Policy Recommendations

HOW WE CAN DRIVE EU MOBILITY TO 2040

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TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

To enable adaptive and anticipatory regulatory schemes and governance with novel policies contributing to a sustainable mobility goal, the regulation of future mobility for passenger and freight should include the following recommendations.

NEW REGULATORY AND GOVERNANCE APPROACHES
- ➢ The EU should establish a common framework for governing mobility innovations.
- ➢ The EU should provide cross-sectoral guidance and facilitate communication across governance levels and industry sectors.

COOPERATION OF SERVICES AMONG PUBLIC AND PRIVATE PARTIES
- ➢ The EU should identify and drive consultations around common needs between public and private parties.

CREATING A REGULATORY ENVIRONMENT FIT FOR NEW MOBILITY SERVICES
- ➢ Public authorities are encouraged to develop flexible regulations and policies which foster the development of 'new mobility platforms' for knowledge and technological resource exchanges and, where possible, create conditions for business models for new mobility platforms to be developed.

DATA
- ➢ The EU should set up minimum requirements for mobility service providers to manage data.
- ➢ The EU should support the establishment of clear standards for the type and format of data to be shared sustainably.

SUSTAINABILITY
- ➢ The EU should define standardised procedures and new forms of contracts for agreements between cities and new mobility service providers.
- ➢ Public authorities should take advantage of the great deal of data relating to urban mobility that is now possible to collect, extract, and re-use to map the city's activities in real-time and make the mobility ecosystems more sustainable.

2.INTRODUCTION

This document contains recommendations on European regulatory approaches to devise new regulatory schemes, frameworks, and governance models. It aims to set key priorities towards adaptive new regulation frameworks for future mobility till 2040 for passenger and freight transport.

The recommendations are based on a review of all project deliverables prepared till this point. These deliverables include evidence-based research on disruptive mobility innovations and the main trends they are built upon, as well as the extensive review of governance models and approaches that have been or could be implemented for governing them. A survey was also conducted with GECKO stakeholders to select the most strongly agreed recommendations from the public, private, and other sectors. This was followed by a workshop with active participation of the stakeholders and two rounds of group work with concrete discussion questions directly related to the recommendations.

The recommendations provide guidance for the European Institutions and public authorities to design and implement more appropriate policies to prosper the development of disruptive technologies and business models in transport systems. These recommendations are without prejudice to the European Institutions' ongoing and upcoming legislative proposals put forward in the context of the Smart & Sustainable Mobility Strategy as well as the European Digital Strategy and Strategy for Data. The GECKO project recommends the following to enable adaptive and anticipatory regulatory schemes and governance with novel policies contributing to sustainable mobility goals.

3. RECOMENDATIONS FOR THE FUTURE

3.1. New regulatory and governance approaches

Technological and business model innovations have the potential to make passenger and freight mobility systems integrated and seamless. However, they may also accentuate certain challenges such as congestion, social inequity and air pollution if not governed correctly. The challenge for finding the right governance approaches lies in achieving a balance between regulating too little and too much and building the capacity to embrace the fast-changing mobility sector. New governance models based on adaptive, collaborative, data-informed decision-making allow continuous impact monitoring of the mobility frameworks. As the future role and impact of new mobility solutions remains unclear, new governance models can support the achievement of policy goals set by authorities (such as carbon neutrality or social equity) thanks to 'real-time' adjustments that can reduce any negative externalities of new mobility solutions, which may not be apparent at the time of deploying these solutions. Local authorities should be able to experiment with new governance models so the services and legal framework can also evolve over time.

In addition to more traditional methods such as binding rules (regulations that have legal force) and market approach (for example, taxation of unsustainable modes of transport), new flexible, adaptive governance approaches, such as collaborative governance (collaboration between public and private stakeholders to achieve better results), outcome-based regulation (concentration on the required result and a flexible approach to the choice of methods of achieving) and regulatory sandboxes (local testing of the innovation under the control of the regulatory body), could be used. However, regulatory processes are time-consuming and cannot be expedited, for instance, at higher governance levels where significant coordination and careful consideration of all impacts is necessary. Thus, the appropriateness of each governance approach depends on the features of the domain where they are applied. For example, adaptive or, risk-based governance approaches will be more appropriate in cases with a high level of uncertainty regarding the impacts of a mobility innovation (for example, The Norwegian urban growth agreement), while collaborative governance may provide useful for setting common standards or policy (for example, Greater London Authority). Another challenge is that there is limited understanding and evidence of sustainable of business foundations of mobility innovations, which limits their collaboration and adaptation in a constructive manner.

RECOMMENDATIONS

The EU should establish a common framework for governing mobility innovations.
- ➢ This could take place by listing instruments that are most appropriate for governance interventions in view of the specifics of a mobility innovation.
- ➢ New flexible, adaptive governance approaches, such as collaborative governance, outcome-based regulation and regulatory sandboxes[1] could be included in such framework.
- ➢ The appropriateness of each governance approach in the framework would depend on the features of the domain where they are applied.

Despite the blurring of boundaries among industries due to innovations, **institutional and regulatory silos still exist** among various governance levels and segments of social activity. Thus, competences for regulating cross-sector issues are found in different stakeholders across organizations, which makes overarching governance hard to deploy. For example, the competencies for governing meaningful transport innovations can lie in the departments of transportation, urban planning, healthcare, etc. Also, the governance of innovations such as platforms or data-based business models lies beyond individual industry sector, and new capabilities are necessary for public actors to engage in their governance.

RECOMMENDATIONS

The EU should provide cross-sectoral guidance and facilitate communication across governance levels and industry sectors.
- ➢ Forums could be established to facilitate this communication across governance levels and industry sectors.
- ➢ These forums would be ~~is~~ critical for developing cross-sectoral understanding and competencies.

3.2. Cooperation of services among public and private parties

Providers of new mobility solutions that collaborate with public authorities contribute to a more integrated and efficient urban transport systems. **For a new mobility service to succeed, strong cooperation between public and private parties is essential.** This cooperation between public and private parties can be a Memorandum of Understanding or a contract (such as Software-as-a-Service, management contract, concession, or a licence). This can however be hampered by commercial interests and limited trust. Public authorities should therefore take a proactive approach to the governance of disruptive mobility solutions, including dialogue with private parties developing disruptive mobility innovations, to be able to direct innovation in their desired direction. They should also consider the fit between the value proposition of the disruptive innovation and their own policies. These steps can however be challenging due to a lack of

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Such as defined in paragraph 2.3. of the following deliverable: http://h2020-gecko.eu/fileadmin/user_upload/publications/GECKO_D2.4_Regulatory_schemes_and_governance_models_for_disruptive_innovation.pdf[1]

institutional capacity and funding by local authorities, slow public processes, and an unclear role of local authorities.

> **RECOMMENDATIONS**
> The EU should identify and drive consultations around common needs between public and private parties.
> ➢ This could take place by encouraging the establishment of collaboration mechanisms or forums that include local and national governments and are organised at a regular interval.
> ➢ Guidance, best practice, and communication support should be provided by the EU. This would also help the EU set policy direction.

3.3.   Creating a regulatory environment fit for new mobility services

Many disruptive new mobility services and technologies have been developed over the last decade. These innovations have redefined the transport industry, as they foster collaboration between multiple stakeholders and influence users' behaviour in both positive as well as negative ways due to high uncertainties associated with disruptive innovations. Take the e-scooter service as an example. On the one hand, it helps achieve the last-mile goal; on the other hand, it might trigger some unintended consequences when poorly managed. **As increased mobility services combine resources from other industries (e.g., entertainment, shopping) to address customer needs, an adaptive governance framework should cross industry boundaries to support business model innovation**. From a policy maker's point of view, it is critical to understand how to facilitate cross-industry collaborations and support business model innovations with a concrete governance framework. Such a framework would enable firms to maintain their innovation momentum and support them to develop a more sustainable business model through resource integration with cross-industry stakeholders. Under the governance framework, **local governments might be able to develop new mobility platforms that help firms, institutions and entrepreneurs to connect with the right networks of people and resources, which in turn, enabling firms to create an integrated solution and eventually innovate their business models.** These platforms can be domain-focused with specialised knowledge or diverse platforms, depending on the goal of the governance framework. However, the current limited understanding of regulatory frameworks on cross-industry collaboration limits the development of sustainable business model innovation. There are also limitations on data and resource exchanges between organisations in different industries. In addition, it is difficult to decide the extent of flexibility of the governance framework. If the framework is too rigid, it might deter creativity and innovation that can help in addressing sustainable goals; if it is too loose, organisations will encounter uncertainties and become unwilling to change their current business model.

RECOMMENDATIONS
Public authorities are encouraged to develop flexible regulations and policies which foster the development of 'new mobility platforms'[2] for knowledge and technological resource exchanges and, where possible, create conditions for business models for new mobility platforms to be developed.
- ➢ The platform could be domain-focused with specialised knowledge but also can be a diverse platform that integrates diverse technological resources.
- ➢ With well-developed platforms, different new mobility service and technology firms can acquire the essential resources to develop integrated solutions for the market. For example, some mobility firms have integrated cloud computing services into their solution through cross-industry collaboration, which better address the on-demand needs of their clients.

3.4. Data

Data and analytics hold a lot of potential for the transport domain and can help different stakeholders in achieving their goals. Transport service providers can rely on them for improving services, end-users can benefit from them by gaining access to more sustainable travel modes, reduce travel times etc., and policy makers can use them to achieve various policy objectives. **However, several challenges, such as legal ambiguities of data ownership, privacy and protection, limit the current offering of data and analytics in transport sector. Concrete strategies that address these ambiguities need to be adopted by the EU to overcome these challenges and avoid absolute industry self-governance.** However, adoption and implementation of these strategies can be challenging if authorities rely on a rigid and one size fits all approach for governing data issues. While striving for coherence in data governance, enough room should be left to accommodate specific needs of sectors like transport. To achieve sustainable and smart mobility in Europe, several steps are required at policy and regulatory level to improve data governance both in general and specifically in the context of transportation.

RECOMMENDATION
The EU should set up minimum requirements for mobility service providers to manage data.
- ➢ Data management guidance should be developed for different topics (such as data privacy, protection and ownership) to resolve legal ambiguities and generate certainty.
- ➢ Such guidance can prove useful as a soft (non-rigid) approach for better data governance, benefitting all and especially new and emerging mobility solution providers.

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[2]   New mobility platforms are defined in the following deliverable: http://h2020-gecko.eu/fileadmin/user_upload/GECKO_D4.1_Guidelines_for_new_governance_models.pdf. These are areas of cooperation. Their economic models are enabled by the technological advancement of internet combined with democratisation of use and ownership of smartphones. The interconnection of these two is so strong that the European Commission (EC) actually uses the term "collaborative economy" and defines it as "business models where activities are facilitated by collaborative platforms that create an open marketplace for the temporary usage of goods or services often provided by private individuals".

Dynamic data acquisition and analysis can also enable proactive (rather than reactive) governance. However, acquisition of data can be challenging due to lack of standards or metrices defining the type and format of data to be shared. Absence of clear regulations on data sharing, concerns about breaching privacy laws and commercial interests also create a hesitancy among different stakeholders, making them more and more reluctant and suspicious about sharing data. Furthermore, analysis of data is another challenge as there is a shortage of resources and skilled data professionals. Proliferation of different transport policies can also complicate data analysis process, by blurring the objectives for which analysis may be required.

RECOMMENDATION

The EU should support the establishment of clear standards for the type and format of data to be shared sustainably.

➢ This should take place in consultation with both transport as well as data experts and comply with any international standard requirements.

➢ Given that data collection, sharing, and analysis often comes with varying costs and conditions, the resulting potential market asymmetry should be forestalled through systematic data reciprocity. This approach would ensure a level-playing field.

➢ It should be ensured that any data shared in compliance with such standards does not breach privacy obligations. Stakeholders should also be guided on how they can share data without compromising privacy.

➢ Platforms should be established to facilitate sharing of data easily and stakeholders should be nudged towards data sharing by indicating how this can create value and profitability for their enterprise, for example by helping them better understand mobility trends and consumer preferences.

➢ Questions relating to ownership of data should also be clarified to facilitate data sharing.

➢ To improve data analysis, efforts should be made to provide opportunities and incentives for the re-skilling and upskilling of professionals.

3.5. Sustainability

Regulations should consider the environmental sustainability of new services, with the aim of maximizing their benefits for the community. To this end, to assess whether a disruptive mobility innovation is a sustainable option, the actual environmental benefit of a mobility solution can be only assessed by considering its whole lifecycle, so including also potential shifts of environmental impacts elsewhere.

From an operational point of view, potential rebound effects (an increase in usage that cancels out a portion of the expected societal benefits) must be prevented by calibrating the costs of the services offered based on an analysis of several significant indicators allowing for taking both the intended and unintended impacts into account. (e.g., MaaS services may encourage additional transport movements, which may have adverse environmental and societal impacts).

In this sense, the evidence of the impacts generated by the mobility service, the strategies adopted by the mobility service provider to pursue the sustainability goals set by the city, the monitoring of these strategies and the clarity of the measures to be taken if the service does not

reach the expected targets, should find a clear place in the requirements to operate and in the contract agreements between cities and mobility service providers.

RECOMMENDATION

The EU should define standardised procedures and new forms of cooperation (with a flexibility that considers the specificities of the territory) for agreements between cities and new mobility service providers.

➢ The evidence of the impacts generated by the mobility service, the strategies adopted by the mobility service provider to pursue sustainability, the monitoring of these strategies, and the measures to be taken if the service does not reach the expected targets, should find a clear place in the operational requirements and in the agreements between cities and mobility providers.

➢ This would provide support in determining which are the most effective actions towards deep decarbonisation.

➢ Visibility could be given not only to cities that adopt effective decarbonisation strategies but also to the actors involved such as policy makers, mobility service providers, etc.

➢ A framework could also be put in place to ensure new mobility solutions can be assessed considering sustainability criteria.

The advent of big data contributes to the assessment of the environmental footprint of each mobility service available in a city, thus allowing on one hand to guide policy choices for the identification of incentive schemes for the most sustainable solutions, and on the other hand to call a user's attention to the impact of his/her transport choices. For MaaS, for example, the problem of presenting different travel solutions can be solved by requiring the MaaS operator to give greater visibility to the most sustainable combination/type of multimodality solutions. In terms of incentives, the combination of incentive schemes for virtuous behaviour and charging schemes for environmental impact towards both operators and end-users can help to pursue city sustainability goals.

RECOMMENDATION

Public authorities should take advantage of the great deal of data relating to urban mobility that is now possible to collect, extract, and re-use to map the city's activities in real-time and make the mobility ecosystems more sustainable.

➢ By recognising the importance of big data, authorities can improve managing and regulating mobility.

➢ Big data analysis will also help authorities in testing and evaluating the implementation of regulatory measures faster, hence supporting the decision-making process by also facilitating a broad and clear communication between stakeholders and the public.

GECKO CONSORTIUM

The consortium of GECKO consists of 9 partners with multidisciplinary and complementary competencies. This includes leading universities, networks and industry sector specialists.