

BMDV-Workshop Series “Data Innovations for Smart Mobility in Europe”

Workshop No. 12: Public Transport transformed by data

Date: Tuesday, 27 September 2022

Location: Virtual Room (Zoom)

Time: 09.30 – 12.00 h (CET)

Summary

Providing sustainable, affordable and efficient mobility to all citizens is the goal of cities and regions around Europe and world-wide. The improvement of public transportation plays a crucial role for the reduction of CO₂ emissions, noise and other pollutants in cities, protection of resources and biodiversity. Data innovations can support governments and cities to achieve these goals by driving meaningful changes in the mobility sector. Invited speakers offered an input for the exchanges with participants about the challenges and opportunities of transforming public transport by data, making it more attractive for all citizens.

Thematic overview

Tim Rittmann (Federal Ministry for Digital and Transport, BMDV) welcomed participants and introduced the invited speakers and their respective projects. One of the goals of the mFUND programme is to improve public transport accessibility to everyone, regardless of their proximity to urban areas and, therefore, several projects selected for funding provide innovative solutions based on data use. Rittmann spoke about his own experiences living in Berlin, a city with a good public transport infrastructure and the importance of the topic for the achievement of more sustainable and climate friendlier mobility.

Innovative solutions

The first project, CTran, was presented by Benjamin Heldt (German Aerospace Center, Germany). Heldt explained that the workforce in the lignite sector has declined rapidly since the reunification of Germany and consequently in these regions the population decreased and the share of elderly became proportionally higher than the average in the country. The use of mobility in these areas resembles rural regions, with 90% of the population owning cars and scarce public transport offers. The CTran project aims to make public transport more attractive in those regions. For this, the consortium is developing an app that helps users plan journeys with public transport. In turn, route data and travel time information is collected to help evaluate the user behaviour. The app intends to incentivise users to shift to public transport by earning e.g. sustainability points through its use.

Efe Usanmaz (UITP, Belgium) introduced Data4PT, a Connecting Europe Facility (CEF) project aiming at advancing data-sharing practices in the public transport sector. To achieve this objective, Data4PT supports EU member states in the deployment of harmonized European public data standards for the implementation of EU-wide multimodal travel information services (MMTIS) delegated regulations. To assist the operators and ministries in this process, Data4PT offers different types of support: capacity building, technical support, exchange of experiences and creation of business models. As part of the supporting activities, several webinars on the basics of standards took or will take place open to interested parties and free of charge. Additionally, all sorts of information has been made available on the website-knowledge which is accessible to everyone.

The German Passenger Transportation Act states that public transport has to be completely accessible by 2022. Project OPENER-next, represented by René Apitzsch (Chemnitz University of Technology, Germany), aims at supporting the achievement of this goal by collecting accessibility data of public transport stops and making them available for users and operators. The data is collected through crowdsourcing to lower the acquisition effort and enable quality assurance. A standardized and open data basis is utilized to enable transfer of the recorded data to software applications. Users of the barrier data collection app are encouraged to answer short, clear questions while waiting at a public transport stop. Assigned OpenStreetMap (OSM) Tags are set in the backend which are uploaded via a personal OSM account.

Ride2Rail, a Horizon 2020 project was presented by Giuseppe Rizzi (UITP, Brussels). Rizzi observed that in many urban and suburban areas single car occupancy still prevails. Ride2Rail aims to develop an innovative framework for intelligent mobility to establish carpooling as complement for public transport. The goal is to encourage ride sharing to reach public transport with the support of a driver or a travel companion application. The project is implemented in four demo sites, ranging from big cities like Athens to rural regions like the South Moravia region. To establish different multimodal travel offers, seven clusters of travelers were identified according to personal preferences, e.g. quick, cheap or reliable travel. Users can open the travel companion app and are presented with ride sharing options ranked through Machine Learning according to their own preferences (e.g. quick travel).

Discussed topics

Many topics were discussed by the participants after each presentation and at the end of the workshop. One aspect discussed was the accessibility of digital services for the elderly, since there seems to be more resistance to the use of new approaches or technologies by this group. Heldt explained that for CTran, the consortium tackles this issue by holding workshops with elderly people to receive input via a qualitative approach. Rizzi added that the instruction of users is one of the biggest difficulties for MaaS applications, regardless of

age. To ensure that the users of their driver companion app were instructed accordingly, Ride2Rail held local events with volunteer users. Apitzsch agreed that involving the users is sometimes challenging and added that showing them the benefits of collecting data improves acceptance. When asked if aspects like barrier-free mobility were considered in the app developed by CTran, Heldt admitted that it had not been considered in the planning yet, but promised to include it in further consortium discussions.

When asked about the potential transferability of the application, Apitzsch (OPENER-next) explained that while the app is currently only available in German language, it can be used globally, as long as there is information about the public transport stops available in OSM. The translation of the application in other languages is a goal for future initiatives. Usanmaz pointed out that the cooperation between different stakeholders sometimes turns out to be challenging. However, if the cooperation relies on trust and an open exchange, there is great potential for success and fast results, especially referring to the establishment of standards that Data4PT is focusing on.

Participants also discussed the challenges related to the use of data for public transport and despite matters such as harmonization and standardization playing a large role in many projects, users' behaviors seem to offer one of the strongest challenges for implementation of new services.