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At a glance

European Strategy for a Sustainable and Smart Mobility – towards a Data Driven European Transport and Mobility Ecosystem

Background

As part of the European Green Deal and the European Data Strategy, the European Commission has announced a Strategy for a Sustainable and Smart Mobility, scheduled for release before the end of 2020.
As Germany's digital association, aiming at fostering a digital and sustainable future for Europe, Bitkom drafted the following paper as a contribution to the EU's consultation on the future of transport and mobility.

Bitkom Evaluation

Bitkom welcomes the Commission's initiative to draft a strategy for a sustainable and smart mobility. It is, in our view, crucial to recognise that the future of transport and mobility is digital and green. In order to attain a fair, sustainable and smart transport system, the task at hand is to create a data driven European mobility ecosystem that includes all relevant stakeholders. Bitkom is convinced that such an ecosystem is not built only on a single platform but on the interplay and exchange of multiple platforms.

Our most important points

We would like to highlight the following points as crucial for a functioning data ecosystem:

- **Acknowledge the different nature of movement of goods and persons**
  The mobility and the logistics sector must be evaluated individually and separately when implementing a European data and mobility space.
- **Use and simplification of already existing legal frameworks**
  A European Mobility Data Space does not have to be designed and implemented from scratch. There are existing and promising regulations as well as legal requirements such as the GDPR, eFTI/eCMR, PSI (Open Data) Directive or even national regulations that should be considered when implementing the data space.
- **Digitise and interconnect all transport modes and infrastructures**
  In order to improve the system as a whole, all transport modes for people and goods have to be interconnected in the long run (i.e. multi-/ intermodality) to inter alia design traffic management more efficiently, make mobility more seamless while maintaining technological neutrality.

Position Paper

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September 2020

Introduction

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[1] This paper thus focuses on the second part of the consultation on the "Strategy for a Sustainable and Smart Mobility".

Content

A data driven European Transport & Mobility Ecosystem – Opportunities, Challenges & Recommendations

Bitkom welcomes the Commission's initiative to draft a strategy for a sustainable and smart mobility. It is, in our view, crucial to recognise that the future of transport and mobility is digital and green. The Commission's objectives on making the transport system more sustainable, making sustainable alternative solutions available to people and businesses, to establish polluter-pays principle in all transport modes and to push connectivity and access to all transport modes are in line with Bitkom's vision on digitalisation on transport and mobility.

Pushing for clean vehicles and alternative fuels for road, maritime and aviation mobility, facilitating intermodal transport, and improving efficiency, incentivising the right consumer choices and low-emission practices and investing in low- and zero-emissions solutions, including infrastructure is the right way to enable an efficient interplay between digitalisation and sustainability. One of the most important elements of this ecosystem is the European Mobility Data Space, which was announced in the EU's data strategy and will be included in the strategy for a sustainable and smart mobility. Bitkom highlights the crucial role of the European Mobility Data Space in light of European efforts to build a sustainable and green economy. The digitalisation of the mobility and logistics sector should be regarded as a key factor in the EU's Green Deal.

In order to attain a fair, sustainable and smart transport system, the task at hand is to create a data driven European mobility ecosystem that includes all relevant stakeholders. Only a digital European ecosystem will enable Europe to further compete on a global level. Bitkom is convinced that such an ecosystem is not built only on a single platform but on the interplay and exchange of multiple platforms. The new data infrastructure project GAIA-X aims to establish a sovereign European open data infrastructure ecosystem and should serve as reference also for a data driven European mobility ecosystem. Particularly already existing reference models (such as the International Data Spaces Association) could be regarded as a model for a European data infrastructure. In the following, we will point out the challenges and opportunities the industry sees for such a data space, as well as outline some general principles and recommendations for it.

General Principles

A European Mobility Data Space does not have to be designed and implemented from scratch. There are already promising regulations as well as legal requirements that should be considered when implementing the data space:

- **GDPR**: many legal provisions, most notably regarding personal data, included in the GDPR apply to the mobility sector and should be taken into account in order not to over-regulate.
- **UNECE WP 29**: the United Nations World Forum for Harmonization of Vehicle Regulations (WP 29) is responsible for harmonized regulations on vehicles. Its work thus also affects regulations covering data and cybersecurity and should therefore be considered for European legislations.
- **eFTI / eCMR**: The current development within the Digital Transport and Logistics Forum (DTLF) supports the setup of data platforms and national authority access points in order to exchange and access electronic freight documents (eFTI) between commercial partners as well as with several authorities, including customs. While the e-CMR protocol has already been ratified by most of the European countries, a standardisation of data formats will be a crucial prerequisite for the market acceptance of the eCMR.
- **Directive 1999/62/EC** on the charging of heavy goods vehicles for the use of the European infrastructure.
- **PSI (Open Data) Directive**: The PSI Directive currently regulates the further use of available data within the public sector. The update of the directive (EU 2019/1024) aims at making such data available more easily and in a timely manner, especially for high-value data such as real-time data from the mobility sector. The upcoming Implementing Act on High Value Datasets will as well play a key role to achieve a European Mobility Dataspace.
- **Delegated Regulation (EU) No. 886/2013**: Formulates that available vehicle generated data, which can be used to improve road safety via safety-related traffic information, must be made available to road users and road authorities free of charge.
- **Existing national regulations**: National regulations such as the *Personenbeförderungsgesetz* in Germany build a baseline for further European regulations as public transport is typically regulated on a member state level. This causes the cross-border deployment of new mobility services to be extremely difficult. At the moment, European legislation [like the regulation (EC) No 1073/2009] hampers the development of an open European market for mobility and logistics services. Only with a European legislation, the potential of cross-border connections and operations can be lifted.

- **Existing data frameworks as base:** A European data space must offer the opportunity for mobility providers as well as mobility users to generate additional value and more efficient operations. Existing standards for data security and data protection could be taken as base and frame for a value-adding transport and mobility ecosystem.

Considering these existing regulations, the data space's governance structure should follow the following guiding principles:

- **Drive innovation**: Setting incentives to public body authorities as well as private companies to share their data and allow them to create additional profit out of data-driven business models at the same time.
- **Data Sovereignty, decentralisation and data security** must be the core pillars of a sustainable governance structure. Every regulation at EU-level must be based on these fundamental principles that allow a fruitful development of the digitalisation in the EU. I.e. GAIA-X creates an ecosystem for the next generation of data infrastructure for Europe that aims to meet high standards of digital sovereignty while promoting innovation.
- **Structured data management:** The data space should not only be a place for random data aggregation, it should rather assemble data in such way as to enable mobility providers to offer user-friendly mobility services based on a well-managed and high quality data. It should therefore follow clear governance rules for data sharing and usage.
- **Avoidance of bureaucratic hurdles:** A common European data space is only as good as it reduces costs in the maintenance for all relevant stakeholders. An intelligent and time-efficient data space should avoid extra-requirements for its users.
- **Principle of voluntary sharing:** Apart from mandatory requirements existing in sectorial regulations, data sharing should remain voluntary, unless a compulsion can be justified by market failure, or proportion or the need to establish a level-playing field between market participants. The benefit for all participating parties should always be evident.
- **Non-discriminatory participation of all stakeholders***:* All stakeholders participating in the mobility ecosystem should be involved on a level playing field, these include: OEMs, suppliers, mobility service and data providers, logistics and transportation, software and telecommunications companies.
- **Standardisation:** The data exchange should be earmarked, standardised and compliant to a secure format in order to ensure interoperability.

European Mobility Data Space – How to?

Bitkom welcomes the Commission's undertaking embedded in the strategy to create a common European mobility data space. Bitkom further welcomes the sectoral approach of the mobility data space, as it takes the complexity of the mobility industry and the digital transformation it is undergoing into account. The close interdependence of stakeholders in the mobility and transport sector urges for an efficient, non-bureaucratic data sharing at all digital and non-digital touchpoints.

Nevertheless, some aspects should be considered in order to create a functioning and incentivising data infrastructure, which benefits all stakeholders.

Needs & Challenges

The following challenges need to be addressed in order to create a functional data environment.

- **Protection and Security of data:** Data Protection and Data Security must be guaranteed in order to raise acceptance for and trust in the European Mobility Data Space. Still, the possibility to establish and develop business models must be given at any time. Legal uncertainties with regard to the data protection obligations need to be reduced as this is an obstacle to data sharing, data access and data collection. The harmonization of requirements in all EU member states is one of the most important steps for a functioning data space. The clarification of open questions in the area of anonymization and pseudonymization is needed in particular for the provision of data and would improve the possibility to use mobility data.
- **Availability of data**: A European data space should provide access to data for every relevant stakeholder in the logistics and mobility sector. API-interfaces must guarantee the compatibility between different types of platforms and lead to a fair and free competition. However, a clear distinction should be introduced between public, private and commercial data, i.e. public authorities' data and vehicle-generated sensor data, which should be carefully handled according to relevant regulations and state-of-the-art legal requirements.
- **Data standards, formats and licences:** A European data space would be attractive only if we can reach efficiency through data harmonisation. A functioning data space will, especially in the medium and long term, need more open standards as harmonized data formats are a prerequisite for data exchange. Proprietary data formats and interfaces must therefore be avoided.

- **Level-playing field:** It is of utmost importance to secure current and future business models of industry actors including service providers. Such a European Mobility data space should by no means hamper innovation and hinder competitiveness of industry players in Europe.
- **Cost efficiency:** Data access should go along with reasonable costs for all stakeholders and for commercial and non-commercial products. As the ultimate place where offer and demand meet, data marketplaces are the best positioned to monetize data.
- **Integration of national access points (NAPs)**: Established through the delegated acts adopted under Directive 2010/40/EU, each member state already operates a national access point for mobility data. However, each access point works differently: Some hold only meta data, others direct to APIs or have their own data lakes. The data quality differs from data source to data sources, data is often not in real-time or even out-of-date or poorly managed. NAPs should be taken into account and integrated when building a European Mobility Data Space. In order to overcome current hurdles when it comes to public data and usage, the industry stands ready to help authorities with innovative solutions. It is the competitive advantage of private actors to process, maintain and enrich data in time. Moreover, the EU could benefit from a pan-European access point as coordination mechanism. We support ongoing initiatives launched by some Member States to increase cooperation aiming for a more efficient and integrated EU transport system.
- **Data Forum**: For further development and to maintain the proximity to innovation drivers, a permanent data forum should be established and already existing fora should be strengthened. In these, public authorities and economy work together to expand and evaluate data sharing mechanisms, tools and requirements to achieve a dynamic process that leads to more data exchange. Only interdisciplinary work and cross-sectoral collaboration will ensure the success of the data space.

Opportunities

A common data space will enable all relevant stakeholders to overcome the current fragmentation in the mobility sector and build a user-friendly and need-based transport and mobility system.

From Bitkom's point of view, a European mobility data space will:

- Enable a data driven European mobility and logistics ecosystem;
- Foster the deployment of innovative digital solutions in mobility and logistics;
- Enhance the integration of transport modes (intermodality) and foster their use through digital technologies;
- Increase accessibility to mobility for everyone (all ages, rural and urban areas);

- Ensure a non-discriminatory treatment of single modes of transports;
- Lead to more accessibility of disadvantaged regions that cannot rely on digital technologies, yet.

Already existing use cases give an initial picture of the opportunities presented by functioning EU-wide data space and on where it could lead to in practice. The use cases are separated by sector, acknowledging the different nature of movement of people and goods.

Logistics Use Cases

- **Electronic freight transport information**: The exchange and digitalisation of freight information in the EU.
- **Parking information**: An intelligent and predictive parking system for trucks along European highways.
- **Intelligent Lane-Management at EU borders**: A quicker and cheaper system at EU external border controls which also includes incentives for alternative fuels in the transportation sector.
- **Last Mile Optimisation**: A holistic view on available transport capacities and their utilization, as well as the optimisation of inner-city last-mile-services, which thereby reduces congestion and emissions.
- **Better connectivity at railway and waterways**: Data management along the main routes across Europe and between authorities can be improved by a digital pooling and sharing of data.

Mobility Use Cases

- **Utilisation of infrastructure**: Monitor and steer the utilisation of infrastructure, e.g. EU-wide tolling systems for seamless road usage, inner-city road pricing in order to avoid traffic jams, or dynamic parking fees in order to efficiently utilise parking spots.
- **Multimodal / Seamless mobility:** Real-time exchange of public transport data with respect to real-time timetable information, booking processes and ticket validation. Here, an EU-wide standard to exchange and access the related data sets would help to promote public transport in cross border regions and for travellers.
- **Long-distance bus services:** Publically available data on length, duration and process of constructions or lanes at the boarders would increase the ease of planning and coordi-

nation of scheduled long distance bus routes and thus offer passengers more attractive transport options.
- **Digital Parking Management – Seamless Parking:** a platform which brings together the supply of parking spaces and those looking for them. The aim is to reduce driving hours, energy and fuel consumption as well as CO2 emissions.

Use Cases in the mobility and in the logistics sector

- **Safety-related and Real-Time Traffic Information:** Information such as early-warning systems ahead of traffic jams and constructions, slippery roads, connected with live navigation updates. This can also be connected with live-calculations for the quickest and smartest route.
- **Digital maps**: Information from TN-ITS data providers is intended to support the maintenance of digital map databases. These in turn are a useful resource for anyone contributing to the development of ITS in Europe.
- **Geo and weather data:** A mobility data space offers the opportunity to interconnect global geo and weather data with the mobility and logistics sector. This helps stakeholders for their long-term planning of routes, business processes, traffic predictions and services.
- **Autonomous and connected driving**

Recommendations

The EU's strategy and future regulatory frameworks arising from it should foster the deployment of innovative digital solutions in mobility, therefore the EU should:

1. **Acknowledge the different nature of movement of goods and persons**. The mobility and the logistics sector must be evaluated individually and separately when implementing a European data and mobility space.
2. **Data sharing on a contractual basis**: Every sharing of data in the mobility and logistics sector must be based on the approval of customers and business partners. Where sectoral legislation on data sharing is needed, such as in the automotive sector, the EU shall ensure a level playing field between market participants.
3. **Simplification of existing mobility and logistics regulations:** One example is the public transport infrastructure which is currently subject to various national legislations such as the German *Personenbeförderungsgesetz*. On the one hand, a simplification can help in order to enable innovative mobility concepts. On the other hand, the

cross-country and multilateral intermodal mobility with a common regulation will be strengthened. However, also national legislations offer the opportunity to be simplified by a European regulation. The German BFStrMG with its restrictive requirements for the usability of data is only one example of how national legislations show much room for simplification.

4. Set up a **European platform for data sharing** in both sectors that, in the long run, replaces national solutions and national access points.
5. **Further incentivize the development of intermodal transportation:** This makes the transport system more resilient for future crises and encourages further innovation and competition in the mobility and logistics sectors. In order to successfully implement new mobility concepts, public and private investments in innovative technologies and infrastructures, common technology and safety standards and a harmonization of road traffic rules is key.
6. **Increase funding for new technologies in transport**, e.g. by topping up the Connecting Europe facility (CEF).
7. **Actively forward the digitalisation of common and crucial transport goods in all transport modes**: Relevant transport information is too often lost along the transportation ways due to outdated equipment.
8. **Digitise and interconnect all transport modes and infrastructures** (connected infrastructure) to improve the system as a whole (e.g. more efficient traffic management, make mobility more seamless, maintain technological neutrality).
9. **Invest in the digitalisation of public authorities**: As the EU in the past has consequently introduced regulations that take into account digital data sharing between public authorities and logistics companies, public authorities regularly curb the logistics process. The EU should equip crucial stakeholder such as customs administrations with enough resources to participate a European data space. This also holds true for the transportation of persons. At the moment, approvals of mobility companies are solely created on a paper base. Moreover, the training of staff could encourage the commitment of individuals within governmental organizations and educational entities to promote the concept of open data.

These measures will drive a faster implementation of an interconnected mobility and transport ecosystem. Moreover, the exchange of data will help to build an intermodal transport system, to enable an appropriate and needs-based control system and to use existing capacities more efficiently as to eventually reduce traffic as a whole.

Bitkom represents more than 2,700 companies of the digital economy, including 2,000 direct members. Through IT- and communication services alone, our members generate a domestic annual turnover of 190 billion Euros, including 50 billion Euros in exports. The members of Bitkom employ more than 2 million people in Germany. Among these members are 1,000 small and medium-sized businesses, over 500 startups and almost all global players. They offer a wide range of software technologies, IT-services, and telecommunications or internet services, produce hardware and consumer electronics, operate in the digital media sector or are in other ways affiliated with the digital economy. 80 percent of the members' headquarters are located in Germany with an additional 8 percent both in the EU and the USA, as well as 4 percent in other regions of the world. Bitkom promotes the digital transformation of the German economy, as well as of German society at large, enabling citizens to benefit from digitalisation. A strong European digital policy and a fully integrated digital single market are at the heart of Bitkom's concerns, as well as establishing Germany as a key driver of digital change in Europe and globally.