sub-category, 32 out of 59 responses ranked national access points as either first or

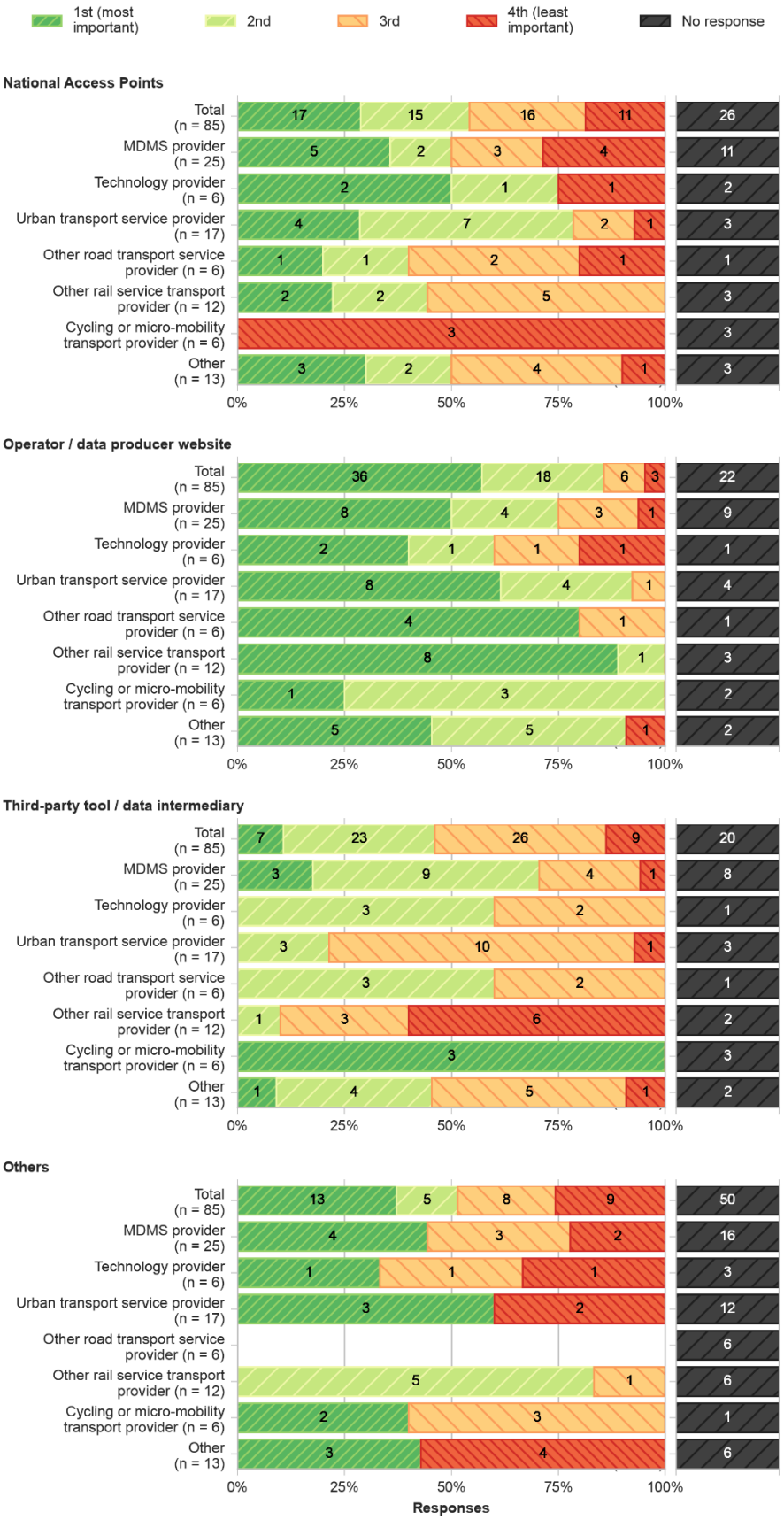
second most important to them. Urban transport service providers gave the greatest proportion of responses stating this source was of first or second importance (11 out of 14).

The data source “operator or data producer websites” was highly ranked as first or second most important across all industry sub-category. Out of 63 responses who answered this question 54 respondents stated that operator websites were of first or second importance. This was the case for all cycling or micro-mobility transport providers and other rail service transport providers who responded to this question. Responses were broadly similar for this question across the industry respondents.

The third data source “third party tools or data intermediaries” received a range of different responses. Out of 65 total responses to this question 30 respondents stated this data source was of first or second importance. Urban transport service providers and other rail service transport providers mostly ranked this data source as third or fourth importance (11 out of 14; 9 out of 10 respectively). All three cycling or micromobility providers who answered this question ranked third party tools as the most important data source for them.

The choice “other” in response to this question was selected as first or second most important by 18 out of the 35 responses from industry. However generally speaking the choice of “other” was most frequently polarised as either first or least important when chosen by industry stakeholders in this question. No other road transport service providers chose to respond to this question.

Figure 15-84: If you make use of multimodal travel data, please rank these access points of data in terms of importance to your work? (Industry respondents only)



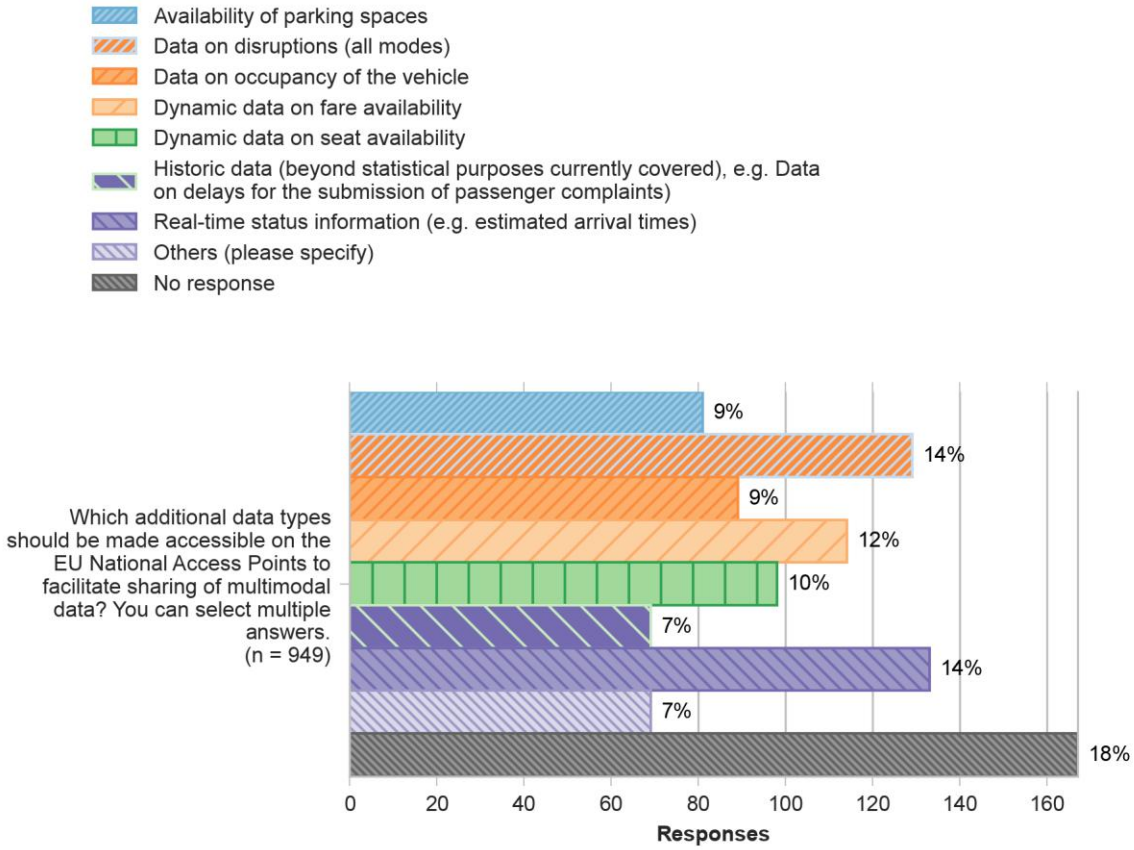
Respondents who selected “other” in response to this question were asked to explain this choice.

- A coordinated response from the group of traditional rail operators and their EU-level associations was identified stating that the industry standard is a cloud-based Open Sales and Distribution Model (OSDM).
- A coordinated response was received from cycling users and their EU-level associations that crowd-sourced data sources (OpenStreetMap) can be better in quality than official sources, referring to NAPs in particular.
- A public authority response highlighted the use of multimodal travel data being necessary where they act as a supervising authority reviewing the NAP. A separate public authority response stated that through the NAP it is easy to find data, and NAPs alongside national data hubs make it easier to rely on harmonised data with a known level of quality. An additional public authority highlighted that gathering data into a common NAP is only a component of the total solution, further stating that data must be compiled in a harmonised practice leading to superior quality data.
- A response provided by an MDMS platform highlighted that data provided by transport operators based on commercial agreements is primarily with NAPs with intermediaries playing a secondary role in supplementing this data. Application programming interfaces (APIs) to transport operators’ propriety systems were identified as the most important source of travel data in the response given by a separate MDMS provider with further data sourced from third parties and operator websites.
- A road transport business expressed concern that forcing transport operators and intermediaries to make data available to NAPs under EU law, or directly to integrators under national rules, would not solve the problem as they see it.
- A micromobility business articulated that NAPs often lack the information required by commercial service operators and for mapping purposes open sources are relied on. A cycling and micromobility provider expressed here that they share data for MaaS integration, open-data sharing through NAP and directly with cities.
- An NGO respondent stated that in passenger rail, infrastructure managers have access to all data and know where trains are on the network better than operators do and suggested that this should be a top access point, being neutral and taxpayer-funded.

Question 7: Which additional data types should be made accessible on the EU National Access Points to facilitate sharing of multimodal data?

Respondents were asked which additional data types should be made accessible to facilitate the sharing of multimodal data on the EU National Access Points). Two answers received a 14% share each of the total responses: “data on disruptions (all modes)” and “real-time status information (e.g. estimated arrival times)”. These 14% shares of total responses were the largest sections of the data after “no response” which was selected by 18% of respondents. The next most selected option received 12% of responses and stated that “dynamic data on fare availability” should be made available on the EU National Access Points. A slightly smaller proportion of respondents (10%) stated that “dynamic data on seat availability” should be accessible. Following on from this 9% of respondents were interested in access being made available of “data on occupancy of the vehicle”, and a further 9% selected “availability of parking spaces”. The final two choices selected with 7% of the data each were “historic data…” including data on delays, and the option available for providing a specific response not mentioned in the existing options.

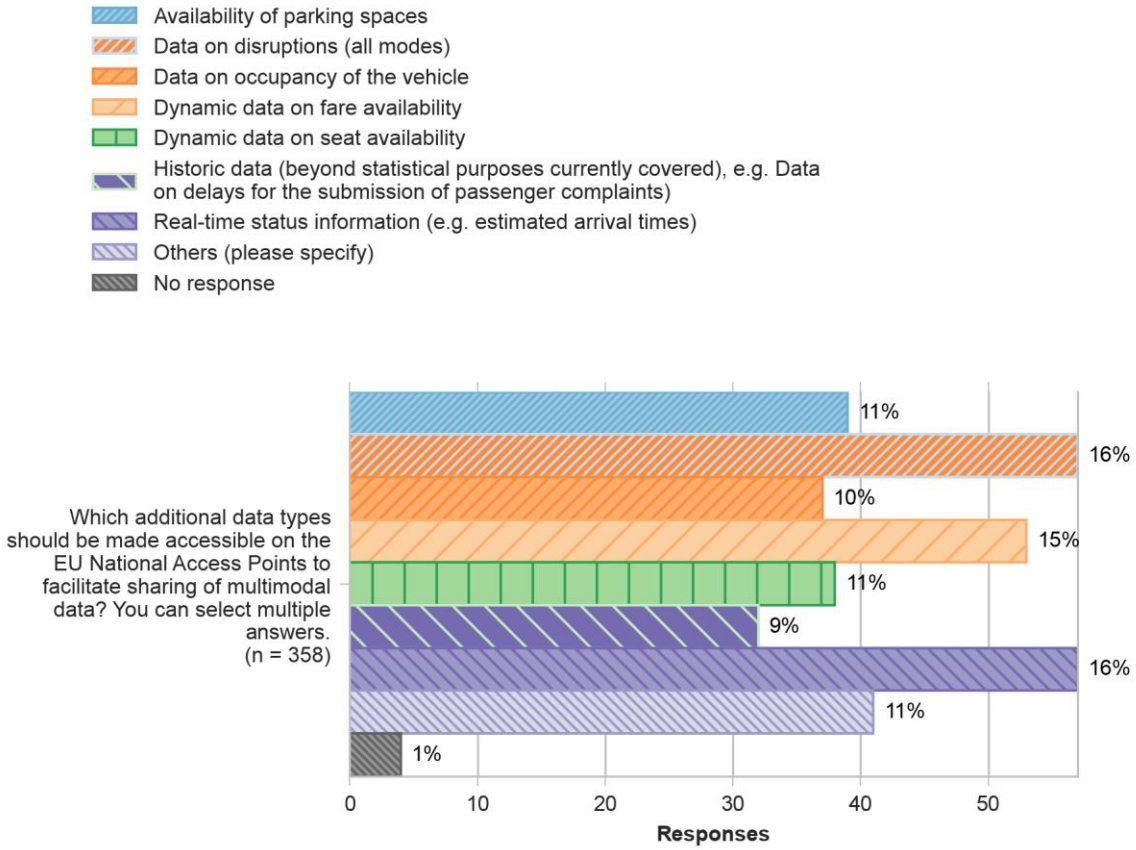
Figure 15-85: Which additional data types should be made accessible on the EU National Access Points to facilitate sharing of multimodal data?



These responses varied with industry responses to some degree, but presented in a pattern that bore similarities to the overall set of respondents. The number of respondents who chose to answer this question was 99% from industry, as opposed to 82% from the respondents across all stakeholder groups. The two answers that were selected with the highest frequency (excluding the “no response” option) were common across industry respondents and the wider public, these choices were “data on disruptions (all modes)” and “real-time status information”. In the set of industry responses to the survey 16% of the respondents chose each of these responses. “Dynamic data on fare availability” received three percentage points more responses when asked to industry rather than the public, at 15% instead of 12%. The option for accessing data on the “availability of parking spaces” received two percentage points more from the industry respondents than the general public, at 11% as opposed to 9%. “Data on occupancy of the vehicle” and “dynamic data on seat availability” both received one more percentage point of responses when asked to industry as opposed to the general public.

A higher proportion of respondents from industry than the overall stakeholders selected the option “other” to specify an answer not explicitly provided in the survey at 11%. “Historic data…” remained the option with the smallest share at 9% of total industry responses.

Figure 15-86: Which additional data types should be made accessible on the EU National Access Points to facilitate sharing of multimodal data? (industry respondents only)



Respondents selecting “other” identified a range of data types to be made available.

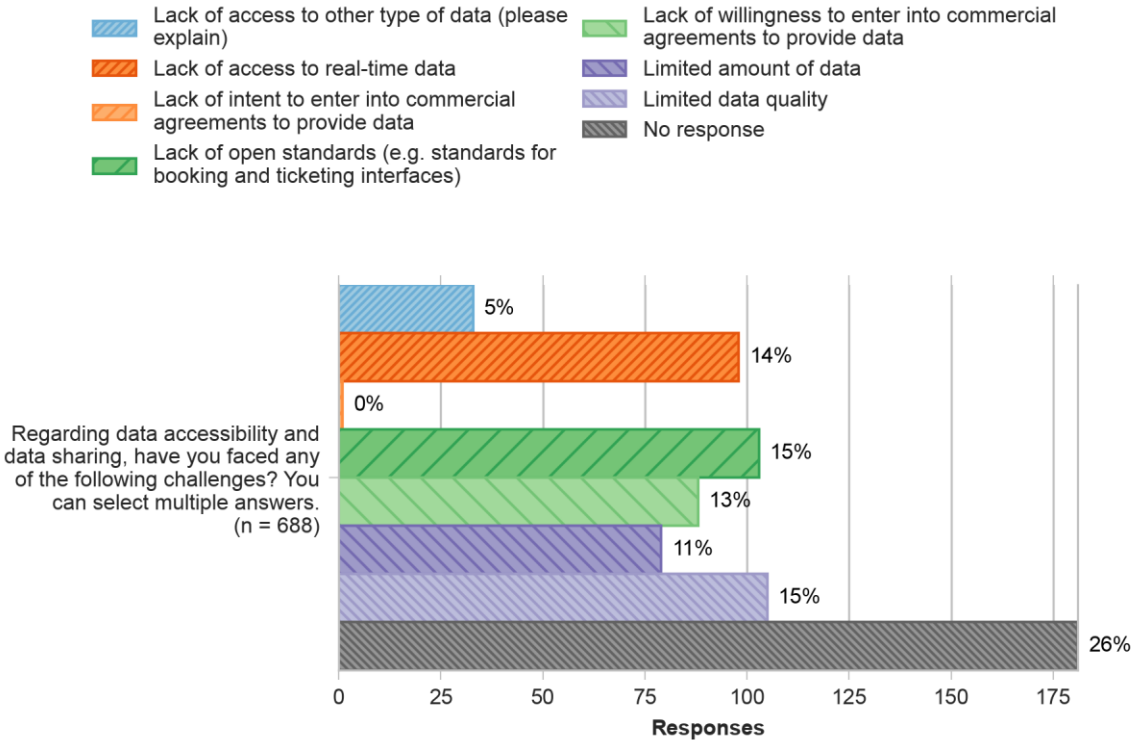
- Respondents from academic or research institutions observed that additional data is necessary so that transport users who are visually impaired or are wheelchair-users can be sure of having accessible routes to their final destination. Additional data on damaged or lost mobility equipment, denied boarding, wheelchair space and would also be extremely valuable for transport users who use rely on mobility equipment.
- A need for public transport operators to be provided with data on sales from MDMS sites was expressed by a respondent from the industry sub-group “other”.
- A public authority respondent noted the potential benefit of providing health promotion information such as the caloric value of energy used in walking or cycling, as well as GHG emissions information to encourage awareness of the environmental impact of different modes. A need for additional data on accessibility for bikes was also highlighted. A public authority response made the point that additional information on the availability of escalators and lifts would be highly beneficial. Data on electric charging points in car-sharing areas, bike shelters and the distance of the nearest micromobility services to stations was also called for in addition to hydrogen infrastructure data by a public authority.
- A coordinated response representing the views of German public transport operators and their MS-level associations stated that either enough data was available already, or that data sets could be commercially sensitive or not even held by the transport operator as there is a significant cost associated with generating them. “Some of these data sets are trade secrets and should remain confidential” was a statement provided that is representative of a number of responses.
- A coordinated response from cycling operators and their EU-level associations expressed that, for cycling, improving the amount of data in what is already required within the NAPs is most important at this stage.

- The usefulness of sector-based solutions such as the OSDM was highlighted by respondents from the rail sector. A citizen stated their support for standardising all EU public transport timetables.
- The need for data on the availability of packages of multimodal trips was expressed in an NGO response, similar to airline reservation systems, as well as a "yellow pages" style directory of organisations that deliver mobility services.

Question 8: Regarding data accessibility and data sharing, have you faced any of the following challenges?

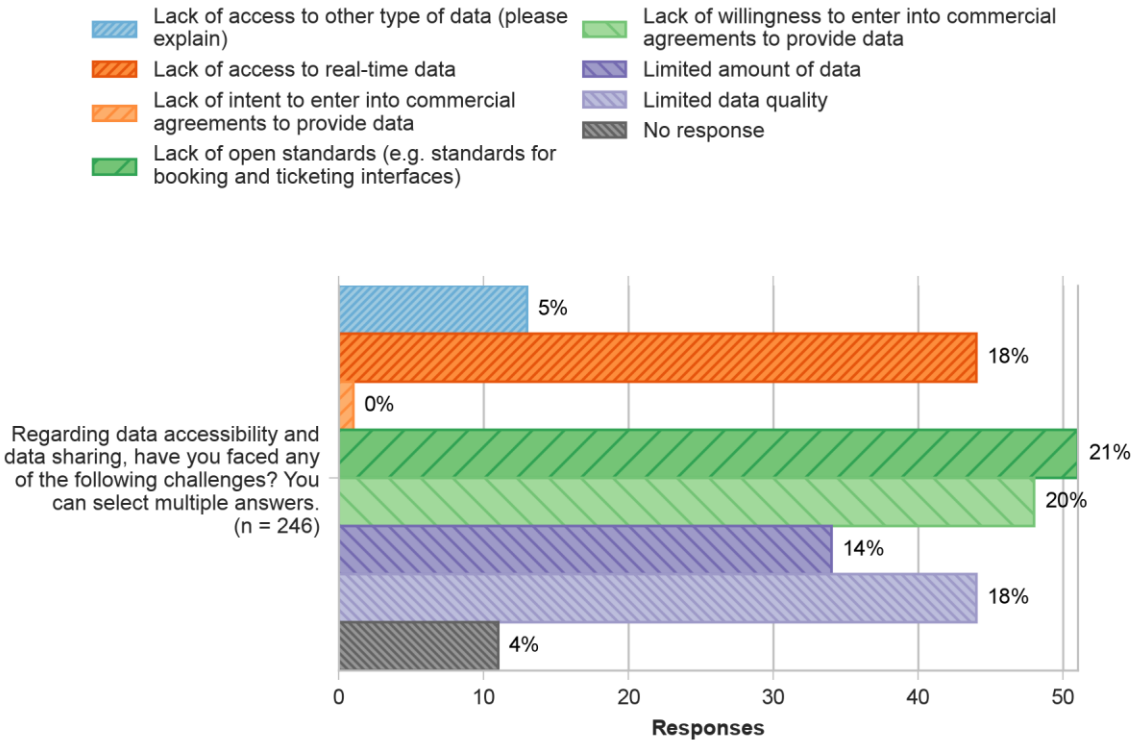
A question was then posed to respondents inquiring whether they had faced any specific challenges in the realm of data accessibility and data sharing; multiple responses were possible for this question. The largest shares of responses after no response were both at 15% that issues were encountered with "limited data quality" and "lack of open standards". The next most selected option was at 14% and confirmed encountering problems with a "lack of access to real-time data". The two next most selected options received 13% and 11% and were respectively the "lack of willingness to enter into commercial agreements to provide data" and a "limited amount of data". Lack of *intent* (as opposed to willingness) to agree to provide data was selected by virtually no respondent (0%) and lack of access to other data types was selected only by 5%.

Figure 15-87: Regarding data accessibility and data sharing, have you faced any of the following challenges?



A larger proportion of respondents from industry (96%) chose to respond to this question. In industry, 21% of respondents had experienced issues with a lack of open standards. The second most selected choice among industry responses received 20% ("lack of willingness to enter into commercial agreements to provide data"). The trend in results was similar across industry responses when compared with general responses except with a higher response rate.

Figure 15-88: Regarding data accessibility and data sharing, have you faced any of the following challenges? (industry respondents only)



Respondents who selected “other” in response to this question were asked to explain further:

- A citizen response desired to see a picture or the vehicle, to know what the passenger will be travelling in or with.
- A public authority response suggested that vehicle occupancy information and travel patterns should be freely available to enable passengers to avoid crowds.
- An urban transport service provider and business organisation stated that public transport operators provide lots of data for reuse to third parties and that if sharing data generates income there should ideally be reciprocity regarding data-sharing.
- A response from a micromobility business expressed that very limited data reporting between mobility operators and MaaS platforms exists to assess the uptake of multimodal transportation and a modal shift from private cars.
- A public authority response articulated a need for data from travel patterns to be mandated in order to be sufficient, further identifying that this data is needed in order to use local knowledge to optimise the transport offering. This was supported by a response from a citizen who emphasised that data (aggregated or not) is difficult to acquire but is needed for cities to evaluate the impact of various modes, with no clear legal framework existing for this. A public authority response also pointed out that legacy proprietary ticketing systems may not support or provide external access APIs, representing a technical issue that poses additional barriers to MDMS integration. A further public authority response specified that in the absence of tools for enforcing data requirements there is resistance on the part of operators to make their assets available. Relating to this, a citizen’s response highlighted that many data owners are not in favour of providing data at a price, let alone publishing data for free.
- A lack of cross-national data such as on flights was also stressed by responses from business organisations.

Question 8b: Do you have any comments on these problems or other potential problems that should be considered?

The analysis showed that there was a coordinated response from German public transport operators and their MS-level associations which argued that "new mobility providers sometimes hesitate to share their data". They argued that the main challenge when sharing data as a local public transport operator is "to select partners who can be trusted and do not compete for customers". Further coordinated responses were identified from traditional rail operators and their EU-level associations stating that "There is no lack of open standards. Data on occupancy of the vehicles are very sensitive for railway undertakings (RU) open access services with mandatory reservation. Making these data accessible will have a negative impact on the level playing field with other transport modes." Cycling users and their EU-level associations provided a coordinated response stating "Lack of EU-level cycling policy hampers standardisation and exchange of data. Treating cycling as solely local competence has led to each city developing their own data standard for cycling infrastructure."

The view was also expressed by three responses from public authorities that it is extremely difficult for transport operators to share data openly for reasons of fear of competition. The difficulty in measuring the quality of data according to uniform standards was also emphasised by a public authority. The point was made by a public authority response that for city authorities processing and aggregating the data made accessible through NAPs still constitutes a challenge, with the revised regulation representing a significant opportunity to provide additional guidance on licensing agreements and data governance.

An urban transport provider voiced concern that the burden of providing further high quality data is very high. A citizen's response also suggested that even though the MMTIS delegated act provides a framework and guidelines at national level, actors at the regional level did not necessarily know or expect to use the relevant standards. A further citizen's response addressed the issue that most data mobility providers do not want to enrich a digital platform with sales information but to keep client-provider data sets to themselves.

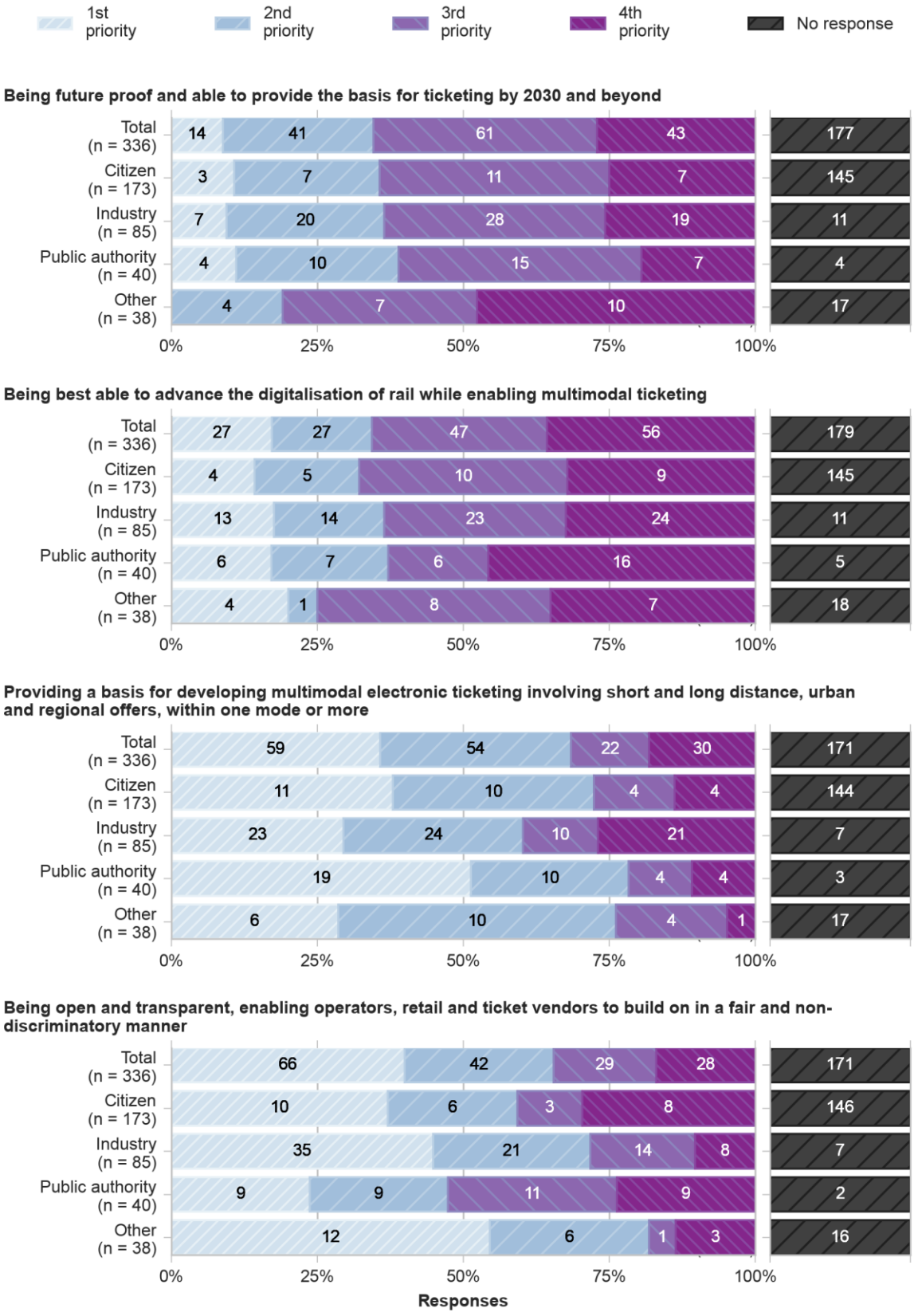
An MDMS provider characterised European train operators as operating like a cartel by limiting the availability of their fare data. Privacy concerns over data were also expressed in terms of keeping identity of the customer anonymous. Another MDMS provider stated that the current regulation has already corresponded with improvements in the amount and quality of data, but "it's a long road".

Question 9a: What should be the main priorities for a joint European data exchange standard on ticketing?

Respondents were then asked to choose what should be the main priorities for a joint European data exchange standard on ticketing from a set of four options.

"Providing a basis for developing multimodal electronic ticketing" was selected as first or second most important by the largest share of responses at 68% (113 out of 165). Being open and transparent, enabling operators, retail and ticket vendors to build on in a fair and non-discriminatory manner was the next most selected option, this was chosen as the first or second priority by 65% of the total responses (108 out of 165). Being future proof and being best able to advance the digitalisation of rail were deemed less of a priority, respectively receiving 65% (104 out of 159) and 66% (103 out of 157) responses classing them as third or fourth priority. The spread of responses received from different groups was generally similar across all stakeholder groups.

Figure 15-89: Q9: What should be the main priorities for a joint European data exchange standard on ticketing?

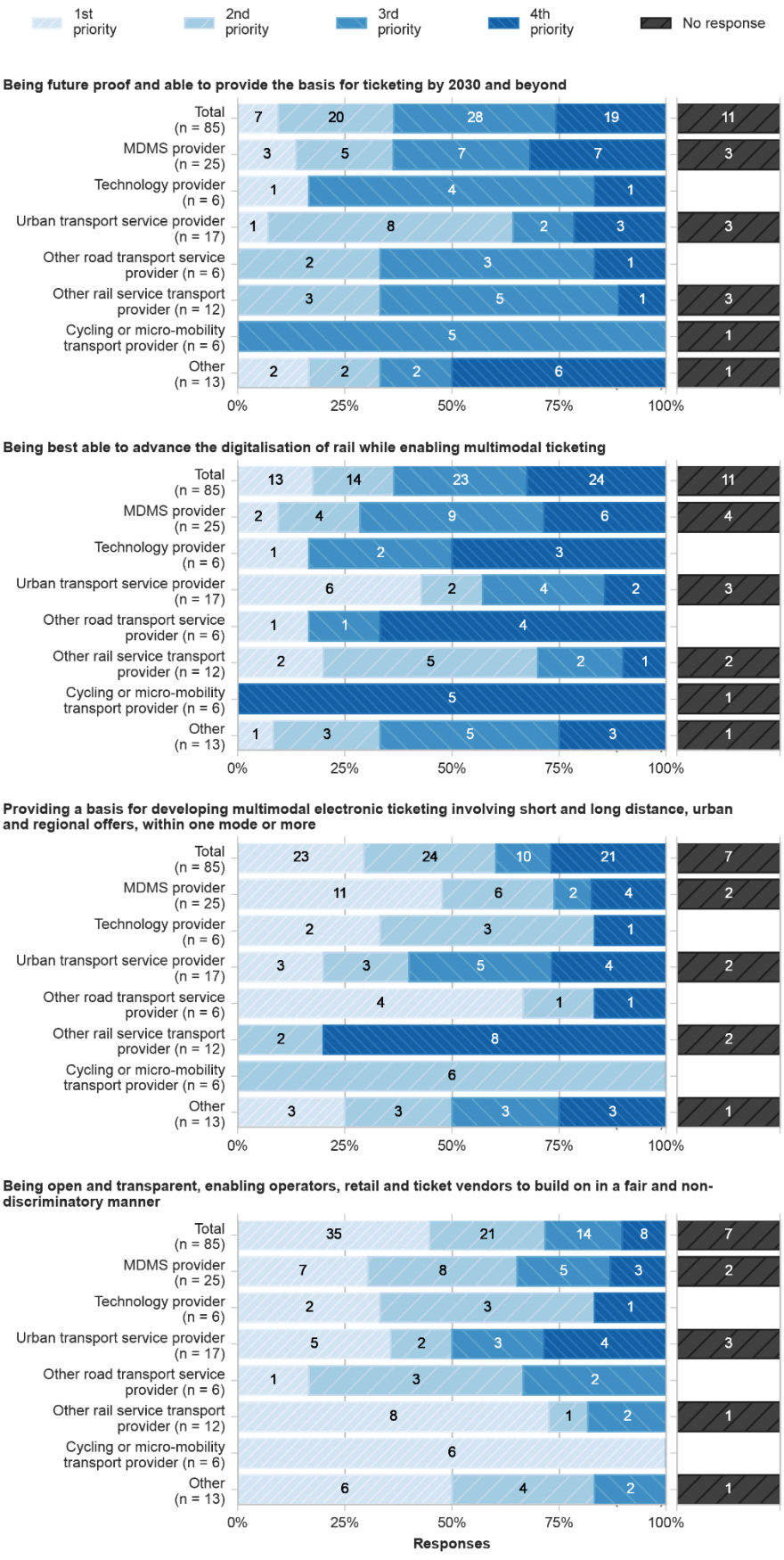


The most unpopular options in industry responses were both selected by only 27 out of 74 total responses as first or second priority. These options were: being future proof and being best able to advance digitalisation. Providing a basis for multimodal ticketing was the second most selected option as first or second priority with

47 out of 78 responses. Being open and transparent was chosen as first or second priority most frequently with 56 out of 78 of industry-specific responses.

When looking at the results from industry in more detail it is noticeable that the five cycling and micromobility transport providers who gave a response regarding these measures all identified being future proof as of third importance and being best able to advance the digitalisation of rail as being of least importance to them. A particularly high rate of rail transport providers stated that providing a basis for developing multimodal electronic ticketing with one mode or more should be the fourth priority (8 out of 10). Being open and transparent was selected as the most important priority by all six cycling and micromobility transport providers.

Figure 15-90: Q9: What should be the main priorities for a joint European data exchange standard on ticketing? (industry respondents only)



Question 9b: For each of the above options, please justify your option

Respondents were then asked to justify the opinion that had been provided covering what the main priorities should be for a joint European data exchange standard on ticketing. A cluster of eight responses from traditional rail operators and their EU-level associations expressed that while digitalisation of rail is already happening and multimodal ticketing is possible, for example combining rail and local public transport "more support for this is of course welcome". The right to choose one's partners and a suitable licence model was also highlighted as critical alongside the need for whatever system being set up to be future proof.

A further set of coordinated responses was received from three cycling operators and their EU-level associations. The response pointed out that there is currently no clear business model for bike sharing within multimodal trip planning. As subsidies for public operators and other incumbents exist and are widely supported, there is "asymmetry in the market" making it hard for new operators to enter and build sustainable business models.

A public authority response stated that the main strength of the EU is to be able to reshape the rules of the market, continuing that efforts to align the modus operandi of operators, start-ups and big tech with public interests can be stronger if carried out at an EU-wide level. The need to facilitate cross-border regional public transport by rail with interoperable ticketing was expressed by a public authority as necessary due to the view that rail is the backbone of regional public transport offerings, therefore this will yield the greatest consumer surplus (the difference between the price a consumer pays and the price they are willing to pay) from multimodal transport as a whole. An MDMS platform suggested that a European data exchange standard on ticketing needs to follow the business reality of today's transport market, both accounting for existing standardisation efforts and being developed in close consultation with industry stakeholders.

An NGO shared the perspective that the railway's sector OSDM is too secretive, non-transparent and can be used to discriminate against passengers and competitors, while also calling for a single standard for short, regional and long-distance offerings. A citizen stated that multimodal ticketing would be a further sign of the extent to which the EU is fully connected among its members.

Question 9c: Should the legislator further mandate data exchange standards for booking and ticketing to meet the multimodality objective, which of them should be mandated in your view? Please justify your choice.

Respondents were then asked whether the legislator should further mandate data exchange standards for booking and ticketing to meet the multimodality objective, and to justify the data exchange standards chosen. Two sets of coordinated responses were received for this question. The first set of coordinated responses came from German public transport operators and their MS-level associations. These responses suggested that "The main difficulty when integrating different modes is not the standard, but the contractual agreement". They further suggested that any EU-wide requirements relating to standards should not contradict contractual agreements.

Another set of coordinated responses from traditional rail operators and their EU-level associations suggested that "we fully support mandating already agreed standards". They continued to clarify that sector-specific solutions like OSDM should always take precedence when mandating new standards to avoid unnecessary investment and ensure a smooth implementation.

Cycling users and their EU-level associations highlighted a desire to mandate standardised data for an international bicycle ticket and standardised information on luggage restrictions (including the number of items and size requirements of each piece of luggage).

A coordinated response from cycling operators and their EU-level associations suggested that the legislator should create mandates for bike sharing as well as standardisation to improve interoperability amongst APIs, in order to reduce the burden associated with integrating bike sharing into multimodal systems across Europe.

Two MDMS providers also stated that data exchange standards should be handled on a mode-by-mode basis, as data exchange already functions smoothly in aviation based on IATA standards, while the rail industry is developing a standards framework. These stakeholders suggested that current challenges are commercial and legal rather than technical and that the EC should monitor developments, considering mandating standards only at a later stage.

A citizen shared the view that the scope of information to be exchanged must be set but not the format of such data so that parties are allowed to make use of existing solutions that they already have. A response from a road transport service provider voiced concern that without common standards every additional approach will add to the amount of effort needed to create a comprehensive multimodal transport ecosystem.

An urban transport service provider declared that the Commission should mandate standardisation bodies to work on standards but not to impose standards. An MDMS provider stated that the current situation is a 'jungle', but a 'jungle' that is not fair and that complicated fares generated by unpredictable algorithms that are not even understood by the operator in some instances. Basic information should be made available and understandable according to this respondent, this MDMS provider added.

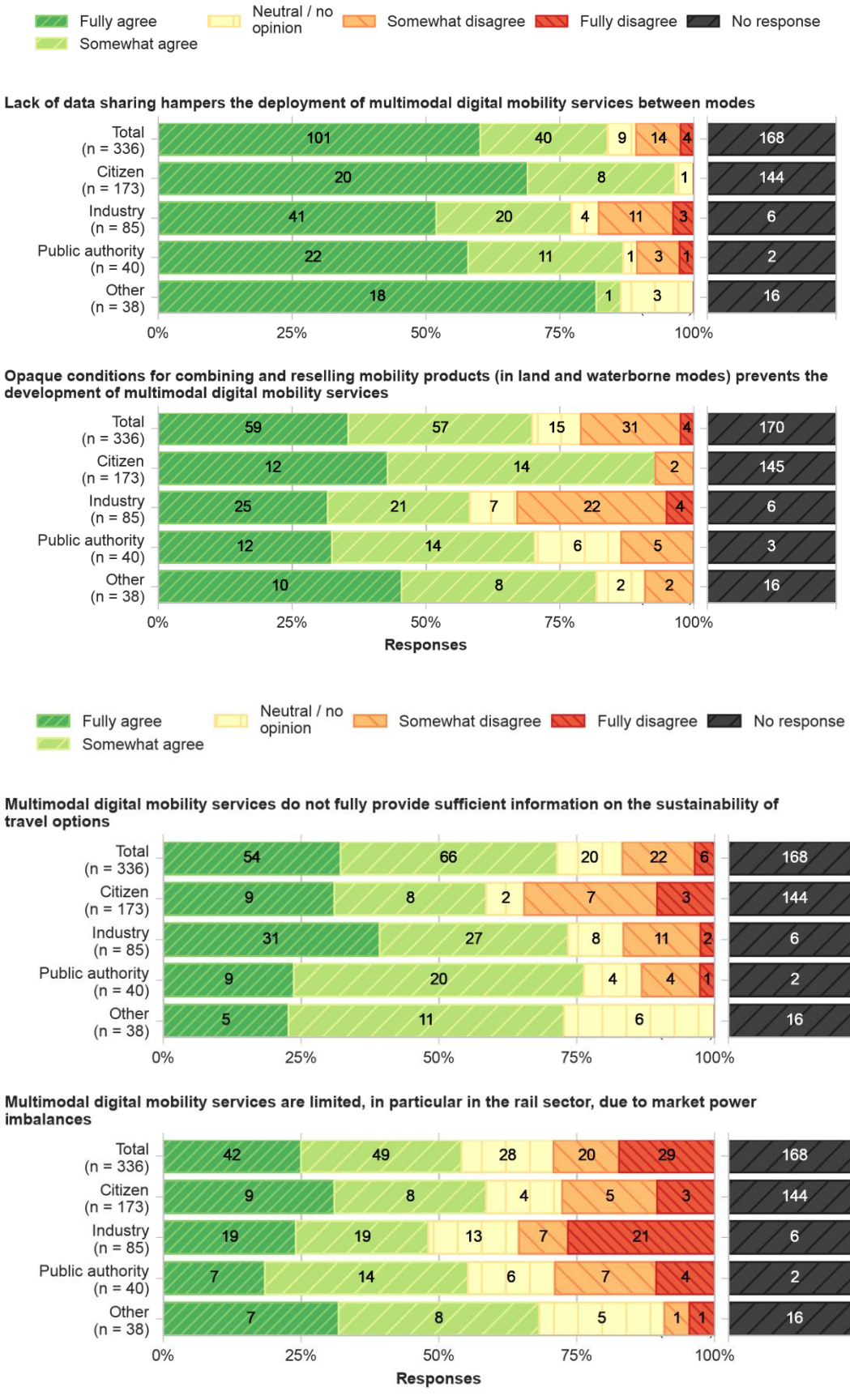
Question 10a: Please indicate to what extent you agree with the following statements:

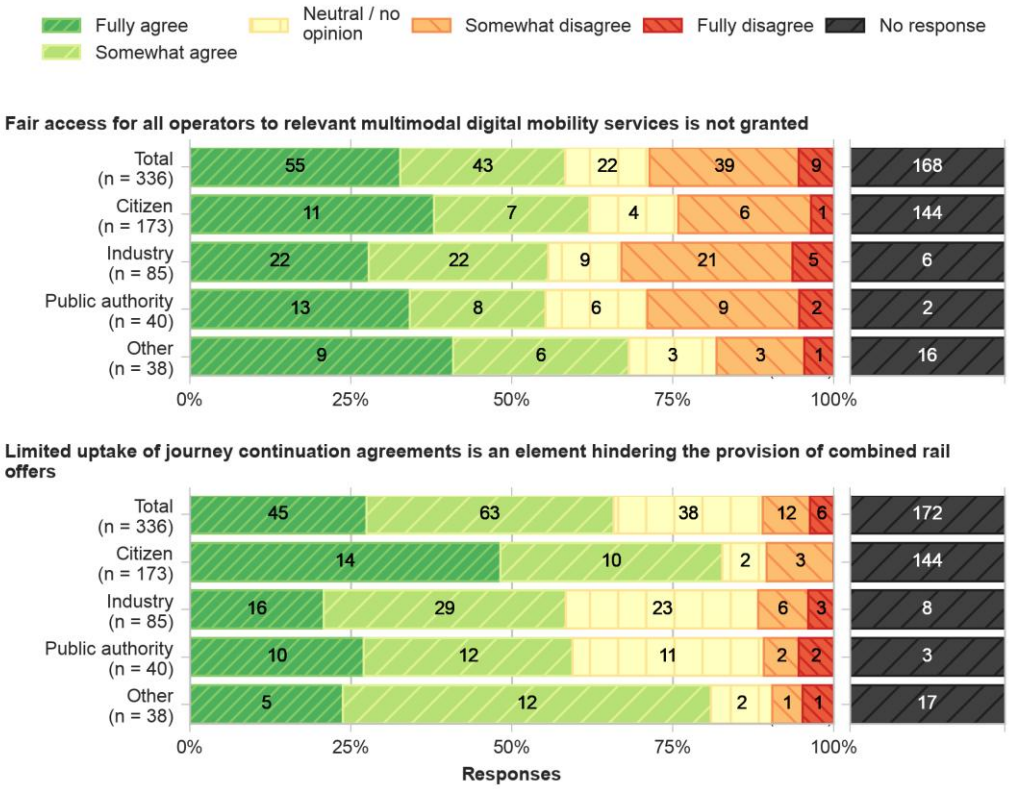
Respondents were then asked to choose from a range of five options illustrating to what extent they agree with a set of six statements. Overall, 60% of total survey respondents who chose to answer this question selected "fully agree" regarding the statement "lack of data sharing hampers the deployment of multimodal digital mobility services between modes" (101 out of 168). All other statements received between 42 and 59 responses of "fully agree" from those who chose to respond to the question, meaning each statement received a proportion of responses ranging between 25% and 36% for "fully agree". Support for each of the statements was generally similar across all stakeholder groups.

A particularly high proportion of citizens who answered this question supported the statement that a "lack of data sharing hampers deployment of MDMS between modes" (28 out of 29). Indeed, a high proportion of citizens also supported the second statement stating that "opaque conditions prevent the development of MDMS" (26 out of 28). Industry (58 out of 79) and public authority respondents (29 out of 38) supported the third statement that "MDMS do not provide sufficient sustainability information at a relatively higher rate than citizens" (17 out of 29).

In the case of the last three statements, ("MDMS are limited due to market power imbalances", "fair access to MDMS is not granted to all operators" and "the limited uptake of journey continuation agreements hinders combined rail offers") a greater proportion of citizen responses and those received from the stakeholder category "other" were supportive than those from industry and public authority stakeholder groups.

Figure 15-91: Q10a: Please indicate to what extent you agree with the following statements:





When looking at the results split by stakeholders from industry it is noticeable that a large majority of MDMS providers (19 out of 21), technology providers (6 out of 6) and cycling or micro-mobility transport providers (6 out of 6) supported the first statement that a lack of data sharing hampers MDMS deployment between modes. The sub-category “other rail service transport provider” gave the greatest proportion of responses disagreeing with this statement (7 out of 11).

Regarding the second statement that opaque conditions prevent the development of MDMS a large portion of the responses from urban transport service providers (7 out of 16), other road transport service providers (3 out of 6) and other rail service transport providers (8 out of 11) did not agree with this.

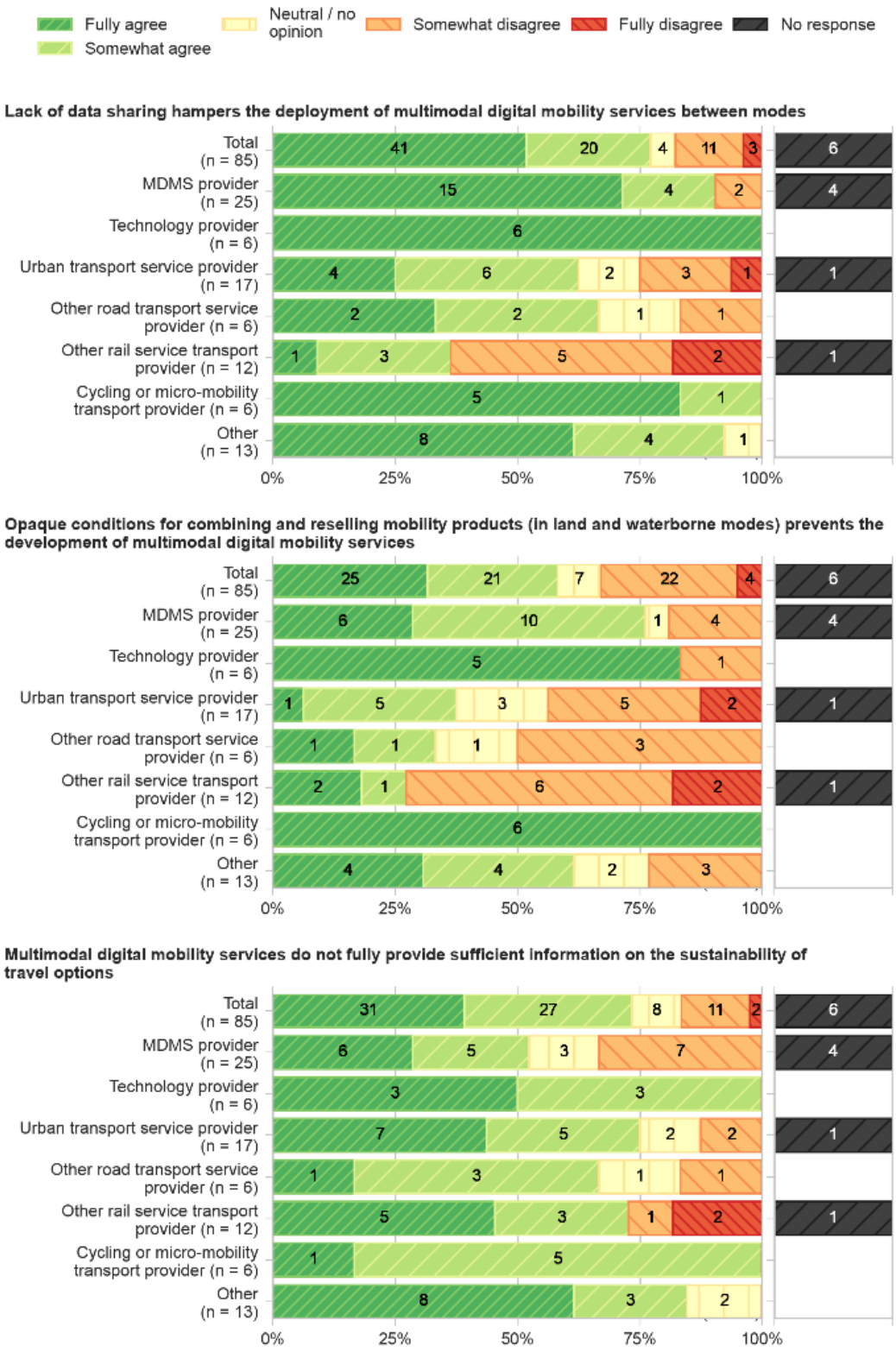
A large majority overall of those who provided a response to the third statement that MDMS do not provide sufficient information on sustainability agreed with this position. This includes all technology provider responses (6 out of 6), all cycling or micro-mobility transport provider responses (6 out of 6) and a relatively large majority in every other sub-category of stakeholders except MDMS providers. Just over half of responses from MDMS providers supported this statement (11 out of 21).

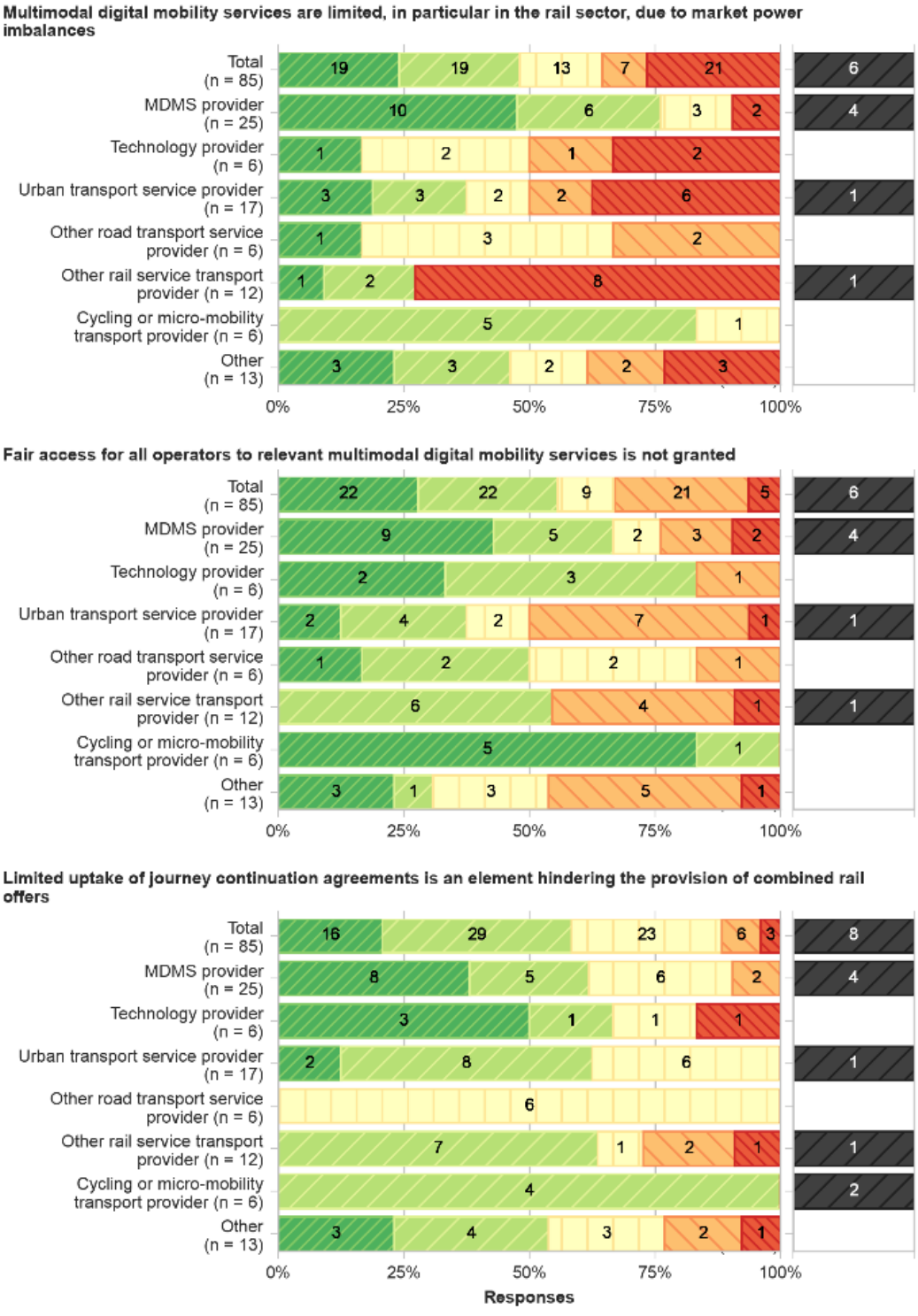
Opposition was registered in relatively high proportions across all stakeholders, in comparison with other statements, in regard to the fourth statement that MDMS are limited due to market power imbalances. A large majority of rail providers fully disagreed with this statement (8 out of 11), while half of technology provider (3 out of 6) and urban transport provider (8 out of 16) responses also disagreed with this position. MDMS provider and cycling or micro-mobility providers were generally more supportive of this statement (16 out of 21 and 5 out of 6 respectively).

More than half of responses overall from industry supported the fifth statement that fair access for all operators to MDMS is not granted (44 out of 79). Technology provider (5 out of 6) and cycling or micromobility provider (6 out of 6) showed the highest proportion of responses agreeing with this statement. Urban transport service providers showed the lowest support, with 8 out of 16 responses disagreeing with this statement.

The views stated in response to the sixth statement that limited uptake of journey continuation agreements hinders combined rail offers showed a relatively large share of “no opinion or neutral” (23 out of 77 overall). All road transport provider responses chose to state that they had no opinion on this topic (6 out of 6). MDMS provider (8 out of 21) and technology provider (3 out of 6) responses showed the largest proportion of respondents who fully agreed with this statement. Overall, 8 out of 85 respondents chose to not answer this question at all.

Figure 15-92: Q10a: Please indicate to what extent you agree with the following statements: (industry respondents only)





Question 10b: Do you have any comment on these problems or other potential problems that should be considered?

Respondents were then asked whether they have a comment on the identified problems or whether other problems should have been considered. A set of German public transport operators and their MS-level associations provided a coordinated response that "It is important for public transport operators to select their partners" and that they do not want to share data with competitors who try to take their customers away.

A coordinated response from traditional rail operators and their EU-level associations stated that "Lack of data exchange is an issue due to lack of governance of reference data on a national level". They continued to explain that the underlying problems are not opaque conditions but the risk of unclear or excessive liability

obligations on operators which hamper the market. They continued to express the view that new entrants should join the existing agreements on journey continuation (AJC and HOTNAT).

A response from an MDMS provider expressed that the full development of digital services is limited by the difficulty of accessing the marketing of tickets, as a large number of transport authorities choose their own tailor-made solution. A response from an urban transport provider voiced concern over the problem of liability in the case of reselling third-party tickets, while voices from the "other" stakeholder category raised the difficulty of how obligations to the passenger are allocated where different transport carriers are involved. A rail service provider as well as an urban transport provider stressed that in France multimodality is regulated by the *loi d'orientation des mobilités* (LOM) which is considered to provide a complete and satisfactory regulatory framework. A public authority response highlighted that the biggest problem from their perspective is that data are not handled in a fair, non-discriminatory and transparent manner.

A response from the stakeholder category "other" claimed that any restrictions on public authority powers governing the ecosystem hamper their ability to influence the mobility outcomes of their jurisdiction. This response concluded that public authorities should retain the power to set conditions across diverse Member States and modes for access to public space and transport infrastructure as well as the resale of public transport fares.

A travel agent called on the European Commission to keep privacy in mind when developing future-proof legislation. Calls were also made from an urban transport provider to ensure that existence of public transport tickets below market value shall not occur, bearing in mind that public transport tickets are already sold at a price that is usually financially compensated.

A micromobility provider suggested that too much emphasis is being put on multimodal trips and that the largest volume of trips within a city are single mode, further to this it was stated that too much focus on multimodal trips takes the focus away from the majority of daily use cases.

A consumer organisation declared that digital mobility solutions need to be accessible and user-friendly so that persons with limited digital skills can use them and those without digital tools are able to use alternatives.

Question 11a: When it comes to business-to-business commercial agreements for multimodal digital mobility services in land-based and waterborne modes, how important are these measures for you?

Respondents were asked how important a range of measures are to them when focussing on business-to-business commercial agreements for multimodal digital mobility services in land-based and waterborne modes. Responses across different sectors were broadly similar. "Requirements for commercial agreements on the type of mobility products that can be re-sold" was ranked as very important by 30-55% of respondents across all stakeholder categories and by 49% of respondents in total (79 out of 160). A large majority of respondents from industry supported this statement with 69 out of 76 declaring it as important or very important.

The second measure inquired about "requirements for commercial agreements on technical limitations", which was deemed very important or moderately important by 58% of responses across all stakeholder groups (104 out of 179). Respondents from industry supported this measure with a large majority defining it as moderately or very important (56 out of 74). This option was not given a response by 53% of total responses (179 out of 336).

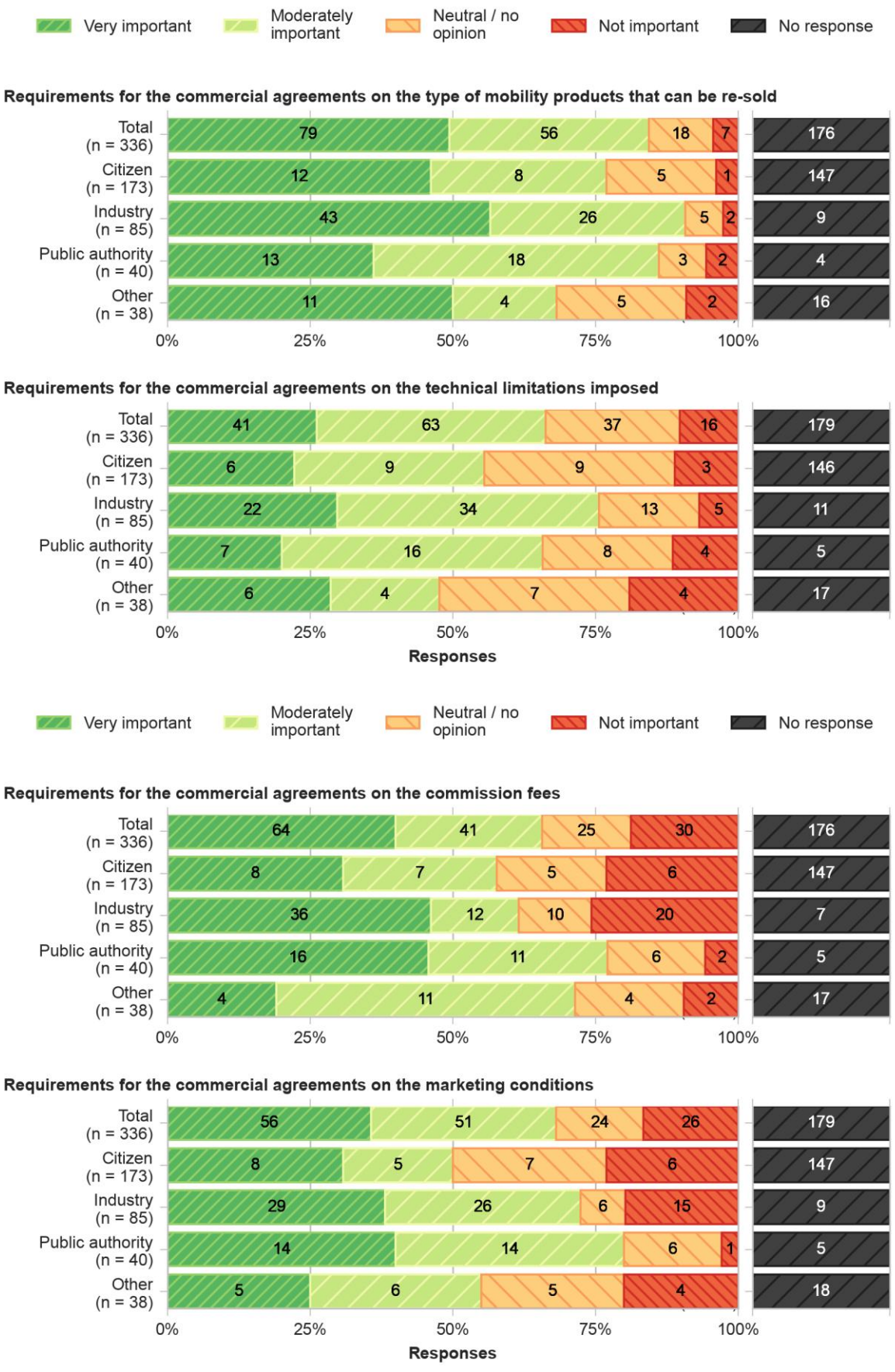
Responses to the third measure "requirements for commercial agreements on commission fees" saw this as very or moderately important at a rate of 66% across all stakeholder groups (105 out of 160). Public authorities rated this measure as important with a share of 27 out of 35 responses, this was the highest rate in comparison to other stakeholder groups.

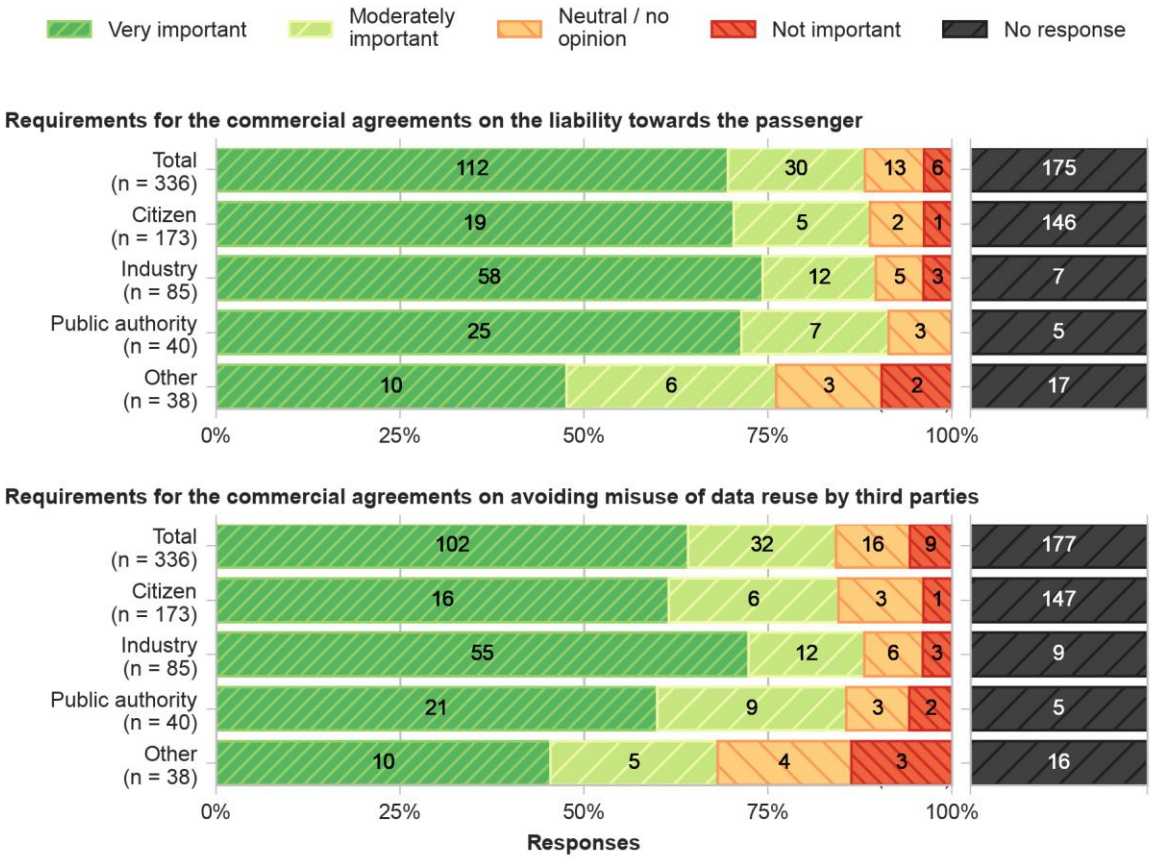
The fourth measure referred to "requirements for commercial agreements on marketing conditions". These requirements were rated as important by 68% across all stakeholder groups (107 out of 157). A large majority of public authority and industry responses believe this is important (28 out of 35 and 55 out of 76 respectively). Overall, 179 respondents chose not to give an answer regarding this measure.

Responses to the fifth measure concerning "requirements for commercial agreements on the liability towards the passenger" showed that overall, which was very important or moderately important for the vast majority of respondents at 88% (142 out of 161). Broadly similar results were observed across all stakeholder groups.

The final measure referenced “requirements for commercial agreements on avoiding the misuse of data reuse by third parties”. Responses showed that 84% overall believed that this measure was important (134 out of 159). Results for across stakeholder groups were broadly similar. The stakeholder category “other” registered a slightly lower proportion of responses ranking this measure as important at 15 out of 22.

Figure 15-93: Q11a: When it comes to business-to-business commercial agreements for multimodal digital mobility services in land-based and waterborne modes, how important are these measures for you?





When looking at the responses split by industry sub-categories a range of results emerged. In reference to the first measure covering requirements for commercial agreements on which mobility products can be re-sold, a large majority of “important” responses were received across all industry sub-categories, with 69 out of 76 overall and no particularly large deviations from this trend within specific industry categories.

The second measure regarding requirements for commercial agreements on technical limitations was registered as important by 56 out of 74 respondents overall. Only one cycling or micromobility provider rated this measure as important out of four responses in total. Technology providers gave the greatest proportion of “very important” responses to this measure within a sub-category (4 out of 6).

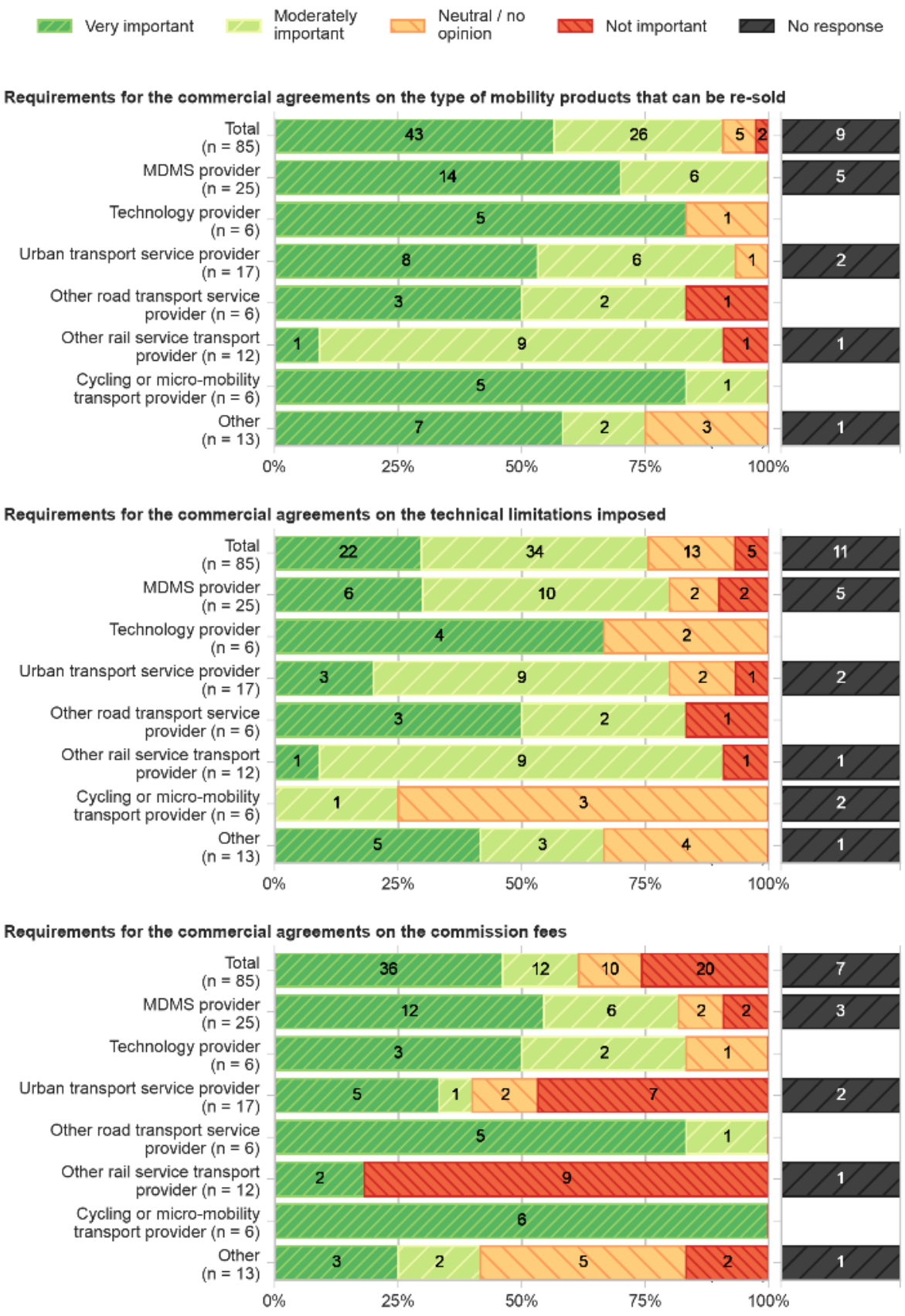
Requirements for commercial agreements on commission fees was asked about in the third section; overall, 48 out of 78 responses ranked this as important. Rail providers gave a large share of responses identifying this as “not important” (9 out of 11).

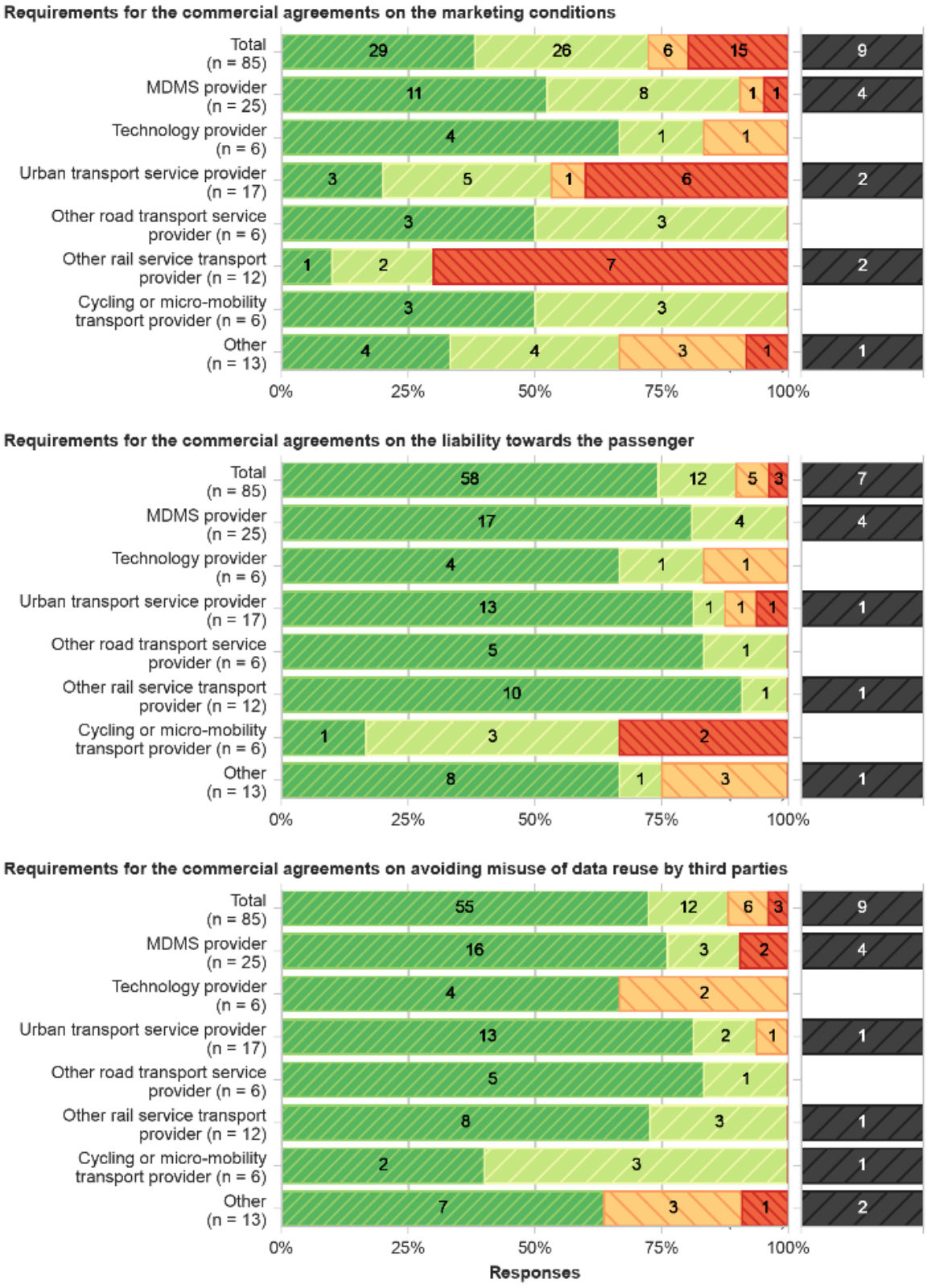
The fourth measure asked about requirements for commercial agreements on marketing conditions. Overall, 55 out of 76 respondents across industry identified this as important. Rail and urban transport providers gave a particularly high rate of responses stating this measure was not important (7 out of 10 and 6 out of 15, respectively).

The fifth measure received broad support and asked about requirements for commercial agreements on the liability towards the passenger. Overall, 70 out of 78 respondents gauged this as moderately or very important. Responses were quite similar across all industry stakeholders on this measure.

The final measure inquired about requirements for commercial agreements on avoiding misuse of data reuse by third parties. This was considered overall as important by 67 out of 76 respondents who chose to answer this question. In all the categories of other road transport provider, other rail transport provider and cycling or micromobility provider every response stated that this measure was important.

Figure 15-94: Q11a: When it comes to business-to-business commercial agreements for multimodal digital mobility services in land-based and waterborne modes, how important are these measures for you? (industry respondents only)





Question 11b: To ensure fair access for all operators to relevant multimodal digital mobility services, how important are these measures for you?

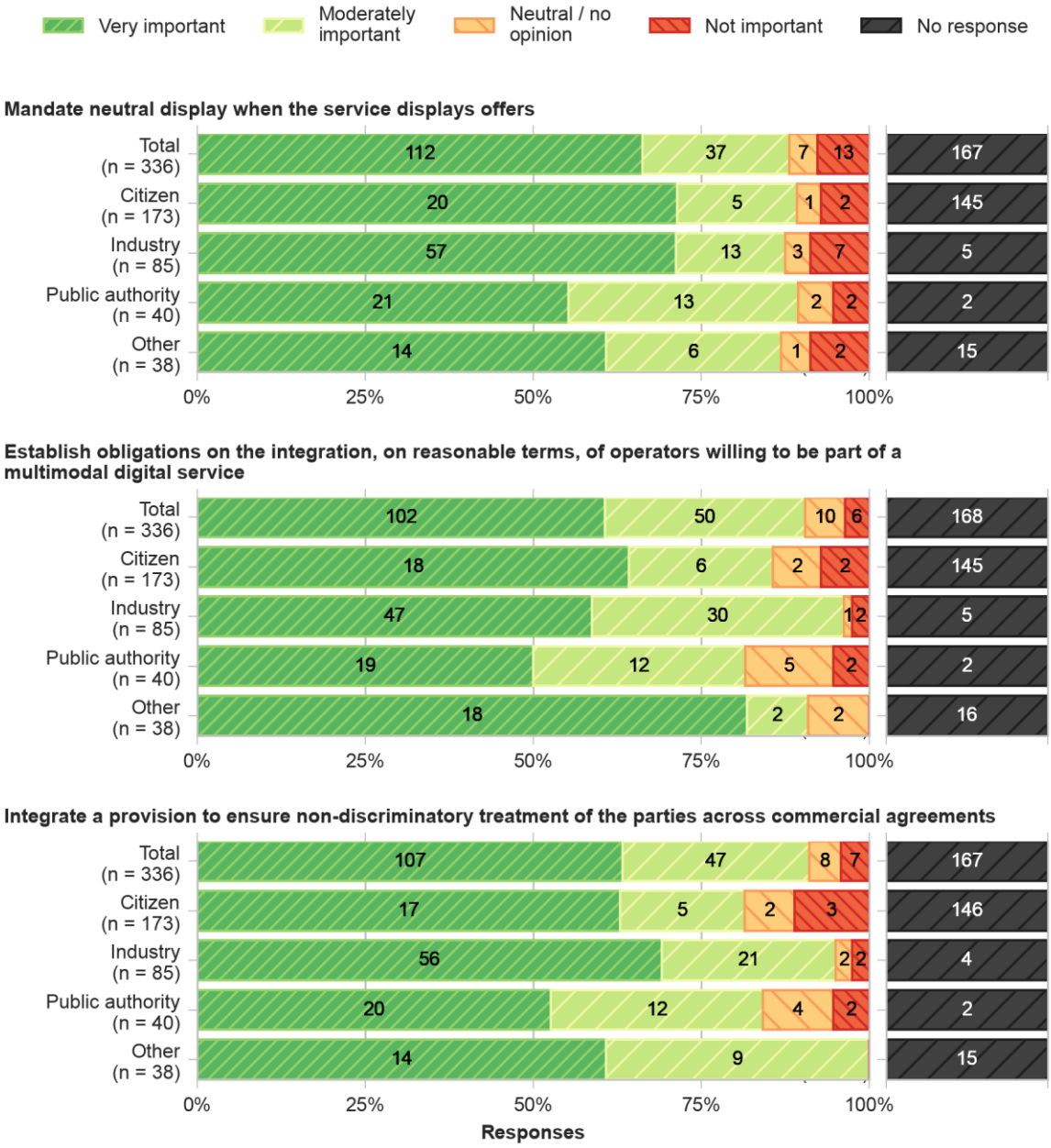
Respondents were asked how important different measures are to ensure fair access for all operators to relevant multimodal digital mobility services. Responses selected “mandating neutral displays” as moderately or very important at a rate of 88% overall (149 out of 169). Of the total, approximately two thirds of respondents

stated that the measure to “mandate neutral display when the service displays offers” was very important to them (112 of 169). Responses across stakeholder groups were broadly similar.

The following measure to establish “obligations on the integration of operators” was supported as very or moderately important by 90% of total responses (152 out of 168). Responses were mostly similar across stakeholder groups. A slightly smaller share or responses overall selected very important regarding this option (60%; 102 out of 168).

The third measure identified integrating “a provision to ensure non-discriminatory treatment of parties across commercial agreements”, which was selected at a rate of 91% as either very or moderately important (154 out of 169). Responses were similar across stakeholder groups in relation to this measure. Of the total responses, 63% confirmed that this option was very important to them (107 out of 169).

Figure 15-95: Q11b: To ensure fair access for all operators to relevant multimodal digital mobility services, how important are these measures for you?



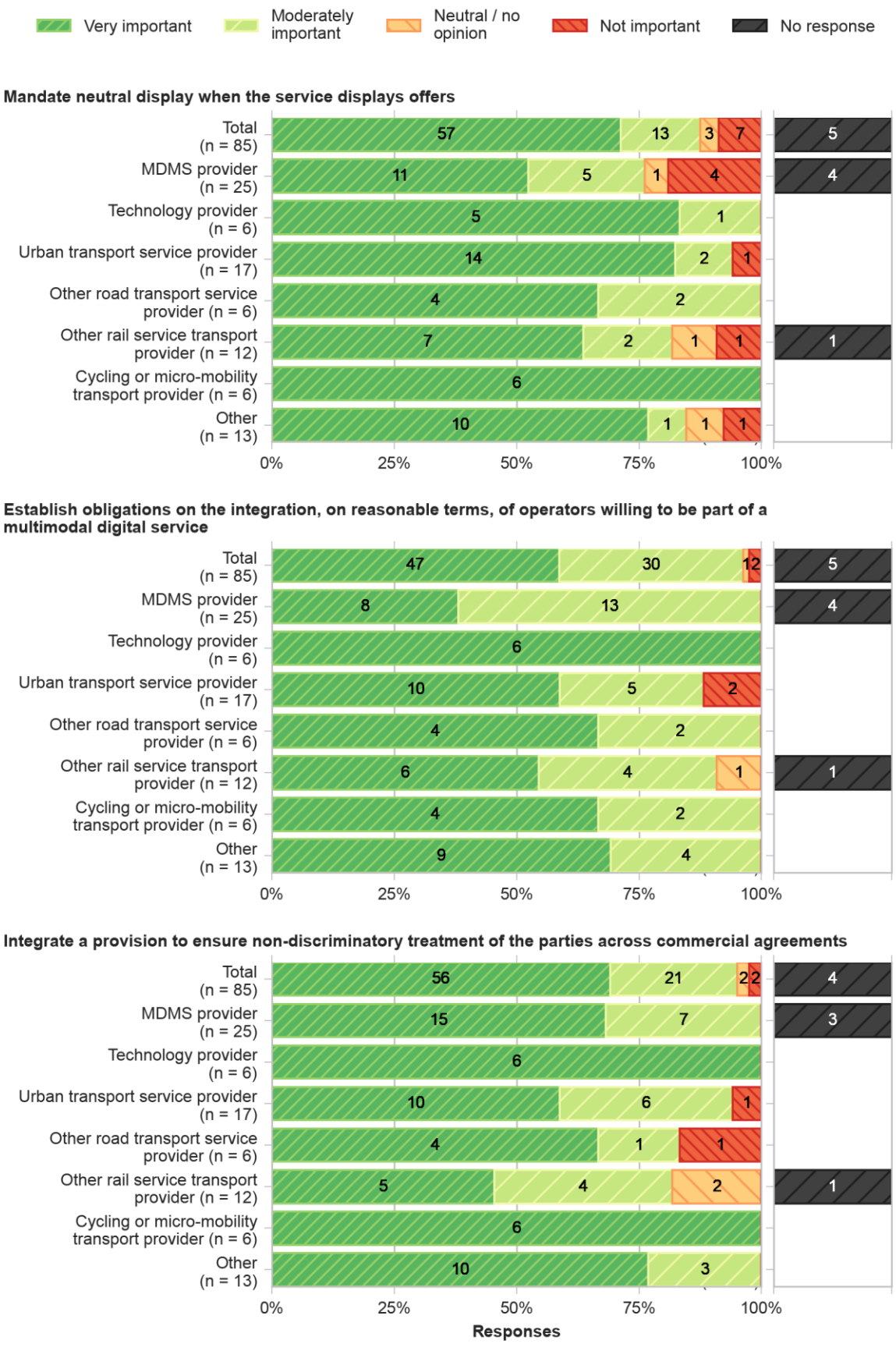
Support for the measures suggested was also high overall across different sub-categories of industry respondents. The measure to “mandate neutral displays” was chosen as moderately or very important by a

large share of total respondents from industry (70 out of 80). All six micro-mobility transport provider or cycling responses selected mandating neutral displays as “very important”.

The second measure identified to “establish obligations on the integration of operators” was selected as very or moderately important by 77 out of 80 industry responses. All six responses from technology providers selected this measure as “very important”.

The third measure to “ensure non-discriminatory treatment of the parties” was also chosen as moderately or very important by 77 out of 80 of the responses from industry. All six technology provider responses as well as all six micro-mobility or cycling transport provider responses identified ensuring non-discriminatory treatment as “very important”.

Figure 15-96: Q11b: To ensure fair access for all operators to relevant multimodal digital mobility services, how important are these measures for you? (industry respondents only)



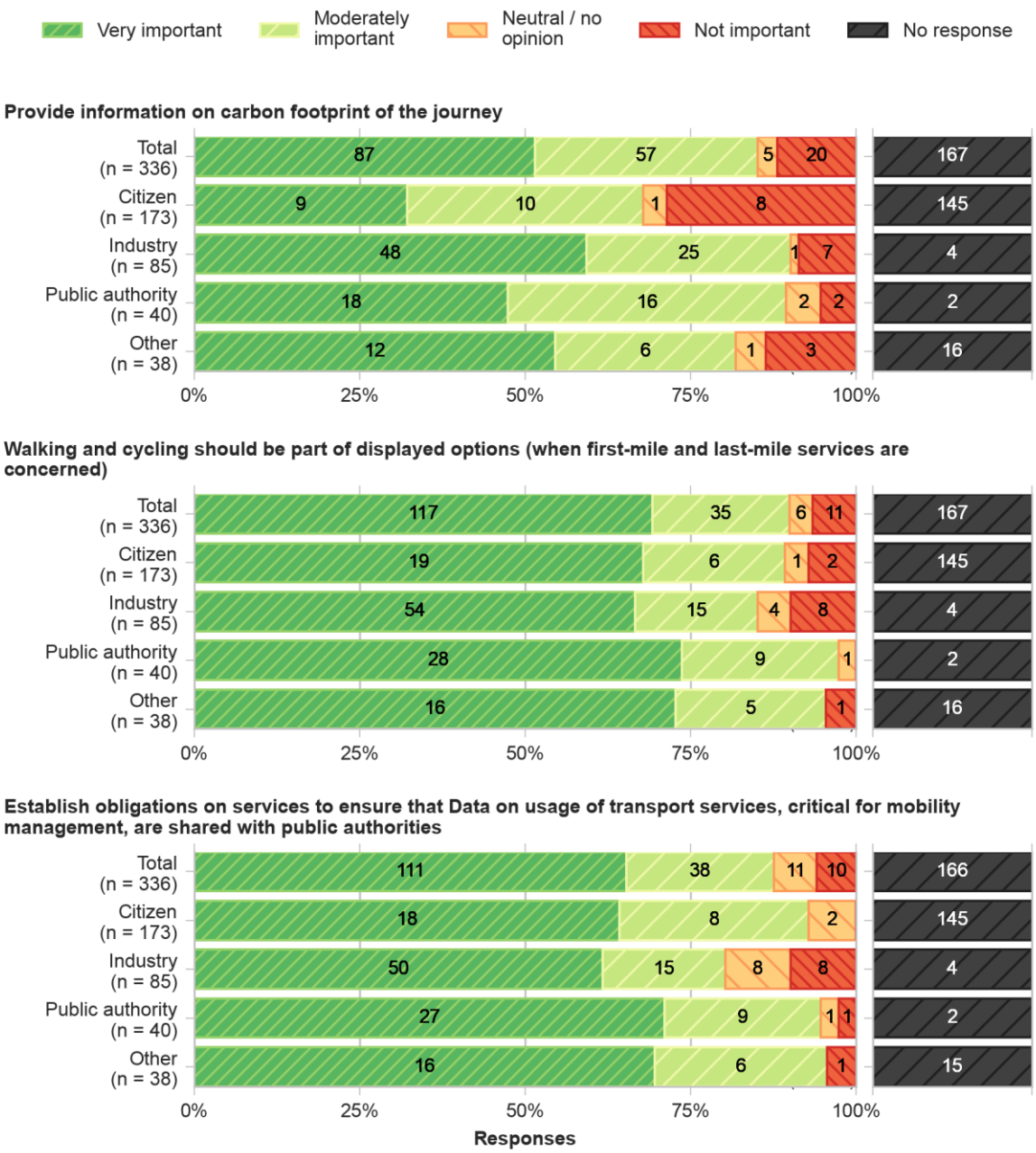
Question 11c: When it comes to ensuring that multimodal digital mobility services enhance the efficiency and sustainability of the transport system, how important are these measures for you?

This question asked respondents to score how important a range of measures are in regard to "ensuring that multimodal digital mobility services enhance the efficiency and sustainability of the transport system. A large share of the responses (85%) stated that carbon footprint information was moderately or very important (144 out of 169), with 52% of respondents stating that providing information on the carbon footprint of the journey was very important to them (87 out of 169). Of those who chose to respond to this question only 12% stated that this measure was not important (20 out of 169). Overall, 50% of survey respondents chose to not give an answer to this question (167 out of 336). The stakeholder group who selected "not important" most frequently in response to this question were citizens (8 out of 28).

The second measure was supported by a large majority of respondents across all stakeholder groups. Overall, 90% of respondents stated that "walking and cycling should be displayed options" was an important measure (152 out of 169). These results were similar across all stakeholder categories.

The third measure referred to "establishing obligations on services to ensure data on usage of transport services are shared with public authorities". This was ranked as important by 88% of responses overall (149 out of 170). These results were generally consistent across stakeholder groups, with 49% of respondents overall choosing to not give an answer to this question (166 out of 336).

Figure 15-97: Q11c: When it comes to ensuring that multimodal digital mobility services enhance the efficiency and sustainability of the transport system, how important are these measures for you?

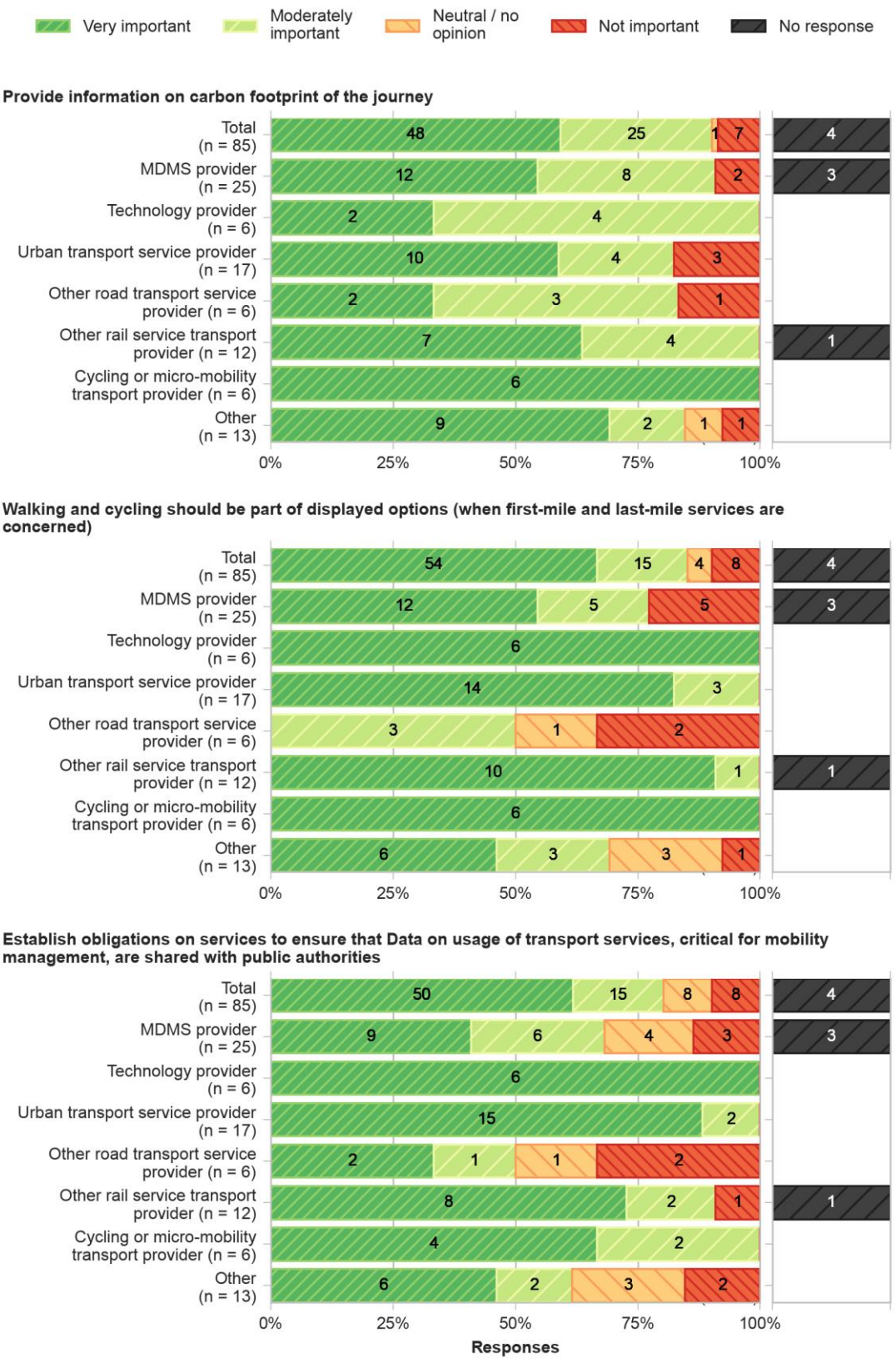


A large majority of industry responses across sub-categories registered “providing information on a journey’s carbon footprint as important”. Overall, 73 out of 81 respondents ranked this measure as important. This result was broadly similar across industry, with the exception of cycling and micromobility providers who all ranked this as very important (six out of six).

The second measure stating that “walking and cycling should be displayed” was supported by 69 out of 81 respondents across industry. Only three “other” road transport providers ranked this measure as moderately important, with the remaining three rating it as neutral or not important.

The third measure “establishing obligations to ensure data are shared with public authorities” was stated as important by 65 out of 81 respondents overall. All technology provider respondents ranked this measure as very important (three out of six), with all urban transport providers and cycling or micromobility providers deeming this either moderately or very important. Other road transport providers showed the smallest share of responses stating this measure is important (three out of six).

Figure 15-98: Q11c: When it comes to ensuring that multimodal digital mobility services enhance the efficiency and sustainability of the transport system, how important are these measures for you? (industry respondents only)



Question 11d: Do you have any comments on these measures or other potential measures to consider?

Respondents were then asked whether they could give any comments on these measures or if any other potential measures could be considered.

A coordinated response from traditional rail operators and their EU-level associations called attention to their position that "Creating high quality data is costly, so data sovereignty is a key". This response called for different models of commercial agreements to be provided. They also declared that operators should be free to decide whether or not they open up ticketing to third parties (including which tickets, and to whom). They also stated that when sharing travel information and/or ticketing data, operators should also be able to choose different terms and conditions under which they share such data.

A range of positions were stated on whether data should be available to consumer organisations, so not only to authorities. For example, two NGOs and a citizen stated that the data on usage of transport services should be publicly available, not only to authorities, but also to consumer organisations.

Attention was drawn by an industry stakeholder to the idea that "the offer display should be neutral, but always be ranked according to social/sustainable policy objectives, not commercial ones". They also expressed that the limited revenue potential from active mobility and public transport can lead to less sustainable modes being prioritised, although sustainability and inclusivity should be at the forefront of multimodality. This response concluded that "to avoid data asymmetry and a burden on the taxpayer, data should be shared free of charge with authorities".

The position from the perspective of a public authority was that "it is important to maintain regional government control of transport services, as regional public policies vary between regions and may be part of an integrated policy package, containing also measures such as land use planning, urban growth and settlement policies, as well as policies for other types of public infrastructure".

Concerns about avoiding the potential of dumping tickets was emphasised by an urban transport provider who stated that it would be extremely important to ensure that "there can be no resale of tickets under the price set by the public transport authority/public transport operator. There can be no dumping of public transport tickets that are already sold at a price that is nearly always financially compensated".

The point was made by the response from an NGO that making third party vendors liable for delay compensation in order to create a combined multimodal ticket across Europe will give no incentive for railway operators and infrastructure managers to improve performance. It was also highlighted that MDMS platforms must be attractive for public transport operators "as they do not want to pay a commission fee to have their services sold by third parties" and a suggestion was made that the user covers a commission fee for the MDMS platform rather than the public transport operator.

Other points made include:

- Calls by a public authority respondent for the leading principle to centre around the potential benefits for the user.
- Public-welfare oriented incentives were suggested by an MDMS provider as a strategy to alter mobility behaviour in order to improve urban mobility pricing models.
- Concern was expressed in a citizen's response over the competitive advantage that could be affected by data sharing "in a digital economy, the ownership and access to data often determines the market dominance".
- Despite the empowering impact of carbon footprint data in enabling transport users to opt for the more sustainable mode out of a transport offering, the behavioural change might be limited. Citizen respondents therefore identified that "to make sure that the user takes the most sustainable mobility solution, governments and industries have to make sure that it is the most interesting solution based on parameters that do influence user behaviour: cost of the trip & comfort/experience of the trip".
- Respondents from MDMS platforms also highlighted that in France the *loi d'orientation des mobilités* (LOM) has already been established as a regulatory framework for multimodality.
- The argument was also made from a public authority that "increased access to mobility-related data would allow public authorities to better provide mobility flows, the use of the infrastructure and adapt mobility planning based on reliable data".

- There were calls from road transport providers, citizens and businesses for data on carbon footprint of transport modes to be standardised.

Question 12: The objective of this new initiative would be best accomplished…

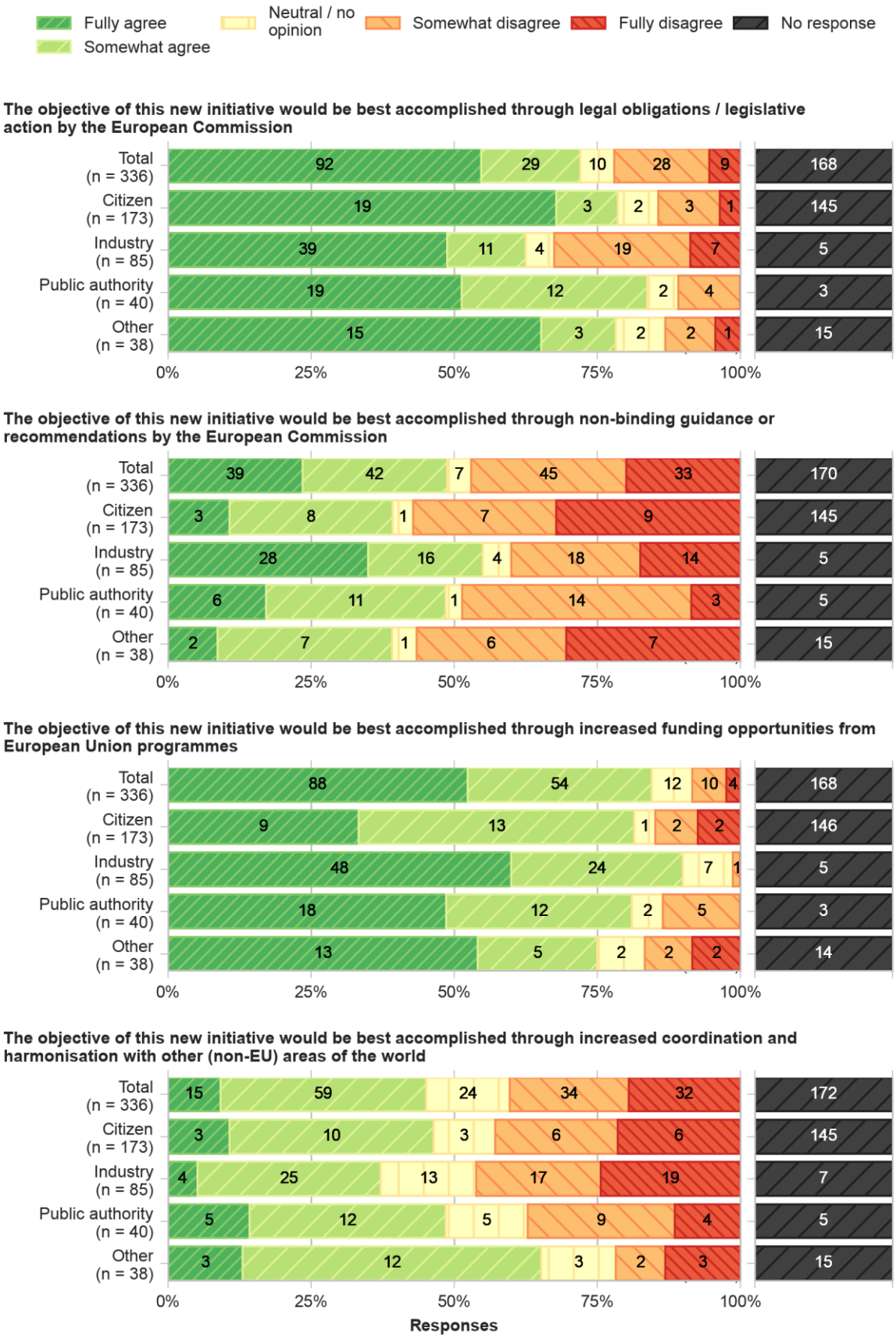
The survey proceeded by asking respondents to state to what extent they agreed with four proposed measures. Overall, 72% or respondents agreed with the measure of "using legal obligations or legislative action to achieve the initiative" (121 out of 168). Responses from industry had the smallest proportion of responses agreeing with this statement (50 out of 80).

In comparison, weaker support was registered for the second measure proposing the "use of non-binding guidance or recommendations by the European Commission to achieve the initiative". Across all stakeholder groups, 49% of respondents agreed that these measures would best accomplish the initiative (81 out of 166). The proportion of respondents who fully disagreed with this statement was 20% (33 out of 166).

The third statement suggesting that "the initiative would best achieve its objectives through increased funding opportunities through EU programmes" received strong support. Across all stakeholder groups, 85% of respondents stated they fully agreed with this measure (142 out of 168).

The fourth proposed measure referred to the "use of increased coordination and harmonisation with other (non-EU) areas of the world to achieve the goals of the initiative". Across all stakeholder groups 40% of respondents did not agree that this measure would best accomplish these goals (66 out of 166). The rate of "no response" received for this measure was 51% (172 out of 336). This was the highest rate of no response out of the four proposed measures.

Figure 15-99: Q12: The objective of this new initiative would be best accomplished…



Industry responses showed a varied set of results for this question (**Error! Reference source not found.**). Overall, 50 out of 80 respondents agreed that the objective would be best accomplished through legislative

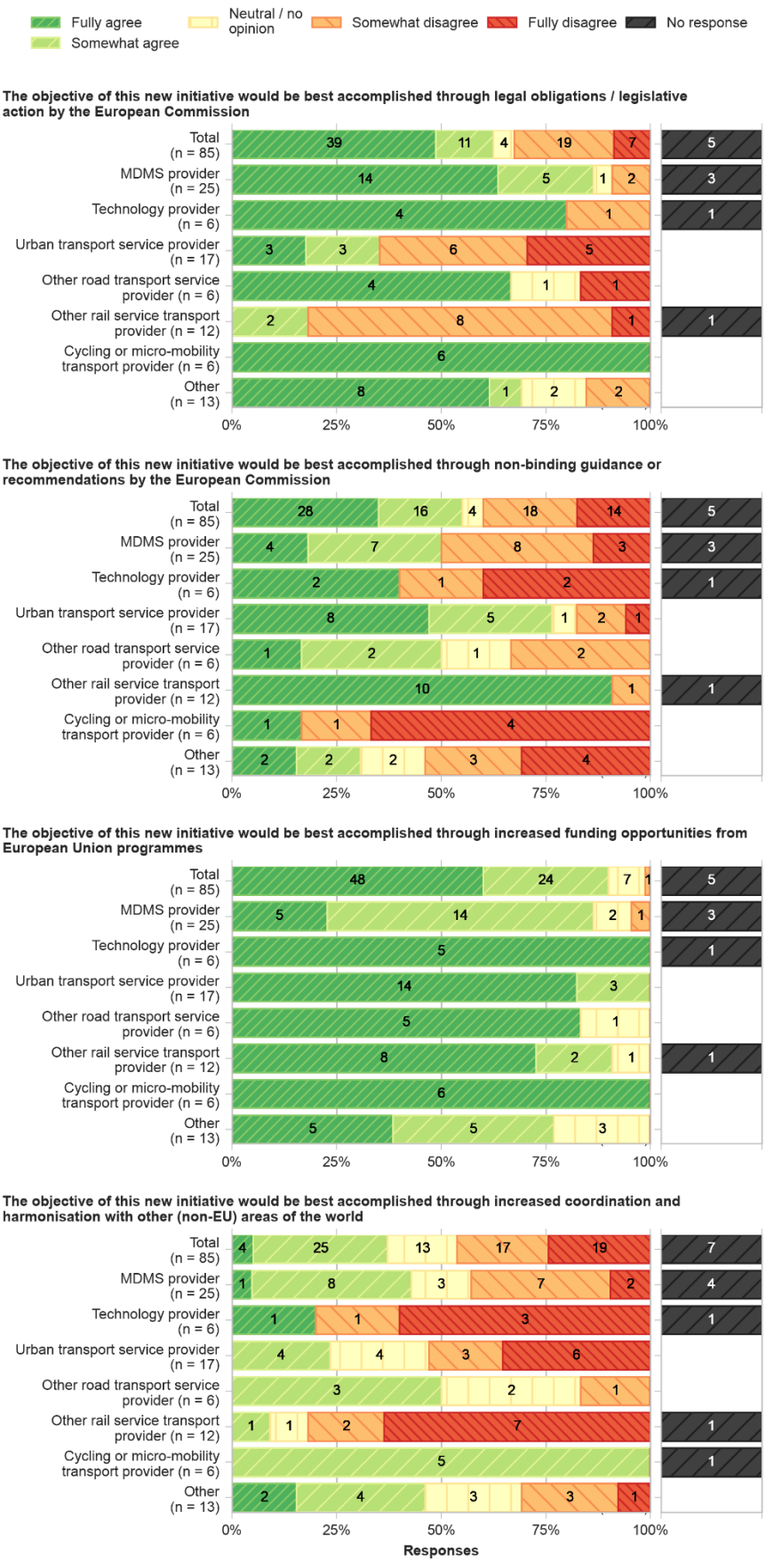
action by the European Commission. Other rail transport providers were most in disagreement with this statement (nine out of 11). Urban transport providers also mostly disagreed with this statement (11 out of 17). Besides these two industry sub-categories the majority of responses in each category agreed with this statement.

The second measure referred to using non-binding guidance to achieve the objective of the new initiative, with which 44 out of 80 respondents agreed, but results varied across industry. Cycling and micromobility providers mostly disagreed with this statement (five out of six), while rail transport providers showed high support with 10 out of 11 responses fully agreeing with it.

The third measure suggested that increased funding would best achieve the objectives set out in the new initiative. This was supported or seen as neutral by every response given bar one (79 out of 80). One MDMS provider somewhat disagreed with this statement (one out of 22).

The fourth measure indicated that the objective would be best accomplished through increased coordination and harmonisation. A majority of respondents disagreed with this statement or saw it as neutral (49 out of 78). Opposition to this statement was particularly strong in the industry sub-categories of technology providers (four out of five) and rail service providers (nine out of 11).

Figure 15-100: Q12: The objective of this new initiative would be best accomplished… (industry respondents only)



Analysis of ad hoc contributions

In its submission, the Community of European Railway and Infrastructure Companies (CER), representing the rail sector, provided a factsheet on a “ticketing roadmap for seamless international passenger rail travel”, in addition to a position paper on a ticketing roadmap. These documents envisaged a future where “tickets issued by different railways and ticket vendors will be easily accepted throughout Europe”, and passenger rights will be ensured alongside easily-accessible information made available in the event of disruptions. The factsheet provided outlines six key processes in the customer’s booking and journey experience to be focussed on with changes implemented by 2025 and then further changes continuing through to 2030 in order to achieve this, depending on data exchange based on voluntary contractual agreements and supported by financial and regulatory support. Concrete actions to achieve the overall vision include: providing more up-to-date timetables by 2025, ensuring train tickets can be bought up to 12 months in advance and implementing the OSDM offline platform (a rail sector specification enabling interoperable ticket sales for trains and other transport modes) to enable customer-friendly sales systems that empower customers to access through tickets, among others.

A longer-term set of concrete actions have also been outlined to be achieved by 2030. These include extending the pan-European roll out of OSDM-online to the whole sector (smaller railways included) so that all railway undertakings can make their tickets available to customers. The digitisation of relevant systems are also planned to be advanced in this time frame so that when disruption impacts the travel chain, seats may be reserved on the next available train using OSDM booking API. By 2030 the use of tickets or an identification document to gain entrance to varied modes of transport is also intended to be made easier with railways and other transport modes hopefully implementing a shared framework of digitalised tickets. It is hoped that a combination of these concrete actions and long term vision contribute to reaching the European carbon emission goals of the European Green Deal.

Amadeus, an MDMS provider, took the opportunity to highlight three main points to be considered in this assessment. The first point expressed that ticket intermediaries and distributors require access to relevant, accurate and dynamic information. Discriminatory practices leveraged by large operators and the fragmentation of “content” (collectively referring to information on fares, routes, timetables, journey times, connections, conditions and prices) has an impact on price transparency, consumer choice and competition. The second point highlighted by Amadeus stated that transparency is a key issue for consumers; this can be achieved by ensuring that MDMS have sufficient access to content on FRAND terms. Neutral display rules were also discussed, with the desire that this should not be prescriptive and allow MDMS sufficient freedom to innovate rankings in line with market requirements. The third priority of Amadeus was that air travel is included in MDMS offerings. The point was made that if air travel is not included in MDMS then it will persist as a default option for long-distance travel, as customers will not be able to view journey comparisons when making a booking.

Following the outline of these priorities Amadeus covered three policy options that it hopes will come to fruition in the EU. These policy options focussed on environmental sustainability (travellers should have access to and be able to rank according to transparent information on the environmental impact of their travel choice), preventing discriminatory practices (incumbent transport providers should be prevented from favouring their own services), and ensuring the regulatory framework provides certainty and transparency for ticket intermediaries: data exchange industry standards must be open, transparent and future proof.

In its submission, the non-profit environmental association Verkehrsclub Deutschland (VCD) welcomed the intention to enable seamless booking and payment of cross-border travel chains. VCD highlighted that a lack of cooperation means that booking multimodal travel chains is not enabled through distribution systems geared towards internal distribution. The suggestion was put forth that a European travel booking hub is needed to link national access points of EU member states and enable through-tickets. Alongside this the VCD also drew attention to the priority of price transparency and their belief that publicly-funded mobility services should retain sovereignty over transport tariffs. This is seen as the best method to ensure that different MDMS do not offer identical travel connections at a variety of prices.

Following on from these points, the VCD made three demands. These were to allow the use of transaction data only until time limits expire, to ban the transfer of personal data to third parties and to ban the internal use of such data beyond the sale of mobility services.

TIER Mobility, a micromobility provider, provided a submission outlining three pieces of feedback on the policy actions covered in the inception impact assessment for this initiative. First, TIER set out hopes relating to the reselling of mobility products. Tier stated that transport operators should be able to freely negotiate the pricing of partnerships with MaaS providers, as well as being able to retain flexibility to some degree with multimodal tickets and that private MaaS operators should be able to sell public transport tickets across the EU.

Secondly, TIER expressed a desire that the development of open data systems for MaaS accounts for the commercial implications that making datasets publicly available can have. A single MaaS standard was also highlighted as a potential solution to reduce technical burdens on MaaS partners, while rules allowing for efficient data exchange were promoted as a means to enable the assessment of (multi-) modal shifts away from cars.

Finally, providing information on the GHG emissions of a journey was the third priority of TIER's response. The intention was set out to incorporate harmonised accounting methods in order to fulfil a future timeline of implementation so that in-app developments can utilise this information.

In the submission provided by UNIFE, the association of the European rail supply industry, it was stated that the logic of sustainability means that MDMS should rest on the backbone of rail and public transport. Transparency and data sharing were highlighted as key methods to help authorities and public entities enable journey continuation. UNIFE also encouraged intentions towards developing a harmonised European legal framework for the development of MaaS while stating their strong support for ensuring that MDMS enhance the efficiency and sustainability of the transport system. It was elaborated further that dedicated initiatives for environmental and GHG emissions accounting would be strongly supported by UNIFE.

In the joint statement provided by the International Association of Public Transport (UITP), European Metropolitan Transport Authority (EMTA) and POLIS, the network of European cities for sustainable mobility, eight key messages were elaborated on. Overall, the position was underscored that public transport is currently successfully organised within Europe and care should be taken to not upset this. The first priority enshrined the importance of local diversity, including the strength of local, regional and transport authorities in achieving the aims of the European Green Deal along with the principle of subsidiarity. The second message was that the effective oversight of markets should be retained by local and regional transport authorities to achieve equitable mobility policy objectives. Measures to advance digital integration were promoted in their third point: by encouraging transport authorities to describe conditions for resale of transport services and define non-discriminatory contracts the UITP, POLIS and EMTA believe this could be achieved. Extending the reach of regulations to all types of mobility providers and not just public undertakings constituted their fourth point. For example, ensuring all vendors are subject to the same rules and regulations in terms of passenger rights of accessibility information.

Beyond the joint position submitted by the EMTA, POLIS and the UITP outlined previously, POLIS, the network of European cities for sustainable mobility, also submitted a report on sharing data for shared mobility. In this report they explain that shared micromobility services generate high volumes of data which can be used to enable local authorities "in planning, managing and improving" the infrastructure these services rely on. POLIS highlight the capacity gap discovered between the public and private sector, stating that this poses problems on both sides. To make progress and achieve more data-driven and evidence-based decision-making this capacity gap must be addressed. In the current state of affairs, the capacity gap they highlight however is set to grow as this is linked to factors that are directly related to the core business of private operators (Information Technologies, for example) which are "comparatively peripheral to the mission of local and regional authorities". This leads to delays in trust building within public-private partnerships, while hampering the ability of the public sector to obtain and use the critical insights needed to "improve the streets on which these services operate".

Ensuring that travel data flows automatically rather than upon request is the fifth strategy for which support was expressed, with the intention that this prevents market asymmetry. The need to avoid disproportionate investment in transport infrastructure in unrealistic timeframes was the sixth point presented, justified by the logic that transport authorities are already struggling to cope with the impacts of the covid-19 pandemic. In this POLIS, EMTA and the UITP also called for financial support programmes to be implemented to cover infrastructure investment. The seventh position outlined was that the specific nature of the contract between public transport authorities and public transport operators should be recognised. This means that transport authorities should be able to award exclusive rights and financial compensation to public transport operators for carrying out public service obligations. Finally, the eighth message called for the installation of a body to oversee and deal with malicious practices within "the volatile market of commercial digital mobility services".

The submission provided by STIB-MIVB, the local public transport operator in Brussels included detailed analysis of the topic. Their main points were: delivering a modal shift from private cars to walking, cycling and public transport as a priority, ensuring "win-win" agreements are reached with MDMS providers (aligned with Brussels' social, inclusive and public service mission) covering subjects such as data reciprocity, and respecting the fact that public transport is publicly financed. Finally, STIB-MIVB expressed support for providing inclusive services with features such as effective route planners and customer service end-to-end. These factors were couched in STIB-MIVB's positive response to the objectives the European Commission outlined alongside their intentions to provide solutions to help deliver these.

The European Travel Agents' and Tour Operators' Associations (ECTAA), representing travel agents and tour operators, submitted a press release covering an antitrust complaint made against the airline trade association IATA in 2019. According to the press release, after years of failed negotiations with IATA to modernise and ensure balance in the distribution programme ECTAA requested the European Commission to investigate and put an end to the infringements of competition rules caused by IATA's Passenger Agency Programme (PAP). The relationship between airlines and travel agents has evolved to one of direct competition, according to their submission. However, the unilateral contractual constraints on travel agents for the distribution of tickets represented in the PAP have not evolved to reflect this reality. As the PAP regulates the relationship between accredited travel agents and IATA airlines the ECTAA call for appropriate intervention to be made so that competition in the market of air ticket distribution is no longer restricted.

The Austrian Economic Chamber (WKO) submitted a letter expressing their support for the goals the Commission has outlined and their contribution to meeting the aims of the European Green Deal. Their main idea was that digital applications are seen as crucial to fuel a modal shift from private vehicle use. They further clarified that the concrete details of measures to be introduced must be sufficiently examined but that digital applications may be able to lead changes in the demand for various transport modes.

Wiener Stadtwerke (WSTW), an infrastructure company owned by the government of Vienna, submitted a detailed outline of their positions on this initiative. On the topic of data sharing, WSTW expressed a variety of positions. WSTW detailed that they are open to providing dynamic data on disruptions via a standardised API, with the prerequisite that all service providers also do so. Due to technical reasons, they stated that dynamic data relating to the use of vehicles (how busy a bus is, for example) cannot be provided, however. The opportunity for competitors to use this data in order to attract customers to more polluting competitors was also noted as a threat. WSTW went on to note their agreement that minimum requirements of interoperability of ticketing-related APIs be established, with the obligation that this applies to all actors, while PTOs maintain the right to only sell a smaller portfolio of their products.

Ranking according to the sustainability of transport options was not supported outright by the WSTW, instead the suggestion was made that ranking should take place based on "urban requirements" or "the needs of transportation". Finally, on the topic of creating an EU-wide booking, information and payment system for transport the WSTW called for the potential added value to be sufficiently evaluated so that the potential advantages of relying on local expertise could be examined in comparison to creating a top-down EU-wide solution.

The contribution made by eu travel tech, an organisation representing travel technology companies (including MDMS providers), drew attention to concerns pertaining to enforcement, coherence and sustainability. Eu travel tech called for binding timelines for the examination of complaints, and a strong role for European authorities and national counterparts in enforcement. The stakeholder also called for potential obligations for MDMS to be analysed and contextualised in the existing legislative landscape, while also ensuring an independent and unbiased marketplace as key. It was highlighted that in comparison to rail travel the air ticket distribution market can seem transparent, convenient and competitive. However, eu travel tech opposes such a position and calls for any comprehensive initiative on multimodal travel to include air travel. To account for problems faced by MDMS regarding rail distribution, eu travel tech asked for services to based on fair, reasonable and non-discriminatory commercial terms (FRAND).

In order to enable travellers to make informed and sustainable travel choices, eu travel tech supported integrating fair comparisons of sustainability factors (with these mainly covering CO_2 emissions). To achieve this, eu travel tech stated that transport service providers should be obliged to share accurate and comprehensive emissions data for all offerings. It is also stated that this should be in accordance with the methodology developed under the CountEmissions EU initiative (an initiative that sets out a common framework to calculate and report transport-related greenhouse gas emissions, both for the passenger and freight sector).

Recommendations were made by Cycling Industries Europe (CIE), an organisation representing cycling business stakeholders, surrounding themes including ticketing and data. It was stated that "efforts to digitalise transport are crucial to improve network efficiency" with emphasis needed to be put on the standardisation of abundant and dependable data. An example was provided to illustrate the need for data standardisation detailing the difference between "cycle tracks" (physically separated from roads) and "cycle lanes" (separated by horizontal markings) which are international terms, from "segregated cycle lanes" which are not universally understood. Financial support was also called for to empower capacity building in active and urban mobility, with attention drawn to evidence provided by POLIS on the cost of digitalisation to cities.

CIE stressed that the "patchwork of national, regional and operator regulations" on the carriage of bicycles is an obstacle to undertaking longer and especially international trips. Calls were made for a standardised international bicycle ticket to cover carriage on different carriers and ensure journey continuation in case of disruption. Further, concerns were highlighted around the unfair promotion of services either for private companies or council-run services. Regulating to safeguard fair market conditions and a level playing field between all actors, with full transparency if a financial relationship is pre-existing was emphasised by CIE as necessary to prevent undue influence on consumer choice.

The European Disability Forum (EDF), an independent NGO representing the interests of Europeans with disabilities, contributed support for defining new rules covering multimodal journeys and guaranteeing passenger rights. The EDF considered that gaps exist that need to be closed to ensure truly accessible transport is available for passengers, including passengers with disabilities and reduced mobility. A "seamless, accessible and fully integrated travel chain across transport modes" was defined as a key priority for the EDF. To ensure this comes to fruition, EDF highlighted the need for effective and coherent complaint mechanisms as well as guaranteed assistance for passengers using multimodal products with reduced mobility or disabilities.

In their contribution Trainline, an MDMS provider and online rail and coach ticket vendor, welcomed the Commission's initiative to consider concrete policy options to foster MDMS in the EU. Trainline highlighted the role digital solutions play in encouraging customers to travel using sustainable modes of transport in an integrated and convenient way, expanding that offers must be "as attractive, customer-friendly and accessible as possible" to enable this. The potential for support from MDMS providers to drive innovation was outlined positively, with an example offered that during the COVID-19 pandemic Trainline was able to integrate a crowd alert function, informing travellers of the occupancy of trains.

Trainline also indicated that commercial relations with transport providers were the main barrier for MDMS. Particularly in the railway sector, Trainline claimed that pre-existing market imbalances allow unfair commercial conditions to be imposed on independent MDMS providers. Actions to position technical standards as the key obstacle in developing rail distribution were criticised by Trainline, instead adopting a general FRAND principle and addressing the power asymmetries in the transport market was recommended to reduce the anti-competitive practices that they consider to prevent MDMS from being fully deployed.

The association of European Passenger Transport Operators (EPTO), an organisation representing private sector public transport operators in Europe, expressed support for EU action to guide the development of MDMS but noted three areas where focus is needed. One priority was the need to respect the differences between long-distance, cross-border transport and regional, suburban and urban public transport services. Aligning MDMS development with sustainable mobility goals at a range of scales (local, regional and national) constituted the second, while the third called for the Commission to create a flexible regulatory framework to allow MDMS to be deployed further. Avoiding a one-size-fits-all approach was justified by the statement that 95% of all trips are made locally, therefore it is vital to reflect local realities. About that, EPTO noted that opening up and making appropriate data available for re-use can be beneficial and lead to the development of sustainable mobility solutions. Finally, EPTO maintained that discriminatory practices deployed by ticketing parties would hamper the development of multimodal journeys and that this should be avoided.

In their submission, Métropole Européenne de Lille (MEL), an intercommunal network of cities whose major city is Lille (FR), noted that patterns of transport use can be oriented towards less emitting modes through encouraging the uptake of MaaS. MEL outlined priorities on which it was decided to validate the immediate launch of the development of a new digital platform to be developed within the current public transport landscape. MEL highlighted the importance of incorporating the functionality of customising trips, tracking schedules of journeys, real-time monitoring of bus schedules and the integration of reservation services, carpooling and carsharing into MaaS services. On top of this, MEL expressed the desire that transport data quality be improved so that it is interoperable and easily integrated into geographic information tools according

to common standards. It is hoped that these strategies lead to a fluid and attractive customer experience for new users, enabling a modal shift to less polluting mores of transport.

In the response provided by the Union des Transports Publics et ferroviaires (UTP), the union of public urban passenger transport companies in France, the introduction of the loi d'orientation des mobilités (LOM) was hailed as constituting a balanced framework for the development of digital multimodal services aimed at limiting the use of individual vehicles. The UTP expressed concern that the Commission should make efforts to avoid weakening this French legislative setting. The position was also outlined that the UTP does not support the integration of long-distance rail into MDMS in so far as this would represent an obligation to open up digital systems to any actor who requests it. Two actions that the UTP called for from the Commission were, firstly, to orient funds towards the development of digital services to empower sustainable and smart mobility. Secondly the UTP called for the prevention of platforms operating in “silos” and for data management to take place based on European standards, with the voluntary involvement of local public transport actors.

Support was expressed by Berliner Verkehrsbetriebe (BVG), the main public transport company in Berlin, in their submission for enabling a shift away from reliance on private cars through MDMS with example of the green mobility app “Jelbi”. This was presented alongside two guiding principles that it was hoped would be used to progress this work. The first principle was that national mobility platforms should remain in public hands. This is justified by the fact that they are a tool and the basis for sustainable traffic design and planning in a city, enabling the shift towards low-car and low-emission cities. The second principle highlighted by the BVG was that only public transport should be allowed to sell public transport tickets. It was expressed that opening up the sale of public transport tickets to third parties would not only lead to considerable revenue losses for public transport companies, which would in turn have to be covered by higher subsidies from taxpayers' money, but would also result in the loss of the customer interface and thus of data on mobility behaviour.

The Verband Deutsches Reisemanagement (VDR), the business travel association in Germany, provided a positive stance on the power of MDMS to improve intermodal travel. The VDR expressed that business travellers feel the effects of the difficulty of using public transport in unfamiliar cities and regions where there is a lack of real-time information, presence of different fare systems, lack of integration of mobile ticketing in a central platform, standardised ticket vending machines and a lack of advance booking options. The VDR called for these issues to be addressed through ensuring the visibility of all modes of transport, including timetables and connections, making real-time information available during the journey, demanding easy rebooking and cancellation and standardising invoice records to match companies' automated billing processes.

Innovative transport concepts were highlighted by VDR as a component of a potential set of solutions, including on-demand services, car-sharing, mobility subscriptions and car-pooling as well as the future integration of automated driving. The introduction of a supranational mobility platform was also supported as offering the opportunity, with the involvement of all stakeholders, to develop common EU-wide mobility standards.

The Autorità di regolazione dei trasporti (ART), an administrative transport authority based in Turin (IT), outlined a position supporting the effective development of MaaS, while concerns. This included calls for improving the advancement of the digitisation of rail, as this would encourage greater use of this mode, given its key role in national and international connections within the EU and as a sustainable, innovative and safe mode of transport. A centralised information system was defined as a prerequisite by the ART for the development of integrated multimodal ticketing systems. ART also acknowledged that opening data to third-party sales systems is a necessary condition for the development of an EU standard for ticketing data exchange, regardless of the technical means by which operators will have to operate, although there they acknowledged that there is strong resistance from carriers to grant access to their own sales systems and related data. This position was elaborated on that when guaranteeing access to these sales systems, it is necessary that various operators be provided with non-discriminatory criteria, to ensure all operators, including SMEs and start-ups, would be able to participate. Finally, ART underscored that the inclusion of short- and long-distance, urban and regional offerings within one or more transport modes is important for the future development of MaaS applications.

The European Automobile Manufacturers Association (ACEA), the main lobbying group of the automobile industry in the EU, contributed their position on shared and sustainable urban mobility. ACEA called for efficient governance based on the harmonisation of rules so that private companies can launch innovative business models with a level playing field. ACEA also made the point that shared mobility services will benefit from higher levels of driving automation and cities becoming smarter. As a general principle, ACEA stressed that the free movement of people and goods are two of the fundamental freedoms of the EU and are essential to

the proper functioning of the Internal Market. As such, the ACEA considers all modes as important for a modern inclusive and decarbonised transport system and emphasised that everyone should be able to choose “the most suitable mobility option according to their specific mobility needs”.

The International Road Transport Union (IRU), a global organisation of transport companies, outlined their position the development of MaaS and on the governance of business-to-business data in the EU. IRU detailed that the fragmentation of MaaS models and the associated regulatory responses contribute to business and legal uncertainty for transport operators. As IRU recognised transport operators as the backbone of MaaS they raised concerns that current EU e-commerce rules are not sufficient to ensure transport markets work in the interests of both passengers and businesses. MaaS operators being established at a national level was called for, along with voluntary opt-ins for transport operators onto MaaS systems. IRU also stated that ranking of the transport offering through MaaS should only follow “objective and transparent criteria”. A need for quality data and minimum data standards to not lead to the exclusion of SMEs who cannot afford the costs involved was expressed. Finally, IRU encouraged the creation of financing mechanisms to support the digitalisation of EU mobility companies.

In the contribution provided by management and consulting firm Arthur D. Little, the need to go “beyond MaaS” using a comprehensive approach was observed as an integral aspect of addressing new mobility issues. Arthur D. Little sees six requirements as needing to be fulfilled in order to achieve unified urban mobility management. This strategy includes:

- Covering all relevant modes including private cars, integrating goods movements with mobility services (Logistics-as-a-Service combined with MaaS) and further integrating multimodal infrastructure.
- Extending MaaS beyond the city boundary.
- Improving the balance between supply and demand and e.mbedding a holistic traffic management approach to further improve MaaS development.

The consulting company SFMCON submitted their vision for debunking myths in MaaS. In this, they highlighted that MaaS is not just an app but “a question about governance and good business sense”. They wish to dispel the idea that MaaS agents prey on existing sales volume or that each city should have its own MaaS implementation. Instead of such a city-centric approach they call for MaaS to be generally enabled. SFMCON expressed that the real competition is not between individual mobility service providers in the MaaS landscape, but between the MaaS ecosystem and the private car. Shifting a traveller from a car owner to a car user, empowering door-to-door mobility and moving from closed to open data were three principles steering SFMCON’s vision.

Finally, the Urban Mobility Partnership (UMP), a multimodal transport partnership, contributed their practical guide to MaaS. This detailed how to manage the complexity of the mobility environment engendered by MaaS development. Key goals highlighted in the guide included the notion that MaaS should have the customer at its centre, providing a “customised, safe and sustainable” set of options for consumers. UMP also drew attention to MaaS being an integral part of modern transport policy at local, regional, national and European levels and suggested that mobility should be considered central to spatial planning, as this helps to create better cities and regions. They further elaborated that MaaS makes for more efficient public transport services, in their view, and although the importance of the car in society is acknowledged they hold the belief that MaaS can reduce the need for car ownership



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