

TAKING
COOPERATION
FORWARD



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Planning for MaaS in Central Europe: local engagement, supporting measures and governance approaches



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What is Maas?

- A) An app, providing integratee access to different mobility services to citizens*
- B) A sustainable mobility planning and management tool for local administrations*
- C) An ecosystem where different mobility services collaborate and compete*



“Mobility as a Service” (MaaS) is an end-user-oriented, intermodal service that claims to combine the offers of existing mobility providers in all modes within the framework of the core components

- intermodal travel information and
- use of the travel offer under consideration of
- Booking, Reservation, Payment and Billing
- including new forms of mobility (e.g. Sharing Mobility)

in an integrative service (e.g. one-stop-shop principle) and at the same time act as a basis for new services.

Source: MaaS made in Austria, 2019, www.digitalvernetztmobil.at



MAAS LEVELS



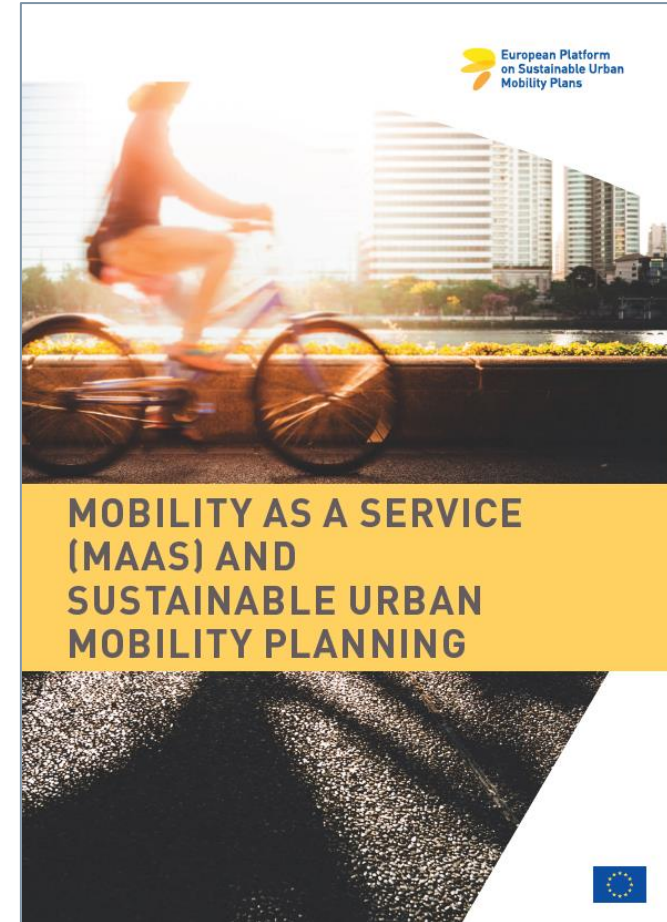
Source: Sochor, et al. 2017, in MaaS White Paper, JPI Urban Europe 2018



The MaaS SUMP topic guide provides step-by-step guidance for planning MaaS in SUMPs, guidance on how to assess MaaS readiness, codification of operational/governance models

Our objectives:

- Develop an Annex
 - ✓ Providing context for CE
 - ✓ Focus on engagement and integration
- Elaborate a tool
 - ✓ Understanding governance implications (tool)



TOPIC GUIDE

Sustainable urban
mobility planning steps for
MaaS

How to evaluate and
support cities' readiness
for MaaS?

MaaS operational and
governance options and
models

Building the Annex content

- Planning steps could be explicated by different governance models
- Best practices, partners experiences
- A «scenario» approach to evaluation
- Identify challenges and provide recommendations according to demand-supply-digitalization scenarios

SELF ASSESSMENT TOOL

Questionnaire
Demand
Supply
Digitalization

Scenarios, risks and
benefits

Hints and
recommendations



Topic guide on MaaS- An annex focusing on Central Europe



MaaS ANNEX, components

Case studies (and good practices)

Graz
Budapest
Koprivnica

(Vienna
Helsinki
Antwerpen
Amsterdam)

MaaS guidance for implementation on CE

- Local engagement and demand analysis
- Data availability, quality, standardization, sharing and management
- Incentive measures and schemes supporting take up of MaaS
- How to involve traditional and new service providers in the ecosystem

Self-assessment tool results

Cities and models: mix of CE and other



Stakeholder engagement and demand analysis

- How to reach car users, it's a full-time job
- Work at micro-level: policies don't change behaviors as much as services do
- Design infrastructure for MaaS (mobility hubs)
- Make people choose (test days)
- Find allies (mobility managers), create trust



Data availability, quality, standardization, sharing and management

- Create incentive for data sharing
- Transparent algorithms, open APIs
- Standardize the way you create and integrate data
- Ask only for data you need



Incentive measures and schemes supporting take up of MaaS

- Stick and carrot, be creative!
- Monetary: public calls for development, lump sums
- Focus on operators, supporting development, offering business or legal guidance etc.
- Users: focus on user experience rather than sustainability
- Remember: "if you'll have to think, you'll get in the car"



How to involve traditional and new service providers in the ecosystem

- Manage spatial planning to make MaaS work
- Demand Responsive Transport supporting PT offer
- Variety
- MaaS is about ecosystem, societal goals can be pursued by services



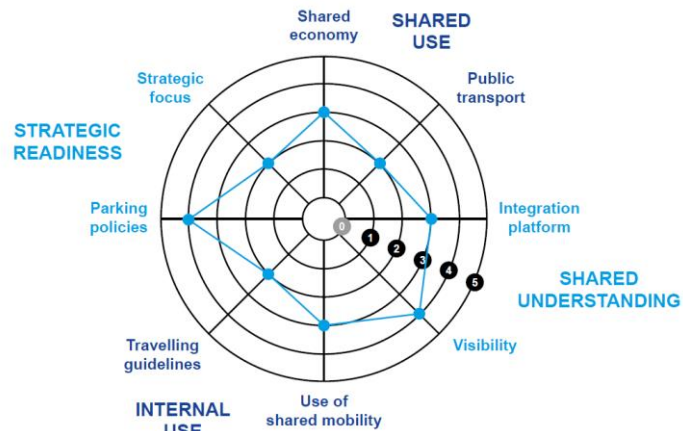
Self assessment - A tool accompanying governance scenarios



Examples of existing tools and their focus

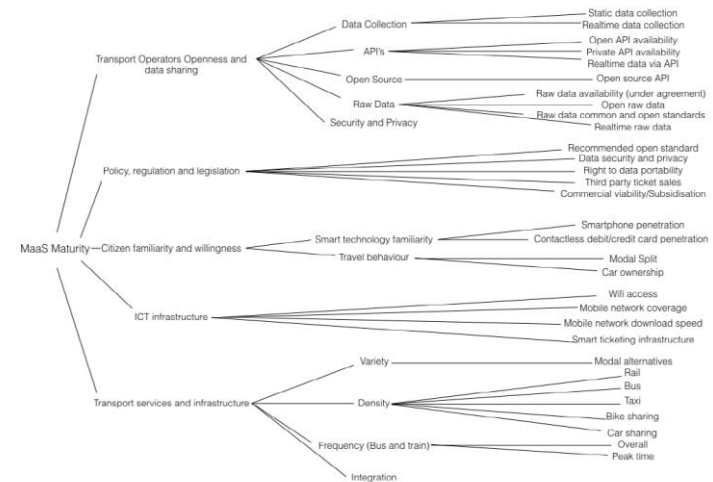
Key existing tools/resources

CIVITAS ECCENTRIC MaaS Readiness Level
Indicators for local authorities



City of Stockholm

UCL MaaS Lab MaaS Maturity Index



NEW MAAS SELF-ASSESSMENT TOOL

Why a new tool?

The new **MaaS scenarios self-assessment tool** aims at supporting the planning process helping policymakers and mobility planners to evaluate the consequences of measures fostering the implementation of different MaaS models, designing for them different challenging scenarios according to territorial e socioeconomic characteristics of the areas of applications, and to operational and market structure of existing and planned mobility networks.



NEW MAAS SELF-ASSESSMENT TOOL

Operational and governance models

„Commercial integrator“

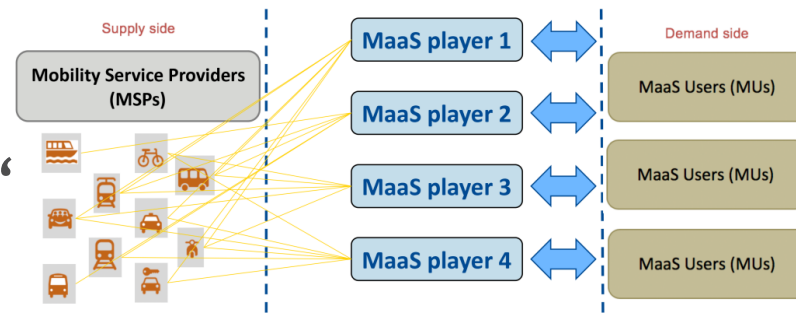


Figure 12. The MaaS Model 1 (elaborated from the elements of UITP Report, 2019, "Commercial integrator")

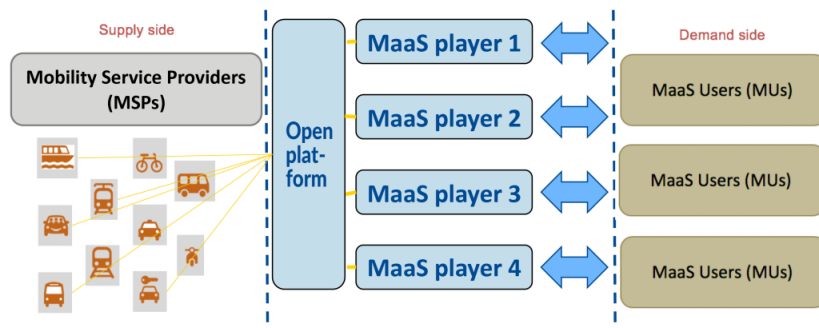


Figure 13. The MaaS Model 2 (elaborated from the elements of UITP Report, 2019, "Open back-end platform")

„Open back-end platform“

„PT as the integrator“

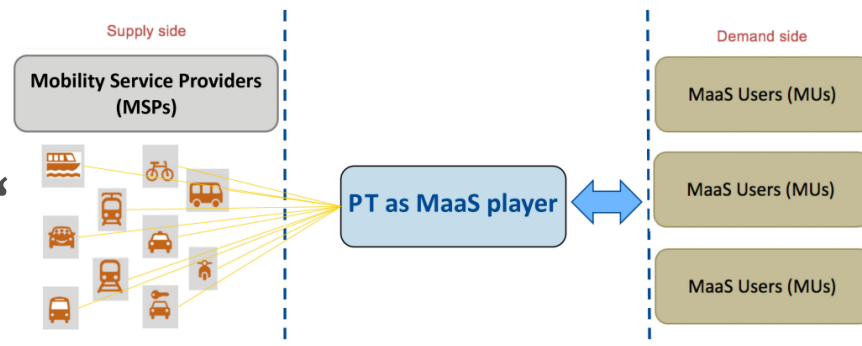
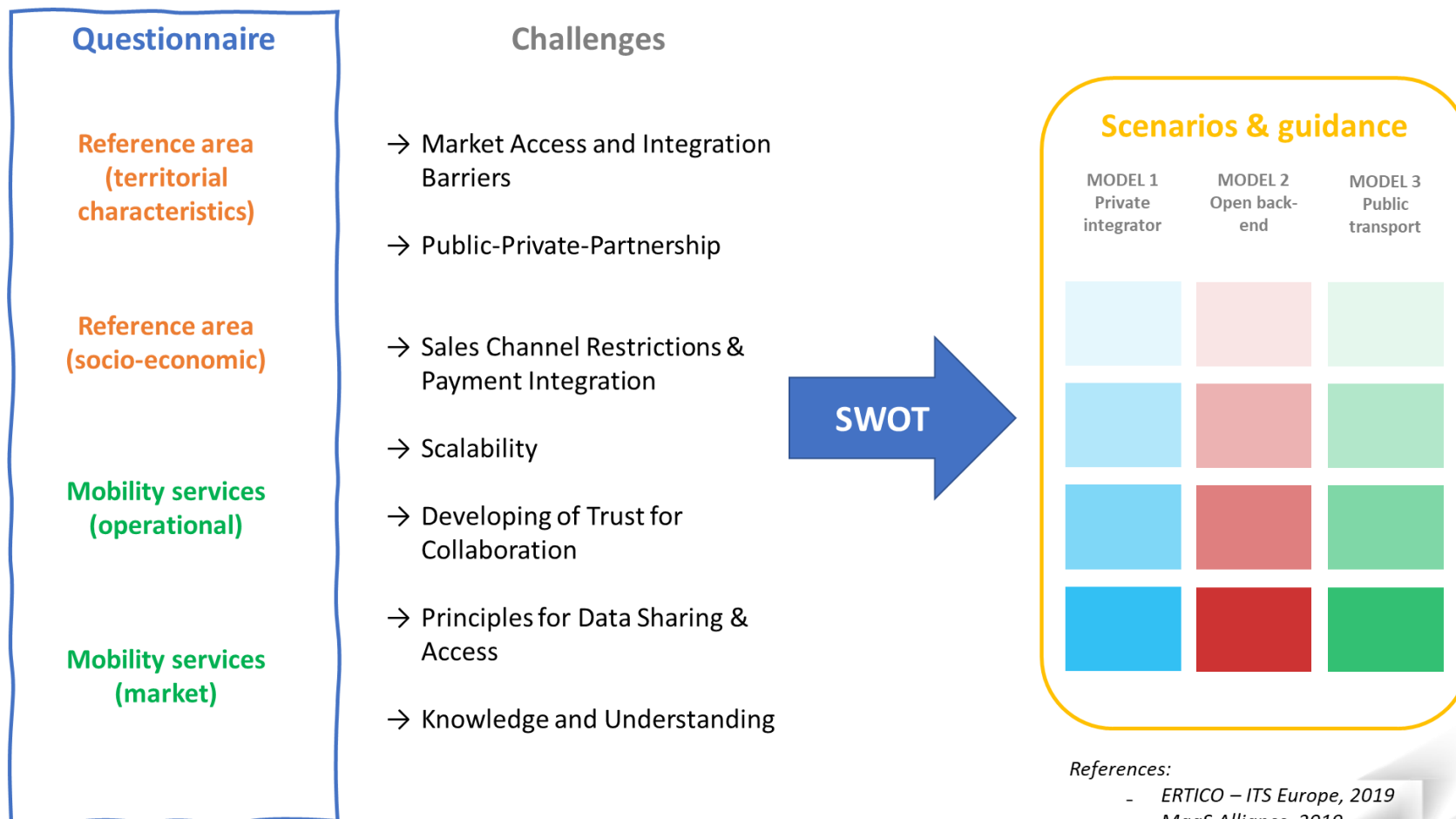


Figure 14: The MaaS Model 3 (elaborated from the elements of UITP Report, 2019, "Public Transport as the integrator")



NEW MAAS SELF-ASSESSMENT TOOL

How does it work?



References:

- ERTICO – ITS Europe, 2019
- MaaS Alliance, 2019



MaaS SAT, questionnaire (I)

MaaS Profile

Budapest

Date:

17/05/2022

1 Territorial and institutional characteristics

1.1 <i>Type of area</i>	<p>How would you define your reference area?</p> <ul style="list-style-type: none"> a. Region b. Functional Urban Area (FUA) c. Urban area d. Sub-urban area e. Rural/low-density area
1.2 <i>Shape</i>	<p>What are the characteristics of the settlements and of the main infrastructure networks?</p> <ul style="list-style-type: none"> a. polycentric/hive shaped b. radial converging towards a main urban area c. compact combining radial axes towards the center and between peripheral areas
1.3 <i>Presence of access restrictions</i>	<p>What kind of vehicle access restriction scheme is enforced on the territory?</p> <ul style="list-style-type: none"> a. none b. city inner center c. broader low emission area corresponding to a relevant part of the urban territory d. multiple small areas in different zones
1.4 <i>Regulation on new services</i>	<p>How are new services (sharing, ridehailing, others) planned and regulated?</p> <ul style="list-style-type: none"> a. subject to authorisation and quality standard, no limit to the number of operators b. authorization/licence provided to a defined number of operators c. no regulation
1.5 <i>National/regional/local regulatory level</i>	<p>Concerning mobility policies, what is the level of coordination/harmonization among different governance levels and territories?</p> <ul style="list-style-type: none"> a. comprehensive coordination among governance levels (multi-level governance) and between tools (e.g. SUMP, Air quality plans, urban planning, etc.) b. good sectoral coordination (transport and mobility) c. sectoral coordination with harmonization gaps among levels (e.g. lack of regulation at national/regional level when needed for some services) d. poor coordination

MaaS SAT, questionnaire (II)

2 Reference area (socio-economic)	
2.1 <i>Car ownership and use</i>	<p>How would you define the car role in the reference area?</p> <ul style="list-style-type: none"> a. dominant (high property rates, dominant in commuting flows and largely used for family duties and leisure) b. strongly diffused (high property rates, mainly relevant in commuting flows) c. necessary for targeted activities (high to medium property rates, mainly used for family duties and leisure) d. secondary (low property rates, shared)
2.2 <i>Relevance of combined mobility</i>	<p>How would you evaluate the combined/multimodal mobility on the territory?</p> <ul style="list-style-type: none"> a. good intermodal infrastructure (e.g. park and ride, intermodal stations, mobility hubs) and high usage of combined mobility b. good intermodal infrastructure and limited usage of combined mobility c. limited intermodal infrastructure (covering few areas and/or modes) and combined services d. poor intermodal infrastructure and combined services
2.3 <i>Openness towards communication technology, immaterial ticketing and payments</i>	<p>How is the attitude of citizens towards digitalization of services?</p> <ul style="list-style-type: none"> a. general good adoption of digital services also in mobility (mobility apps, digital ticketing, etc.) b. positive attitude towards ICT services in other sectors (e.g. public services, digital payments, etc.) c. strong gap between more and less digitally advanced social groups (e.g. young and elderly, etc.) d. ICT services limited to early adopters
2.4 <i>Level of concern related to data protection</i>	<p>How is the general attitude of citizens towards data protection?</p> <ul style="list-style-type: none"> a. good knowledge on the topic and attention to data management policies b. good knowledge and concerns mainly on private entities managing data (e.g. private mobility operators) c. limited knowledge and very strong concern toward public and private entities d. limited knowledge and low concern
2.5 <i>Perceived quality of public transport</i>	<p>How public transport is perceived by citizens?</p> <ul style="list-style-type: none"> a. reliable, convenient, capillar, competitive with private mobility in fulfilling most of mobility needs b. reliable, convenient, preferable for specific mobility needs (e.g. commuting towards city centre) c. only partially reliable, economically convenient d. in general not reliable and used only when there is no alternative

MaaS SAT, questionnaire (III)

3 Mobility (operational)	
3.1 Demand main flows (urban/inter etc.)	<p>How would you describe the main mobility flows in the reference area?</p> <ul style="list-style-type: none">a. strongly polarized in space (periphery towards center) and time (relevance of peak hours)b. distributed over a number of poles or multi-directional, polarized in timec. polarized in space, distributed in timed. mainly multi-directional and more distributed in time
3.2 Supply relevance of public transport	<p>How does the public transport network look like in your territory?</p> <ul style="list-style-type: none">a. focusing on high demand routes, poor presence of feeding servicesb. very concentrated in densely populated areas, limited in othersc. capillar at local level, calibrated according to population densityd. widely diffused, ensuring high accessibility also in peripheral areas
3.3 Supply other modes	<p>How are new mobility services (shared and flexible mobility, e.g car/bikesharing, micromobility, DRT shuttles, taxi/ridehailing etc.) diffused in your territory?</p> <ul style="list-style-type: none">a. mainly in densely populated and central areasb. mainly in peripheral areas where the public transport network is less developedc. in densely populated and peripheral areas, as alternative to public transportd. in densely populated and peripheral areas, as complement to public transporte. non existing



MaaS SAT, questionnaire (IV)

4 Mobility services (market)	
4.1 Number of operators in PT	<p>What is the situation of public transport operators in your area?</p> <ul style="list-style-type: none"> a. One operator for all relevant local services b. One operator for local public transport and one for railway c. Operators differentiated per mode/area/distance (e.g. bus, tram and train; urban, extra urban and regional, etc.) d. Several operators covering different modes/areas but also in competition in some cases
4.2 Number of new mobility services providers (shared and flexible services)	<p>How many new mobility services providers are in the market?</p> <ul style="list-style-type: none"> a. no new mobility services b. 1 to 3 c. more than 3, but different services (e.g. car sharing, bike sharing, micromobility) d. more than 3, some in direct competition
4.3 Service integration between regional and local	<p>How would you describe the level of integration (timetable and tariff) among regional and local public transport services?</p> <ul style="list-style-type: none"> a. no integration b. partial integration (timetable, no or only partial tariff) c. partial integration (tariff, only partial timetable) d. full integration
4.4 Existing integrated services trad and new	<p>Are new mobility services integrated with the public transport network?</p> <ul style="list-style-type: none"> a. no/not relevant b. few new services are integrated with public transport and can be easily used jointly c. several new services are integrated with public transport and can be easily used jointly d. several new services are integrated with public transport, also through multimodal mobility hubs at public transport stops
4.5 Attitude of players towards data sharing	<p>Are mobility players sharing data with the public administration and/or among each others?</p> <ul style="list-style-type: none"> a. no operator is sharing data b. operators are sharing data with the public administration, mainly for monitoring purposes c. operators are sharing basic data (e.g. timetables, parking, vehicle availability, etc.) for information purposes d. public transport operators and new mobility providers are sharing advanced data (for trip planning and further integration)

MaaS SAT, output (layout)

SWOT

MaaS Profile	Budapest	Interreg CENTRAL EUROPE Dynaxibility4CE
Date:	17/05/2022	
STRENGTHS		
Territorial and Institutional Structure	Density and compactness allowing viability of different services MaaS can provide capillar services Center is a favorable environment for zero emissions transport and new mobility services Easy go-to-market for new mobility services Suitable environment for a societal goals oriented MaaS	
Socio-economic background	MaaS can fulfill the needs of systematic mobility	
Mobility operational context	High demand potential for sustainable services	
Mobility market	Good response to mobility needs in different areas/ for different target groups Benefits from competition among market oriented services Easy to use tariff system	
WEAKNESSES		
Territorial and Institutional Structure	Possible overlapping of mobility services Possible overlapping of mobility services In peripheral areas zero emissions transport and new mobility services have less competitive advantages Lack of control on new mobility services Planning for mobility services becomes more complex	
Socio-economic background	Addressing non systematic mobility is challenging	
Mobility operational context	Complexity of networks	
Mobility market	Complex coordination Complex coordination Services not always operationally aligned	
OPPORTUNITIES		
Territorial and Institutional Structure	Creating options for citizens without a car Implementing a capillar MaaS replacing private car ownership The attractiveness of the center for new mobility services can foster their expansion beyond the area Citizens can explore a broad range of services Building a strongly environment and society oriented MaaS	
Socio-economic background	Creating a solid MaaS focusing improving commuting experience	
Mobility operational context	Foster the behavioral change in favor of more sustainable modes	
Mobility market	Creating a composite mobility offer for different target groups at FUA/ regional level Creating a MaaS ecosystem based on fair competition, with equal opportunities for different operators Improve the optimization of the network by fostering collaboration among actors	
THREATS		
Territorial and Institutional Structure	Focus on citizens and little attention to mobility needs of city users Possible excess of competition between traditional and new mobility services, favouring the latter (more flexible) Strong disparity between city center and peripheral areas Quality of services hindered by continuous entrance and exit of operators in the market The complexity of coordination among policies might limit the benefits of integrated mobility	
Socio-economic background	MaaS only partially addressing non systematic and leisure trips	
Mobility operational context	Private vehicles gain competitive advantage by the creation of efficient road and parking infrastructure	
Mobility market	Conflicting MaaS approaches hindering integration Exclusion of less profitable/ more society oriented services from the ecosystem and the market No agreement on rationalisation of networks compromises the effectiveness of MaaS for users	

Recommendations per model (example)

Model 1 - "Commercial integrator" Challenges and recommendations

Socio-economic background	Foster collaboration among operators to create multiple opportunities for MaaS, defining a comprehensive set of engagement rules including for parking and new mobility services Promote the digital integration among services, and the implementation of different digital payment channels and immaterial ticketing systems Ensure common rules and standards fulfill data protection regulations, monitor public and private operators and ensure communication of results Develop a dedicated campaign and targeted actions on data protection in mobility Foster the integration of new mobility services with the objective of making the service more capillar (integrating first and last mile, and serving non systematic mobility), through spatial planning of operational areas and conditional authorisations
Mobility operational context	Drive the diversification of services for different purposes (commuting, leisure, etc.) and time frames (peak, off peak) to improve economic efficiency Foster the increase of range by new mobility services (especially shared) outside their "comfort zone", through a mix of regulations and incentives Promote the creation and scaling up of bottom-up and peer-to-peer innovative services for neighborhoods and peripheral areas,
Mobility market	Create an ecosystem for fair and transparent data exchange, promote multimodality and incentivize society oriented preferences, facilitate the entrance in the market by new operators Foster mutual trust among operators through participation and incentives, promote open API policies



Model 2 - "Open back-end platform"	<i>Challenges and recommendations</i>
Socio-economic background	<p>Foster participation of operators to the open back-end through incentives such as joint promotion, support to technological development/compliance to regulations/ business analysis of integrated options, include infrastructure managers and data</p> <p>Foster the participation of digitalized services to the development and population of the open-back end platform, setting standards and incentives for participation</p> <p>Ensure common rules and standards fulfill data protection regulations, monitor public and private operators, label platforms joining the ecosystem</p> <p>Develop a dedicated campaign and targeted actions on data protection in mobility</p> <p>Foster the integration of new mobility services with the objective of making the service more capillar (integrating first and last mile, and serving non systematic mobility), through spatial planning of operational areas and incentives to collaboration</p>
Mobility operational context	<p>Drive the diversification of services for different purposes (commuting, leisure, etc.) and time frames (peak, off peak) to improve economic efficiency</p> <p>Foster the increase of range by new mobility services (especially shared) outside their "comfort zone", through a mix of regulations and incentives, actively promoting integration with public transport</p> <p>Promote the creation and scaling up of bottom-up and peer-to-peer innovative services for neighborhoods and peripheral areas, also through the development of intermodal infrastructure (e.g. mobility hubs)</p>
Mobility market	<p>Create an ecosystem for fair and transparent data exchange, foster the development and integration of new peer-to-peer services and incentivize society oriented preferences</p> <p>Foster mutual trust among operators through participation and incentives, promote open API policies, create incentives for the joint development of services (e.g. easy authorisation, support to business and technical development, co-marketing)</p>

THANK YOU FOR YOUR ATTENTION!



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