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MaaS 2.0:

The Innovative Mobility Landscape: The Case of Mobility as a Service

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Urban mobility is at a crossroads

Current Scenario:

25%

Contribution of road transportation to global emissions

4.2 million+

Excess deaths per year because of PM2.5 pollutants globally

EUR 100b

Cost of congestion on EU roads alone

Projected 2015 – 2050:

+133%

Total passenger travel
billion passenger kilometers

+163%

Urban passenger travel
billion passenger kilometers

+86%

Urban population growth

+13%

CO_2 emissions from all passenger travel
Gigatonnes CO_2 (tank-to-wheel)

-5%

CO_2 emissions from Urban passenger travel
Gigatonnes CO_2 (tank-to-wheel)

-64%

Reduction needed to achieve 1.5°
Gigatonnes CO_2 (tank-to-wheel)

ITF Transportation Outlook: https://doi.org/10.1787/25202367, WHO Ambient Air Pollution Factsheet, UNECE

Urban passenger transportation can be rapidly decarbonized

- ~ 80% reduction in CO2 emissions could be achieved under ambitious but attainable policies
- Higher fuel efficiency, improvements in load factors and powertrain electrification all have a role to play
- Shared and public transit can reduce emissions and private car usership

ITF Transport Outlook 2021

Measures to decarbonise transport: Avoid, shift, improve

Concentrating on any one of these in isolation will not solve the social and environmental challenges transport faces. Instead, policy makers will need to adopt a holistic approach to prioritising policies based on a balance of what is most appropriate in terms of impact, sector, and region.

C40 CITIES

INTERNATIONAL TRANSPORT WORKERS' FEDERATION

Public transport must double in cities over next decade to meet 1.5°C target

Mayors, unions, transport authorities, regulators and partners all call on national governments to collectively double public transport journeys in cities by 2030 and advance a just transition to zero-emissions public transport, if they are to meet their climate goals and limit global heating to 1.5°C

RMI

Our Driving Habits Must Be Part of the Climate Conversation

The United States must reduce VMT by 20 percent before the end of the decade to limit warming to 1.5°C—and this remains true even under ambitious EV adoption scenarios

Mobility today: more choices, new layers, more digital may shift future travel….

- There is no one size fits all
- We must re-think the link between mobility and car use and foster greater diversity and choice
- Stakeholders must act together to ensure that new mobility is green mobility
- Solving the tensions between new and legacy mobility services and changing travel behavior must account for entrenched practices and system inertia

MaaS promises significant benefits from integrating mobility offers

- MaaS is a distribution model for mobility, not just an App. It is an ecosystem, not just a single service
- MaaS focuses on users' travel needs and, with the right policies, can contribute to better, more sustainable travel
- MaaS can contribute up to 15% CO2 emissions reduction in 2050 and improved efficiency

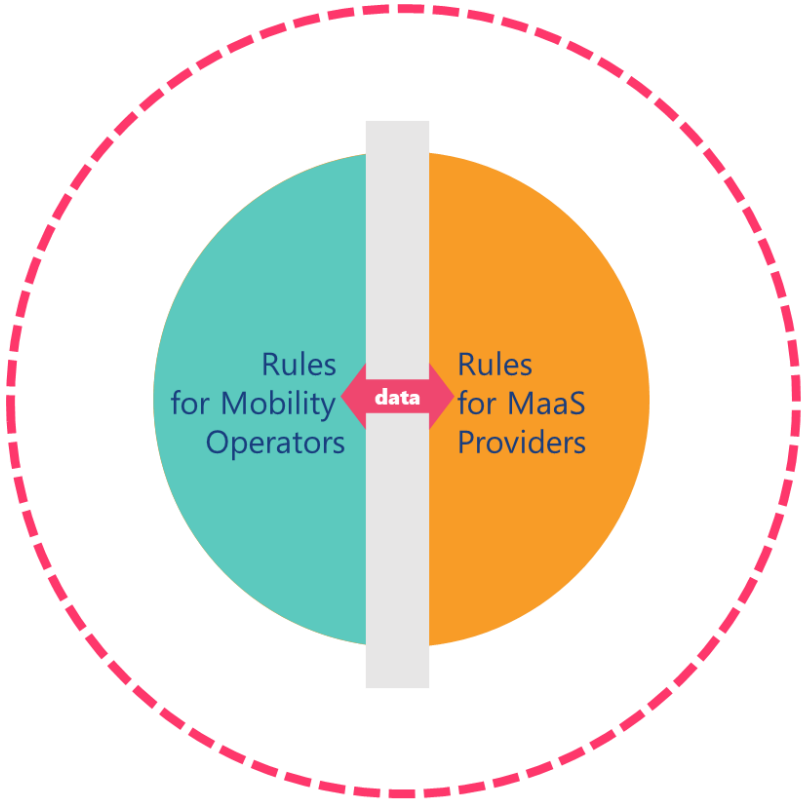
EUROPEAN COMMISSION

Sustainable and Smart Mobility Strategy – putting European transport on track for the future

FLAGSHIP 6 – MAKING CONNECTED AND AUTOMATED MULTIMODAL MOBILITY A REALITY

56. **The EU needs to take full advantage of smart digital solutions and intelligent transport systems (ITS)**. Connected and automated systems have enormous potential to fundamentally improve the functioning of the whole transport system and contribute to our sustainability and safety goals. Actions will focus on supporting the integration of transport modes into a functioning multimodal system.

MaaS requires an effective regulatory and data governance framework



Context-setting rules & policy (Pricing, access, space allocation, infrastructure, etc…)

- MaaS requires an adapted regulatory framework for mobility operation separate from that for MaaS provision
- The data governance framework is what ties the two together and enables MaaS to function
- Achieving the full potential of MaaS requires flanking and context-setting measures that support its deployment and uptake

Policy making for data sharing is necessary to create shared value

Increased digitalization of transportation systems and identification of **new value streams** by processing and merging data are driving increased data sharing

PATH 1: Collaborative and harmonized policy-making processes that guide development of data sharing ecosystems

PATH 2: Ad hoc and heterogenous policy making that may lag market and technology development

Potential Outcomes

- Data sharing supporting the transition to sustainable mobility
- Competitive data economy
- Ethical, privacy-proof and unbiased use of data
- Harmonized approaches and shared best practices to enable scaled impact

- Siloed approaches exacerbate mobility challenges
- Monopolized data economies, with widening data divide
- Accentuated biases rooted in race, gender, age, etc.
- Heterogeneous data sharing rules lead to local, irreplicable impact

Source: Sustainable Mobility: Policy Making for Data Sharing

Future MaaS can enable a multimodal system to meet sustainability goals

Deep digital integration across the ecosystem of actors including vehicle manufacturers, vehicle users, parking operators, municipal governments and planners, mobility operators and MaaS providers to:

- Share full and fair information about costs and time of journey with users during journey planning, initiation, navigation, and termination.
- Provide ability to integrate additional services – book and pay for EV charging spots, onboard wifi, and other offerings.
- Use data to design smart nudges and better design city infrastructure
- Integrate with first and last-mile DRT/MOD options

1 Must do better to decouple mobility from growth in emissions, resource use, space consumption and inequity

2 By better integrating and coordinating transport services, we can realize up to 15% lower CO_2 emissions by 2050 and improve welfare.

3 MaaS can help but public authorities and businesses must work together to create vibrant MaaS ecosystems that improve people's daily travel experience

International Transport Forum

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Case-Specific Policy Analysis
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