



# MaaS Market Playbook



**MaaS**

ALLIANCE



**Mobility as a Service (MaaS)** is the integration of various forms of transport and transport-related services into a single, comprehensive, and on-demand mobility service. MaaS offers end-users the added value of being able to access mobility through a single application and a single payment channel (instead of multiple ticketing and payment operations). To meet a customer's request, a MaaS operator hosts a diverse menu of transport options, including (but not limited to) public transport, active modes such as walking and cycling, ride/car/bike-sharing, taxi, and car rental or lease, or a combination thereof.

MaaS aims to be the best value proposition for users, societies, and the environment. To achieve this, it is committed to helping individuals meet their mobility needs, solving the inconvenient parts of individual journeys, and improving co-operation, efficiency, and sustainability across the entire transport system.

**The MaaS Alliance** The MaaS Alliance (Alliance) is a public-private partnership working to establish the foundations for building a common approach to MaaS and to unlocking the economies of scale needed to support the successful implementation and uptake of MaaS globally. The main goal of the Alliance is to facilitate an open MaaS ecosystem that benefits users, societies, and the environment. To do this, the Alliance brings together stakeholders from all sectors in order to enable the successful deployment of MaaS around the world. The Alliance also contributes to policy-making, promotes the added value of MaaS to new stakeholders, monitors and shares information on MaaS market development, and supports the technical interoperability of services.

*The analysis and outcomes presented in this document are the result of several workshops, surveys, and thematic discussions held during 2020 with MaaS Alliance members.*

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# Executive Summary



**Open ecosystem for innovations and market with a variety of choice**



**Putting people at the center**



**Engagement – creating MaaS for and with all**



**New togetherness for better mobility**



**Market dynamism and trust**



**Advanced data sharing models and incentives schemes**



**Access to critical assets**



**Sustainable mobility ecosystem**

The MaaS Alliance published its original vision in 2017 as the MaaS Alliance White Paper, giving guidelines and recommendations on creating a thriving MaaS ecosystem. The White Paper highlighted the need for MaaS to be sustainable, inclusive, and based on collaboration between public and private partners working in an open ecosystem. Now that the Alliance has more experience with – and insights into – the evolution of MaaS, it is time to take a deeper dive into the subject. Specifically, we aim to provide detailed information on how to support the development of an open and competitive MaaS market that delivers clear benefits to users, societies, and the environment.

As a complex service, MaaS is only as strong as its weakest link. Bad weather, poor transfer facilities or delayed service are just a few of the factors that can impact the customer experience. A seamless and committed collaboration among the whole sector is thus needed to produce compelling services. MaaS

also involves numerous, sometimes competing, stakeholders. To work, all organisations, whether public or private, must get something in return for their collaboration and investments. Establishing business models, incentives, and liabilities that work for everyone is essential to providing a premium service to the end-users.

By facilitating open and trusted knowledge sharing within the industry, the MaaS Alliance has gained significant new insights and ideas for developing user-centric, societally sound MaaS services, all of which are documented in this Playbook. In the following pages, we describe the building blocks of a well-functioning MaaS market.

We also provide suggestions on how to support the development and scalability of services and the market, facilitate and frame the Public-Private-People-Partnerships, and build trust within the ecosystem.

# Forewords by the MaaS Alliance Board

Over the course of the past five years, the entire urban mobility landscape has changed. The most visible of these changes has been in the plethora of new mobility options that have become available to users. These include shared mobility services, e-scooters, e-bikes, and new MaaS solutions – to name only a few. This development, along with the accompanying growth in services, strongly suggests that there was some unmet and unexplored demand in urban mobility. It has also created a completely new dynamic in the transport sector, increasing the variety of services available, shortening the time required to bring them to market, and changing the competitive environment. Establishing productive partnerships and collaboration in this new, multi-stakeholder reality presents both huge opportunities and big challenges. This factor is part of the reason why the MaaS Alliance has been a success: as a **public-private partnership**, it has been in the right place at the right time to support this transformation.

**Trust** is a now one of the most crucial elements for building a digital economy and facilitating the evolution of new mobility systems. Institutions and regulators have already taken important steps to strengthen trust within the ecosystem. For instance, the General Data Protection Regulation (GDPR) is a trust-building mechanism geared towards users. We must now create similar trust-building mechanisms for business-to-government, government-to-business, and business-to-business interfaces. Trust is of particular importance within the MaaS ecosystem as all actors are both partners and competitors. In MaaS' current development phase, regulation is, first and foremost, a tool for building trust between industry stakeholders, setting a clear framework for facilitating the development of the industry, and creating a predictable environment for both public and private sector investments.

Regardless of what business model – publicly or privately led – is chosen, we at the MaaS Alliance strongly encourage an open ecosystem approach where the user has several options to choose from. While ambitious open data policies play a key role in achieving this, we must also pay attention to the fact that the success of data policies will eventually depend on aligning the interest of data providers and data users. In this regard, we still need to establish the new incentive models and data exchange schemes to create a dynamic and fair data economy.

We believe that regardless of who plays the role of MaaS operator, the public authorities should be equipped with the necessary tools for governing the development of a multimodal mobility ecosystem and ensuring its compliance with public policy goals. The MaaS Alliance continues to support the efforts of public authorities to grasp and steer the development of future mobility systems and to ensure that MaaS provides clear benefits for users, society, and the environment.

The role of the MaaS Alliance is to support the entire industry to grow and flourish and to enable the wide availability and uptake of MaaS services. As such, we will remain neutral in our support of both publicly and commercially-led MaaS operations (as well other potential models) as the local conditions vary. In doing so, we will also respect our original and all-the-more relevant vision of an open ecosystem. This means that similar, fair market access and operational conditions should be created for everyone, with appropriate and up-to-date regulations in place, to prevent the establishment of private or public walled gardens that would prevent the further development of various attractive services for the end-users.



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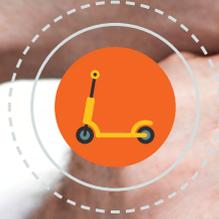
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# Background - The MaaS Alliance White Paper



The MaaS Alliance White Paper, published in 2017, endorsed several key principles of the MaaS ecosystem:

1. MaaS - Open and Inclusive Ecosystem
2. The MaaS User Should Be “Better Off”
3. Added Value Builds on Interoperability and Roaming
4. MaaS Provides Tools for Low-Carbon Transport and Mobility
5. New Business Models for a New Business

Although the industry has progressed and learnt a lot over the past four years, these principles remain highly relevant. In order to establish a dynamic MaaS ecosystem and attractive MaaS services, and to deliver on our policy objectives, these principles should be taken into account across all levels when developing MaaS services. Ensuring and fostering the implementation of these fundamental principles remains one of the main tasks of the

MaaS Alliance and one that will be fulfilled through strong and seamless co-operation with all relevant stakeholders.

By facilitating open and trusted knowledge sharing within the industry, the MaaS Alliance has gained significant new insights and ideas for developing user-centric, societally sound MaaS services. In this Playbook, we share some of our ideas for supporting:

- Public-private partnerships in the MaaS ecosystem
- Setting up local Codes of Conduct for governing MaaS
- Achieving public policy goals
- Developing and growing the industry
- Building a common commitment



[Download](#) the  
MaaS Alliance  
2017 White Paper



# 2

## Characteristics and governance of a well-functioning market



Mobility as a Service redefines the way mobility is supplied and consumed. The successful implementation of MaaS and the delivery of the expected societal benefits requires a new kind of public-private-partnerships, with plenty of room for innovation.

As MaaS is still rapidly evolving, regulation and governance should facilitate this evolution and avoid any excessively strict and/or fixed schemes that are based on conventional operational models and roles. Instead, the **governance framework**, which is often designed and applied at a local or regional level, should ensure that MaaS services deliver on its societal goals, provides user-centric value propositions, and enhances the (economic) viability of the ecosystem.

Furthermore, the framework should ensure accountability for reaching such desired policy goals as connectivity, accessibility, equity, and environmental benefits. It should also support an open ecosystem by establishing parameters for boosting the co-existence of different solutions and business models. It is of the utmost importance that the governance framework is built in collaboration with and through the participation of the public and private sectors, including market newcomers. Last but not least, the framework should always keep the end users in mind.

**Regulation**, often crafted and implemented at the national or multinational level, but sometimes locally or regionally is, on the one hand, a mechanism for building trust among industry stakeholders. It is therefore required for setting up a clear framework to facilitate the development of the industry, and for creating a predictable environment for both

public and private sector investments. On the other hand, regulation is a tool to guarantee user rights. Considering its dual purpose, a regulatory framework should establish such preconditions for developing an open ecosystem of data sharing, integrated services, and fair competition.

Regulation also plays the important role of **preventing the market externalities** that can have undesired societal or environmental impacts (e.g., congestion, noise, pollution) and can detract from the value MaaS provides for society and users. From this point of view, it is important to understand the characteristics of a well-functioning market.

After analysing some examples from other markets, such as the telecom sector<sup>1</sup>, the following list is meant to serve as a checklist for evaluating the main characteristics of a **well-functioning Mobility as a Service market**. Regulators and enforcement bodies should monitor the evolution of the MaaS market and consider taking appropriate actions when market externalities threaten to compromise the systemic balance and user/society benefits.

<sup>1</sup> More on the paper:

[Liberalising Telecommunication Markets: A Framework for Assessment](#)

### 1. Widespread availability of data

- Access to high-quality and accurate data to ensure fair competition
- Existence of standardised data sets and protocols
- Endorsement of “Open by default” and “Interoperability by design” approaches
- Data reciprocity and incentives for data exchange

### 2. Ease of market entry and exit

- Access to market (new mobility services)
- Access to integration and resale of services
- Non-discriminatory subsidy, incentive, and taxation systems that are aligned with policy objectives
- Ability to switch between different service providers (personal + non-personal data portability)
- Inclusivity in terms of modes/services

### 3. Existence of business opportunities

- User buy-in and willingness to pay
- Incentives for innovation
- Commercial viability
- Supportive comprehensive policy framework (flanking policies)
- Funding available for investments

### 4. Added-value of partnerships

- Trust and equity among market players
- Balance in roles and responsibilities

### 5. Absence of antitrust issues and abuses of dominance

- Competition between aggregators/platforms
- No gatekeepers in data, service, or integration layers
- Roaming between services and local ecosystems

### 6. Achievement of public interest objectives

- Inclusivity
- Affordability
- Equity
- Less emissions
- Less pollution
- Less congestion
- Less accidents

As a tool for enhancing trust within local and/or regional MaaS ecosystems, the managing public authority can consider setting up a Code of Conduct or a Mobility Pact among the involved stakeholders. Regardless of who serves as a MaaS operator, public authorities should have the appropriate tools for governing the development of a multimodal mobility ecosystem and ensuring compliance with public policy goals that bring clear benefits to society, the environment, and users.

We suggest that a local or regional framework<sup>2</sup>, a Code of Conduct, or a Mobility Pact is built around the following features and works to enforce local policy priorities and ecosystem goals:

<sup>2</sup> For other inspirations, please have a look at: [Mobility as a Service and Sustainable Urban Mobility Planning](#) (2019) NACTO [“Managing Mobility Data”](#) (2019)

## MaaS and/or Mobility Service Providers could be required to respect the following principles, as part of the Code of Conduct/ Mobility Pact:

### Inclusivity



Provide accessibility and assistance at no additional cost for passengers with disabilities and passengers with reduced mobility across the region

Declare strategies for delivering information and services via non-digital means and means appropriate for people with disabilities and without access to bank accounts and/or credit

Ensure that the service gives equal access to all, supports equality, and does not discriminate against anyone. The service's commitments against racism and discrimination should be highlighted in writing and published.

### Customer Care



Provide an easily accessible and available customer service channel across all modes of mobility

Establish clear procedural channels for addressing any complaints or issues

Have a clear policy for compensating or reimbursing for unsatisfactory services or when the trip is not carried out as planned, with the minimum requirement being to provide a service level that is at least as good as that described in the Terms and Conditions of the individual mobility service providers

### Appropriate and Secured Use of Data



Disclose how they use the data provided and generated by their users

Publish privacy rules, in compliance with legal obligations and anti-surveillance commitments

Have a framework for delivering information to users on how their services impact the environment (specifically as to climate change)

Establish protocols for immediately notifying users and the entire ecosystem of all critical data breaches

## Responsibilities towards Partners



Respect competition laws and refrain from abusing a dominant market position

Ensure non-discriminatory access and integration of services

Use common standards and open APIs

Clearly define and agree on roles and responsibilities in the provision of services through service agreements and legal contracts made with regional or city authorities

Provide a reliable platform, with appropriate mechanisms, for dealing with system failures

## User Experience



Provide clear, accurate and consistent information that will allow consumers to make sound and efficient travel decisions

Provide clear and consistent information regarding the fares and fare structure for the services offered

Provide multiple secure payment options

Be able to fulfil the transport contract even in the case of disruption (i.e., mechanism for rerouting and rebooking)

Transparently display algorithms and ranking criteria to users

Offer multilingual services (both in local and international languages)

Provide clear and fair reasoning for the provision or denial of service

## Responsibilities towards Public Authorities



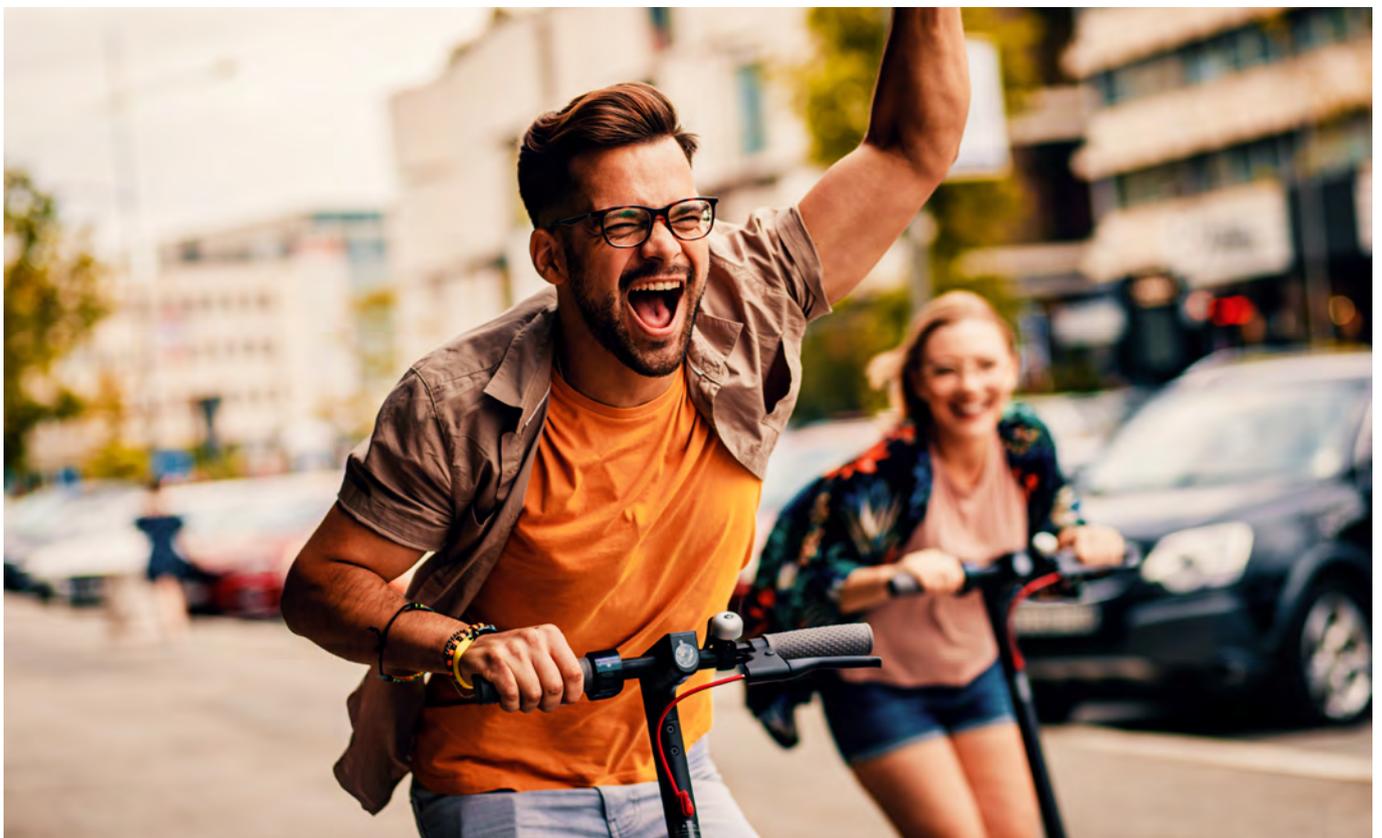
Adhere to policy controls and regulations imposed to achieve societal policy objectives

Ensure a data feedback loop to serve e.g. oversight, traffic management, transport operation, and network and urban planning

Share data on a service's environmental and societal impact, including total carbon generation/savings and equity outcomes

## As a part of the Code of Conduct/Mobility Pact, public authorities could commit to:

- Supporting the establishment of open ecosystems for the services and remaining neutral in supporting both publicly and commercially-led MaaS operations (as well other potential models)
- Reducing the risk of market dominance by ensuring access to data and the market
- Creating a trusted environment for data sharing (e.g., based on a quid-pro-quo principle)
- Supporting the development and requiring the use of open standards developed for MaaS
- Encouraging and supporting wide access and non-discriminatory integration of carriers and services into the platforms
- Putting in place strict privacy and security requirements
- Monitoring market development and dynamics
- Creating an effective data feedback loop between operators and the city (being proportionate and clear about when, why, and what data is necessary for planning, analysis, oversight, and enforcement purposes)
- Establishing a framework to ensure compliance with societal and environmental goals (sustainability, equity, etc.)



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## Market expectations



In recent years, MaaS has been growing rapidly. Following a period of development and introspection, it is now starting to mature into a powerful mobility tool for cities. In fact, according to several external studies, the entire MaaS and new mobility services market is expected to have an annual growth rate of between 25 and 35 %<sup>3</sup>.

Many external factors are driving this positive market development, including a changing consumer paradigm; increasing interest by corporations to offer comprehensive mobility solutions to their employees; the need to decrease emissions, traffic congestion, road casualties, and air pollution; and a general desire to improve the efficiency and resilience of our transport system.

That being said, there are also a number of external factors that could hamper market growth. These include data privacy and security concerns, which are common to the entire platform economy; limited awareness about the total lifetime cost of owning a private vehicle; and, at least temporarily, the COVID-19 pandemic. However, in the long run, the COVID-19 pandemic and the changes it has brought are expected to

foster, even accelerate, the development and uptake of MaaS services.

In preparing this Playbook, we gathered views and insights from MaaS Alliance members, who represent the most important key stakeholder groups and the MaaS ecosystem. Here we share some of the **added value factors** they expect as a result of their involvement in the MaaS ecosystem, as well some of the **preconditions or blocking issues** that our stakeholders see.

Our analysis of these factors and preconditions is based on the invited anonymous contributions from the following stakeholder groups<sup>4</sup>:

- Public transport authorities
- Public transport operators
- Cities
- National and regional governments
- Fleet managers
- Mobility services providers
- Automotive sector
- Cycling sector
- Technology providers
- MaaS engineering and consulting companies
- MaaS operators

Realising the MaaS promise? - MaaS x Covid 19

**Some of the trends post-COVID could also be accelerators for MaaS**

Global Trends	Behavioural trends (influencing demand)	Technology/market trends (influencing supply)
<ul style="list-style-type: none"> <li>↑ Socio-economic inequality</li> <li>↓ Passenger mobility demand growth</li> <li>↑ E-commerce - Goods mobility demand growth</li> <li>↑ City topology transformation</li> </ul>	<ul style="list-style-type: none"> <li>↑ Working from home (white-collars)</li> <li>↑ Travel safety consciousness</li> <li>↑ Healthier mobility lifestyle</li> <li>↑ Evolution of trip patterns (repurpose, retime, respace)</li> </ul>	<ul style="list-style-type: none"> <li>↑ Digitalisation of offerings</li> <li>↑ Acceptance of new forms of mobility (part of the system)</li> <li>↑ Market consolidation of private mobility players</li> <li>↑ Intelligent transport systems</li> </ul>

Source: Arthur D. Little, presentation at the MaaS Alliance Plenary meeting of 5 October 2020

<sup>3</sup> More data on:

[Mobility-As-A-Service \(MaaS\) Global Market \(2019 to 2025\)](#)

[Mobility as a Service \(MaaS\) Market on Market Watch](#) However, the definition of the MaaS market varies.

<sup>4</sup> The roles may vary depending on the operational environment. For example, in some jurisdictions the roles of public transport authorities and regional governments and/or cities are combined or merged.

## Expected opportunities in the MaaS value chain

<p><b>Public Transport Authorities</b></p> 	<ul style="list-style-type: none"><li>• Delivery of key policy objectives</li><li>• Enhance collaboration between public and private organisations</li><li>• Provide integrated multimodal mobility services</li><li>• Steer development and uptake of MaaS services</li></ul>
<p><b>Public Transport Operators</b></p> 	<ul style="list-style-type: none"><li>• Extend their own offer to be consistent with multiple mobility services</li><li>• Provide multimodal and more flexible offerings to users</li><li>• Increased ridership, with public transport being the backbone of MaaS</li></ul>
<p><b>Cities</b></p> 	<ul style="list-style-type: none"><li>• Delivery of key societal objectives</li><li>• Collect and gain useful data to enhance the efficiency of the transport system</li><li>• Lead MaaS innovations as a city lab</li><li>• Rethink public spending (i.e., subsidies)</li></ul>
<p><b>National and Regional Regulators</b></p> 	<ul style="list-style-type: none"><li>• Use MaaS to achieve policy goals and increase such societal benefits as decreased congestion, reduced CO2 emissions, and improved accessibility and services to minorities</li><li>• Set performance metrics and market objectives</li><li>• Support innovations and new business models</li><li>• Increased data flows that benefit transport system planning and the design of incentives</li></ul>
<p><b>Mobility Service Providers</b></p> 	<ul style="list-style-type: none"><li>• Provide new marketing and customer care channels, along with access to a wider market with relatively low costs (as part of an integrated service)</li><li>• Boost the market by integrating offerings into a compelling services in urban and interurban areas, as well as rural regions, and establishing an alternative to private vehicles</li></ul>
<p><b>Automotive Sector</b></p> 	<ul style="list-style-type: none"><li>• Benefit from expected service-related market growth and the business opportunities that come with taking a comprehensive approach to mobility</li><li>• 5G will create possibilities for new features</li><li>• Ability to offer additional in-vehicle services</li></ul>

### Cycling Sector



- Offer bike sharing as an additional service that complements public transit and other first and last mile operators
- Endorse bike-positive policies as a part of MaaS
- Increase marketing offer and prioritised bike routing in MaaS route suggestions

### Fleet Managers



- Be able to offer multimodal trips by collaborating and integrating with other mobility services providers
- Make rental and leasing a viable alternative to employee car ownership models
- Redesign corporate mobility schemes

### Technology Providers



- Be a key enabler for interoperability and global roaming in the MaaS environment
- Participate in projects and sales from cities that will be implementing MaaS solutions
- Provide guidance and best practices on digital transformation to public authorities and support the development of standards

### Engineering and Consulting Companies



- Provide new tools and materials to cities and regions for understanding MaaS opportunities and challenges and how to deploy a MaaS service
- Bring specific expertise (technical, legal, transport and urban planning, commercial) and a unique MaaS perspective to cities and regions
- Reinforce the key position of engineering and consulting organisations based on their neutral position within a highly competitive environment

### MaaS Operators



- Enable win-win situations for mobility service providers, regulators, and users
- Benefit from the growing market
- Develop new partnership models and integrated services that reduce the complexity of using MaaS services within companies

## Motivational blocks/missing preconditions

Public Transport Authorities



- Fear that MaaS services encourage unsustainable modes
- Focus on MaaS should not compromise other responsibilities and the delivery of services to all
- Lack of resources

Public Transport Operators



- Fear that MaaS services encourage unsustainable modes
- Investment needed, no evidence yet of economic benefits
- New mobility market that is not yet stabilised
- Lack of clear standards (for APIs), making it difficult for PTOs to deploy MaaS

Cities



- Fear of greedy behaviour and an approach that is too user centric and that doesn't focus enough on the societal aspects and outcomes of transport
- Lack of clear KPIs
- Lack of vision and long-term commitment will result in poor services

National and Regional Regulators



- Lack of financing and resources
- "Walled garden" solutions
- Bureaucracy, complexity of oversight

Mobility Service Providers



- Knowledge, responsibilities, and financing are very heterogeneous in cities and municipalities, which complicates the rollout
- Integration of services is costly
- Grey zones in regulation when it comes to new mobility services and automated mobility

Automotive Sector



- Lack of standards and homogenisation: every city has their own specifics, no clear regulation
- Complexity of the MaaS ecosystem, many partnerships and interfaces are needed
- Shifting the focus away from vehicles and towards the entire mobility system takes time

### Cycling Sector



- Fear that MaaS favours car use/ride hailing and will decrease the use of bike sharing
- Threatened by the automotive industry, which has stronger lobbying and investment resources to position themselves as the future mobility solution
- Commercial sensitivities (small vs big brands, private vs public players that also have private, e.g. bike-sharing offerings)

### Fleet Managers



- Profitability issues due to the reluctance of consumers and corporate clients to pay for more options despite the high level of investment needed
- Increased competition (by transport operators and peer-to-peer sharing)
- Potential fluctuation in usage
- Increased complexity due to the diversification of services and expansion to a larger population (i.e., all employees)

### Technology Providers



- Lack of harmonisation and API standards can lead to expensive integration and engineering, making the MaaS solution unviable due to low expected ROI
- Potential pressure and reluctance from private MSPs to share data, meaning independent transaction processing could stop MaaS
- Lack of attractive business models

### Engineering and Consulting Companies



- Not enough hindsight and available feedback from first MaaS deployments
- Lack of significant results (KPI) can stop MaaS
- Diversity of approaches and projects results in diversity of partnerships
- Potential underestimation of required competencies in MaaS projects

### MaaS Operators



- Potential monopolistic market development (at national, regional or global level); walled gardens and closed systems; access only to deep links instead of open APIs
- Long timespan: it could take a long time for people to change their habits
- Complexity of the MaaS ecosystem: business depends on many partnerships and interfaces
- Incentive and taxation schemes have not been adapted to the MaaS era<sup>5</sup>

<sup>5</sup> Examples from B2B market: 1) Taxation currently favours the company car, regarding the costs of the company as well as regarding the taxation of the benefit-in-kind of the employee. 2) Complex taxation of business travel by public transport, e.g. in Germany, different taxation depending on where and how the ticket is bought.



**4**

## **Eight Principles for an Open MaaS Ecosystem**



## Open ecosystem for innovations and market with a variety of choice

**An open ecosystem with fair competition supports both innovation and the systematic reform of the mobility sector.** Open systems offer multiple benefits as they encourage a more balanced market development and provide more choices for users. Open data policies – accompanied by appropriate platform regulation that ensures market access, fair competition, and more choices for the consumer – are the building blocks of the open systems that generate social, economic, and environmental benefits.



## Putting people at the centre

- We believe that **MaaS will allow us to recreate freedom of mobility and increase accessibility.** Our main focus should be on the user and how we can increase their where-to-go-network and their freedom to choose amongst an array of sustainable mobility options. By bringing together different modes of transport, MaaS is positioned as a powerful tool for reaching our decarbonisation goal, offering a significant potential for reducing emissions while providing comprehensive services to users. Without a compelling service that ensures strong buy-in from users, the benefits of MaaS cannot be unlocked.
- **We should protect customer rights** by collecting only absolutely necessary data from the users, respecting user privacy, and endorsing the principle of empowering users to be informed and decide on the use of their data, in accordance with the latest data protection schemes. The policy framework for the data economy should put the individual at the centre and make ethical data sharing, data portability, and the MyData principles the norm.
- Interesting opportunities lie in the concept of using **subsidies and incentives directly allocated to end-users** to encourage sustainable behaviour and modes. In the context of MaaS, the incentive scheme could, for example, take the form of tax deductions based on the use of public transport or shared mobility services; tax incentives for the acquisition of e-bikes and e-scooters; or the allocation of funds to be spent on multimodal MaaS services. Allocating the incentives to end-users will also support a more competitive market.



## Engagement – creating MaaS for and with all

- **Creating a well-functioning market is a common responsibility.** Regulators should consider incentives (along with disincentives, e.g., to not use private vehicles) that encourage the multitude of actors to participate in MaaS services that are aligned with public policy goals.
- **Physical, digital, and financial access to transport services is a valuable public good** and, as such, should be available to users regardless of age, gender, race, ethnicity, income, ability, or other characteristic/identity. The transition to MaaS will have a direct impact on the lives, investments, and economic livelihoods of residents, workers, businesses, and other stakeholders. That is why we need to actively engage all these groups, including users that are not digitally equipped, and unbanked, in the decision-making process and support them as we move through this transition.<sup>6</sup>

<sup>6</sup> [Shared Mobility Principles for Livable Cities](#)



## New togetherness for better mobility

- **Future market development creates new opportunities for both established and new companies.** However, for the best results, the transition should be understood as an evolution, putting the focus on common nominators, collaboration, and complementarity instead of confrontations (public vs private, physical vs digital, interest of society vs interest of individuals, consent vs consensus, etc.). All actors need to adopt new working methods that are open to new stakeholders and partnerships. Furthermore, the voice of users (i.e., the customers), namely citizens, business travellers, and tourists, along with the users of logistic services, should be better taken into account.
- **Future MaaS development should build on an enhanced public-private partnership and complementarity.** In the most efficient mobility systems, public, private, and shared services and assets complement each other and provide users with a seamless service. Every opportunity should be taken to enhance those policies and operations that optimise mobility mix, favour using the right mode at the right place, and that match services with needs. More strategic and holistic governance is needed to shape and steer mobility and space in cities.
- **Strategic public procurement schemes can enable MaaS market development.** Public procurement can be used to, for example, foster ecosystem interoperability by setting requirements for data sharing and formats and the use of common APIs in public tendering. The requirements can be used either as ex ante selection criteria or as a requirement for the selected solution and/or service provider.



## Market dynamism and trust

- **Additional efforts and a common commitment are needed to build trust and enhance market dynamism.** In MaaS' current development, regulation is, first and foremost, a **tool for building trust** among industry stakeholders, setting a clear framework for facilitating the development of the industry, and creating a predictable environment for both public and private sector investments.
- Regulation also plays the role of **decreasing market fragmentation** and supporting the development of scalable services beyond individual cities. Although people mostly move and operate in the domain of one city or region, covering only one area is not enough to fulfil all their mobility needs. Thus, regulation should set a level-playing field and create a competitive, non-discriminatory, and open market. Although in the emerging platform economy the platform typically benefits from a stronger bargaining position than the underlying service providers, in a MaaS business the situation is often the opposite, due to the characteristics of the transport services market. In the digital era, a digital platform can be a **tool for both adding transparency and market dynamics and facilitating freedom of choice for users.**
- **Market monitoring** is essential to ensuring credible enforcement and for recognising gaps and weaknesses in the market and ecosystems (See Chapter 2).

## Advanced data sharing models and incentive schemes



- **The success of data policies depends on how well the interest of data providers and data users can be aligned.** In that regard, there is still a need to create new incentive models and schemes to support a dynamic and fair data economy. The principle of data reciprocity should be emphasised in all policies.
- **In a digital economy, the ownership, right of use, and access to data determines market dominance.** Therefore, it should be understood that data sharing and data access do not necessarily equal free data, but that data sharing and exchange models should be designed between partners so they are fair and fit for purpose. We would like to encourage the use of various data exchange schemes (voluntary sharing, commercial collaboration, reciprocity, etc.). However, if access to data remains a blocking issue to further service development, regulatory obligations should be considered.
- The uptake of new mobility services is currently hindered by the fact that the **incentive schemes within the transport system are often linked to the use of fixed, owned assets**, while similar incentives are not available for the use of shared resources. It would be necessary to re-evaluate such incentive schemes to support the use of an environmentally friendly mobility mix that includes shared fleets and mobility services, especially in multimodal urban environments.

## Access to critical assets



- **A well-functioning market with access to key inputs** and with the right infrastructure in place is a precondition for developing a sector that results in individual and societal benefits. Our societies face an urgent need to reduce greenhouse gas emissions while simultaneously providing citizens with more affordable, accessible, healthier, and cleaner transport alternatives. While mass transit remains the backbone of our sustainable mobility services, in the most efficient public transport systems, these mass transit solutions are complemented by various shared and on-demand services. Unlocking this potential requires that integrated MaaS services be comprised of an attractive selection of sustainable, active, shared, and public modes of transport. This, however depends on having access to integration and the resale of services.

## Sustainable mobility ecosystem



- **We are committed to creating a more sustainable transport system and more liveable world with MaaS.** We imagine new mobility models that allow each of us to contribute to improving the environment and quality of life while also allowing us to benefit from more free time and less stress.
- **The mobility of people**, not vehicles, should be at the centre of transport planning and decision-making. We should prioritise walking, cycling, public transport, and other sustainable mobility options. Cities need to discourage the use of single-occupancy vehicles, single-passenger taxis, and other oversized vehicles that transport one person. In the future, it is critical that autonomous vehicles become part of shared fleets and are well-regulated and operate with zero emissions. Shared fleets can provide more affordable access to all, maximize public safety and emissions benefits, ensure that maintenance and software upgrades are managed by professionals, and actualise the promise of decreasing traffic congestion and increasing parking, in line with the broader policy trends of reducing the use of personal cars in dense urban areas<sup>7</sup>.
- **MaaS has the potential to be a positive game changer in mobility.** MaaS should have tangible and measurable positive impacts that make our societies less polluting, less congested, and more liveable. Expected environmental benefits have been a key factor in the strong buy-in from politicians and decision-makers. Policymakers, though, require more data about the impacts and benefits of MaaS. All stakeholders are encouraged to openly share their experiences and results and commit to our ambitious and ongoing endeavour towards developing carbon-neutral solutions.

<sup>7</sup> Inspired by: [Shared Mobility Principles for Livable Cities](#)



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**#MaaSMarketPlaybook**





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