

MDMS, an EU MaaS regulation in the making?

Green Deal Flagship 6 – Making connected and automated multimodal mobility a reality

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Abstract

This paper discusses the problems and objectives identified as part of the European Sustainable and Smart Mobility Strategy Flagship 6: Making connected and automated multimodal mobility a reality.

A new regulation setting the framework for multimodal booking and payment services known as the Multimodal Digital Mobility Services (MDMS) regulation is in the makings. The plan is to enforce this regulation EU wide in 2023.

The aim is to look at the intervention seen from a Mobility as a Service agent and end user point of view.

Especially the focus is on how to create a cross border multimodal travel plan, booking, payment and navigation.

Keywords:

Multimodal, MaaS, MDMS

Introduction

The European Green Deal calls for a 90% reduction in greenhouse gas emissions from transport by 2050, to help the EU become the first climate neutral continent.

As part of the Green Deal, the EU Commission has adopted a strategy to bring transport on track for the future.



Figure 1 – EU Mobility Strategy

The objective of the strategy is to make the European transport system more sustainable, smart and resilient.

“Through the implementation of this strategy, we will create an irreversible shift to zero-emission mobility while making our transport system more efficient and resilient.” Statement from Adina Valean, EU commissioner for mobility and transport.

The EU Mobility Strategy will be executed through 10 flagship areas.

Flagship 6 relates to multimodal mobility and MaaS – Making connected and automated multimodal mobility a reality. This is the subject of this paper as it addresses key digital mobility services which are needed to be adopted to advance the use of more sustainable modes of mobility throughout Europe.

The implementation of flagship 6 resides within DG-MOVE. It includes two major elements:

1. The revision of Delegated regulation (EU) 2017/1926 aka MMTIS. Since implementation some areas have been found to be not covered or maybe covered in parallel regulations. It is my understanding that the changes are backward compatible and not changing the overall objective of the MMTIS regulation. The MMTIS regulation has been discussed in earlier papers as part

of ITS congresses.

2. An assessment of the need for a regulatory initiative on rights and duties of multimodal digital services. This may result in an initiative on market challenges for the development of Multimodal Digital Mobility Services (MDMS).

From desk research and participation in a public MDMS MMTIS Survey May 2022 the objective of this paper is to address the areas covered by the MDMS initiative, which is likely to become a delegated regulation sometime in 2023.

At the time of writing this paper no proposed text for the MDMS regulation has been published (to the best of my knowledge)

What is a Multimodal Digital Mobility Service (MDMS)?

The Multimodal Digital Services delivers the booking and payment services on top of the planning, pricing and navigation services as defined in the EU regulation for Multimodal Travel Information Services

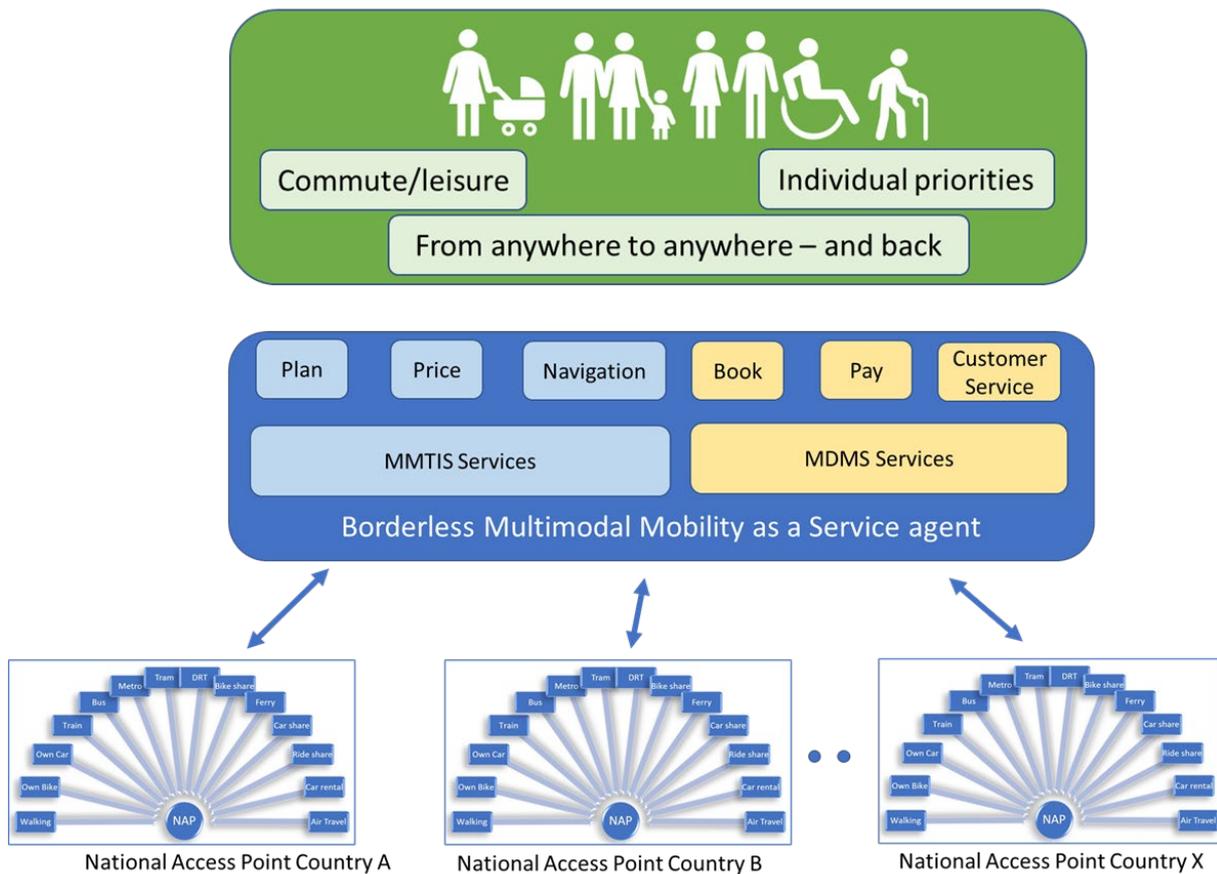


Figure 2 - Combined MMTIS and MDMS Services (cross border)

By sourcing open mobility data from several National Access Points in European countries a MaaS agent conforming to the MMTIS and MDMS regulation can deliver a complete Mobility as a Service to endusers.

Endusers can through this setup make seamless multimodal trip plans crossing several national borders, get the cost of the trip and pay for the sum of costs of each chain of the mobility services in a single payment in a preferred currency. During the trip the MaaS end users gets navigational support and help in case of delays and disruptions. After the journey customer service may assist with complaints etc.

Easy to describe – but history has shown that the MaaS vision has some hard obstacles to overcome. Not so much in term of technology, but more related to business models, value chains and governance.

This is why Flagship 6 is an important intervention by the European Commission.

The problems and objectives of the multimodal Digital Services intervention

Problem definition	Objective
Overall problem <i>Limited use of digital mobility services to improve the performance of the transport system through effective multimodality.</i>	General objective <i>Unleash the potential of MDMS to improve the performance of the transport system developing an effective multimodality offering</i>
Driver A Lack of willingness to cooperate between MDMS and transport operators	Specific objective 1 Enhance cooperation and fair competition between MDMS platforms and transport operators
Driver B Commercial and technical challenges to establish viable, scalable and high quality MDMS	Specific objective 2 Facilitate the re-sell and integration of all mobility offers in MDMS by tackling commercial and technical challenges and establishing fair competition principles
Driver C Lack of commercial incentives to help improve the performance of the transport system through effective multimodality	Specific objective 3 Ensure that digital mobility services support the efficiency and sustainability of the transport system and societal goals

Figure 3 - MDMS Problem definition and objectives Ref 1

Figure 2 summarizes the overall problem and the understanding of objectives of the regulation to remedy the problems identified.

The overall problem – There is a limited use of digital mobility services to improve the performance of the transport system in Europe through effective multimodality.

This is indeed true. While most mobility services delivered by both public and private actors have a digital planning and sales channel, they are all mode specific and does not follow any open standards. The users of the services must be their own multimodal planning experts and know which digital channels to include in searches for feasible travel plans and associated costs.

Driver A – Operating in silos. The lack of willingness to cooperate between multimodal digital mobility service actors and transport operators

The vision of Mobility as a Service is to create digital multimodal travel agents for ground and sea based mobility modes.

The challenges which the startup MaaS actors immediately ran into was the unwillingness from transport operators to share mobility data and make arrangements for third party booking and sale of mobility service on MaaS end users behalf.

Driver B – Market resistance- Commercial and technical challenges to establish viable, scalable and high quality MDMS

The MMTIS regulation has regulated open mobility data for planning and pricing of, plus navigation through multimodal travel plans.

However, there are no pan European standards and best practices enforced to facility third party booking and payment of multimodal travel plans.

The market could of course define MDMS services voluntarily as we have seen in the air travel industry on a global scale. For air travel MDMS has been a reality for many years. Here you can indeed plan, book, pay and navigate through multimodal segments of a trip from any airport to any airport in the world. All you need is an app, a passport and a digital means of payment in the currency of your choice. The ticket reference is international and is a 6 digit combination/2 D barcode. No wonder air travel is ever increasing.

In reality the MDMS regulation is an attempt to mimick the air travel reservation concept as implemented through IATA.

Driver C – Lack of commercial incentives to help improve the performance of the transport system through effective multimodality.

The successful MDMS actor is not known yet. The challenge is whether there is a sustainable business model for third party booking and sales of (borderless) ground and sea based multimodal travel chains? One of the arguments is that if tickets or other mobility services are sold by third parties, then the internal sales channels will induce a higher cost per service sold. This is the classic silo way of thinking. Nobody can sell more of our transport services than ourselves.

The argument forgets the additional benefits of displaying each mobility actors services as part of a bigger network of mobility services, which can be combined.

General Objective – Unleash the potential of MDMS to improve the performance of the transport system developing an effective multimodality offering.

This is indeed a bold objective. As there is quite a skepticism amongst transport actors the initiative of the commission has to make it clear for the actors that nonconformance is not an option. A good example is the GDPR regulation where hefty fines for nonconformance made the implementation successful almost over night.

Specific objective 1: Enhance cooperation and fair competition between MDMS platforms and transport operators

The individual actors does not see their mobility services as a part if a bigger shared mobility ecosystem or grid. They see other shared mobility actors as competitors. However, if a person uses a private mobility service one day rather than public transport, the changes are he will use public transport another day.

If the same person decides that it is too difficult to navigate using mobility as a service, he/she buys a car and is lost as a customer for the whole shared mobility ecosystem.

The fair competition is mostly related to the planning part, which is covered by the MMTIS regulation.

More specifically article 8.2:

As such if an actor's data is available in the National Access Point the services should be included in

Article 8.2 Criteria used for ranking travel options of different transport modes or combinations thereof, or both, shall be transparent and not be based on any factor directly or indirectly relating to the user identity or, if any, the commercial consideration related to the reuse of the data and shall be applied on a non-discriminatory basis to all participating users. The first principle travel itinerary presentation shall not mislead the end-user. (EU)2017/1926

search for an end user travel plan which includes the geographical area served by the actor.

This should end discussions where MDMS platforms are not willing to integrate all operators' offers.

The same goes for operators reluctant to integrate their offers in MDMS platforms. Provisions may be needed to cover for loss of revenue from actors or MDMS platforms who is unable to fulfil there commercial obligations due to bankruptcy etc. (guarantee fund)

The pricing information is also covered by the MMTIS regulation. Here all MDMS actors should be able to get the same end-user pricing for same search criterias.

MDMS actors also must be open to share data to make travel plans that extends into more than one MDMS actor.

Specific objective 2: Facilitate the re-sell and integration of all mobility offers in MDMS by tackling commercial challenges and establishing fair competition principles.

The MDMS actor will be a new part of the value chain between the traveler and the associated transport actors.

In principle it is the MDMS actor who has the cost of marketing, sales and the customer support for linking the transport services. The actors do not have internal cost of the sales transaction. Focus is to deliver the service according to same standards as if the service was sold directly.

Rather than having all cost of sales and marketing internally as for a one tier sales channel, the mobility actors now w

Specific Objective 3: Ensure that digital mobility services support the efficiency and sustainability of the transport system and societal goals

Again, here the MMTIS regulation has provisions to show active mobility modes and calculate environmental factors associated with a travel plan. In that regards there should not be a need to specify more in relation to the booking and payment part.

Discussion of other elements of the combined elements of the MMTIS and upcoming MDMS regulation

In principle the MMTIS regulation should ensure that third party agents could help consumers to find suitable multimodal travel plans and even the associated prices for same services. However, it seems that the NAP's are not populated yet with just basic data at a quantity and quality that justify offering such services.

With no hard consequences of lack of compliance with MMTIS it is easy for the transport operators to just wait and see.

As such the MDMS regulation will be dependent on full compliance with the MMTIS regulation to deliver a reliable service, that adds value to end users.

Unfortunately, the countries in the EU can define own profiles for open mobility data in NeTEx and SIRI formats as specified in the MMTIS regulation. This results in compatibility issues for MaaS agents who plans to deliver cross national border multimodal travel chains. Again that will raise the complexity of the interfaces and cost of implementation and maintenance.

There is no difference in how the mobility data elements work in the physical world. Hence there should only be a single version of NeTEx and SIRI. Efforts are underway in the EU funded NAPCORE program to harmonize data profiles.

Another element is a lack of standard for the National Access Points. It is better to have just one National Access Point for all of Europe. Each countrys national authorities then should only focus on compliance. In any case almost all mobility as a service businesses are operating in an regulated environment authorized by local, regional and national authorities. The MDMS regulation needs to enforce that any license to operate public or private mobility services requires strict compliance with the MMTIS and MDMS regulations

Conclusion

For any services to rely on open mobility data in standard formats through National Access Points it is crucial that non conformance is not an option.

Multimodal travel information services for planning booking and payment of shared mobility services must promise that they show all options to be relevant to end users.

The lack of conformance so far for the MMTIS 2017/1926 regulation shows that without a stick the MMTIS will remain an unfulfilled promise and this will also impact the advent of the MDMS regulation and commercial viable MaaS agencies.

It is a hen and egg issue. Only if mobility data are open in the exact same way can businesses sourcing those data become viable.

And why are we doing this?

We Do These Things *Not Because They Are Easy But Because They Are Hard* - JFK

References [Times New Roman 11 bold, aligned left]

[Text: as defined below]

1. [1st public workshop impact assessment for the initiative on Multimodal Digital Mobility Services \(europa.eu\)](#)