Federal Ministry of Transport and Digital Infrastructure

mFUND Das Startkapital für die Mobilität 4.0

BMVI-Workshop series "Data Innovations for Smart Mobility in Europe"

Workshop No. 3: Managing the European Data Flow: Mobility Data Platforms and Interfaces

Date: Wednesday, 08 September 2021
Time: 09.30 – 12.00 h (CET)

Location: Virtual Room (Zoom)

Summary

Data flow management is necessary to create and apply smart solutions in the mobility sector. In Europe, there are numerous private and open data platforms where many types of data (e.g. mobility patterns, infrastructure, weather, pollutants levels) have been compiled in recent years. These data are fundamental for the improvement of mobility, the protection of resources and the environment and for the reduction of emissions. However, data users are still confronted with accessibility and transparency issues, a lack of standards and poor data quality. Additionally, the interoperability between systems plays a key role for the use of these data.

As data is in the center of all solutions created for smart mobility, the third event of the BMVI Workshop Series "Data Innovations for Smart Mobility in Europe" was dedicated to data management in Europe.

Thematic overview

Christian Schlosser, head of division Data Innovations, Grant Initiatives (DG 21) of the German Federal Ministry of Transport and Digital Infrastructure (BMVI) welcomed the participants and opened the workshop giving Tiffany Vlemmings (Nationaal Dataportaal Wegverkeer / The Netherlands) the floor for a thematic key note on the challenges and benefits of mobility data flow at European level. Ms Vlemmings provided an overview of the ongoing activities on European level and the complexity of the mobility ecosystem highlighting both the challenges and the opportunities related to data use for the improvement of mobility in Europe. Some of the most relevant activities and initiatives in the fields of legislation and research and deployment were presented.

Innovative solutions

Six innovative projects presented their solutions for data platforms and interfaces. The solutions encompassed not only platforms, but also the involvement of citizens in decision-making processes and the use of data for a wide range of improvements in the mobility sector, including optimized infrastructure planning, the achievement of smoother traffic

flows and the reduction of empty containers in depots with the support of artificial intelligence.

Making data available and ready for use

Lisa Wenige (Institute for Applied Informatics - InfAI) provided the first input with information on the project mCLIENT. mCLIENT focusses on the creation of a simple interface for the publication of mobility data on central data platform (e.g. at federal, state or municipal level). Currently, data provision can be very time and resource consuming, making access to valuable data collected by public institutions difficult. Also, the lack of uniformity with respect to the technologies used and poor quality control present further barriers to the utilization of such data. mCLIENT is therefore aiming at increasing accessibility of Open Mobility Data by providing tools to simplify the data publishing process.

The project VoxPop, funded by the European Union within the initiative Urban Innovative Actions, was created to support the digital transformation of the urban mobility system of Lisbon. Maria Coutinho (Empresa de Mobilidade e Estacionamento de Lisboa - EMEL) explained that the project is tackling non-technological challenges which impede data-sharing in the mobility sector. One of the first milestones of the project was the creation of the so-called *Innovators Alliance* - an open forum to facilitate dialogue with the wider group of relevant stakeholders. Moreover, VoxPop is facilitating cooperation between public and private entities in the co-design of an enhanced digital innovation space in Lisbon, creating a trusted data environment. The co-creation process follows the logic of a design thinking process through several steps and the alliance is currently working on the understanding step.

Klaudia Härzer (Durth Roos Consulting) presented the project integPlan. The central objective of IntegPlan is to preprocess traffic, road and construction data for several target groups, including engineering and planning offices, construction companies and road authorities. The project partners are developing building blocks that support an automated, integral life-cycle-analysis of extra-urban roads with bridge structures on the basis of BIM (Building Information Modeling) models. The aim is to be able to holistically evaluate planning variants as early as the preliminary planning stage by integrating the building blocks into BIM models.

Use of data platforms for the improvement of transport and mobility

Project envVisio is developing and testing a novel method of data processing that manages all environmental data in a general, interdisciplinary structured data pool. According to Pascal Poßner (Technical College of Erfurt - University of Applied Sciences), the aim of the project is to create a homogeneous data management platform which allows municipalities to easily merge their data in a compatible manner. Using this method, data can be provided without the need for programming work on the part of the platform user. Several pilots are

currently underway focusing on different aspects of data use, such as noise mapping, improved open data provision, the preparation of construction planning data and post-fossil mobility.

Tiffany Vlemings took the floor once more to present Socrates 2.0, a project co-funded by the European Commission through Connecting Europe Facility. Socrates 2.0 intends to answers two main questions: 1) how to organise interactive traffic management and 2) whether or not interactive traffic management really leads to more efficient, safer and greener mobility. In order to be able to answer these questions, data collected by both the public and the private sector are necessary, and cooperation needs to take place. The project partners have developed a corresponding model of cooperation which is currently being tested in a pilot action.

Project KIK-Lee is working on the development of AI-based indicators for forecasting the degree of capacity utilisation of container depots with the help of public data. Such forecast information has a high potential for improving the planning of operations. It will enable customers of container depots to avoid peak times and permit facility operators to adjust to the expected utilisation. Olaf Rendel (Fraunhofer Center for Maritime Logistics and Services – CML) depicted the current situation where important data is still missing. The approach to solve this problem offered by KIK-Lee involves a comprehensive analysis of mCLOUD data sources, including the assessment of data, providing recommendations for data sources and the analysis of the information required by drivers in order to optimise their route planning.

Discussion and wrap up

After the inputs and specific questions about the projects, the speakers and other participants discussed several topics, such as the necessity for data harmonisation and automated tools capable of extracting or transferring data to databases without the need for extensive human labour or specialisation. Though progress has been made in recent years, the harmonisation of procedures at European level is still on its infancy and better governance is necessary. Some countries employ a centralised approach to the collection and provision of data, which often turns out to be more complex.