



BMVI-Workshop series “Data Innovations for Smart Mobility in Europe”

Workshop No. 2: Data to support monitoring and policy decisions for climate and environment protection in the transport sector

Date: Wednesday, 04 August 2021

Location: Virtual Room (Zoom)

Time: 09.30 – 12.00 h (CET)

Summary

In today’s society, data has become essential in all areas, being the basis for most digital innovations and offering enormous potential for new business models, services and products.

Data plays a fundamental role in the transport sector as well. Digital technologies and data are used on a large scale to increase efficiency, reliability and safety of transport services and infrastructure provision. In addition, data based solutions contribute to reducing the consumption of resources and towards efforts to tackle climate change. Citizens can benefit greatly from data-based solutions, which enable seamless multimodal traffic, increase safety and improve the mobility experience in all types of environments.

The second event of the BMVI Workshop Series “Data Innovations for Smart Mobility in Europe” centered on the collection and utilisation of data in the transport sector to support monitoring and policy decisions in the transport sector for the protection of climate and environment.

Thematic overview

The workshop opened with words of welcome and a short introduction to the BMVI mFUND programme by Christian Schlosser, head of division *Data Innovations, Grant Initiatives* (DG 21) of the German Federal Ministry of Transport and Digital Infrastructure (BMVI). Out of a total number of more than 300 mFUND projects, more than 30 focus specifically on the collection, assessment and utilisation of data in the transport sector with the aim of supporting activities for protecting both climate and environment.

Innovative solutions

During the main segment of the workshop, individuals from five innovative projects presented their experiences – including their original project objectives, their achievements, successes and also restrictions – with the collection and use of data for monitoring and forecasting purposes.

Data monitoring and assessment models



The presentation of the project S-VELD made by Pieter Valks (German Aerospace Center) clearly illustrated how Copernicus data can be used to assess the effects of traffic emissions on the air quality in Germany. The project has also demonstrated how further sets of data provided by the German Federal Highway Research Institute (BASt) and the German Environment Agency (UBA) were essential for both bottom-up and top-down approaches to estimating emissions and air quality, thereby highlighting the importance of access to these various types of data.

Mårten Wilkens and Karin Schildknecht (Community Growth DACH) explained that the project ClimateOS, initiated in 2018 as a part of the Swedish national transition plan, has exemplified how cities can plan and implement climate protection actions with the support of data. The project has developed a dynamic, data-driven platform which helps cities to build, implement and maintain a Living Climate Action Plan. Several cities around the globe are already profiting from the use of this platform. The community of users has developed an extensive knowledge base while at the same time facilitating the exchange and spread of good practice.

H-aero presented an innovative unmanned flight system for the collection of data which is powered by renewable energy, less polluting, more flexible and more reasonably priced than competing technologies. This award-winning flight system presented by Csaba Singer of Hybrid Airplane Technologies GmbH shows a high degree of possibilities for the collection of data as a carrier of a wide range of sensors and cameras for various applications.

Data-based tools for simulations and forecasting

Mobility Urban Values (MUV), a project funded within Horizon 2020, has shown how data can be used to understand and influence behavior in order to reduce traffic emissions. The project presented by Domenico Schillaci (PUSH) has combined information and gamification in an effort to influence the behavior of users of the transportation system towards healthier choices, showing how individual choices can contribute to greener and sustainable mobility.

The thematically connected mFUND projects KEF and FvT showed how machine learning models can be optimised with data to be used for the prediction of fuel consumption in trucks. Daniel Rohr (Tracks GmbH) explained that using several data sources, the system developed in the project can help fleet owners better understand how their decisions influence fuel consumption and, in a further step, how to effectively make decisions which will lead to a reduction of emissions.

Discussion and wrap up

After the presentations, speakers and other participants discussed, among other topics, the application of the innovative solutions in other countries or for additional applications, the importance of combining bottom-up and top-down approaches for monitoring and



forecasting purposes, standardisation issues and possible collaborations between actors in the fields.

The projects presented have shown a broad range of innovative approaches. In common, they demonstrated how data collection and simulation models can be important tools for making decisions leading to sustainable transport and mobility and achieving climate goals. Furthermore, some participants could identify possible partnerships and exchange on ideas for future common projects.