Technische Berichte

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Autor(en): Project Consortium TUM Living Lab Connected Mobility

Herausgeber: Anne Faber, Florian Matthes, Felix Michel

Titel des Berichts: Digital Mobility Platforms and Ecosystems

Titelzusatz: State of the Art Report

Abstract: To support the digital transformation in the area of Smart Mobility and Smart City, the TUM Living Lab Connected Mobility (TUM LLCM) research project was initiated, funded by the Bavarian Ministry of Economic Affairs and Media, Energy and Technology (StMWi) through the Center Digitisation.Bavaria, an initiative of the Bavarian State Government. The project bundles the relevant research, implementation, and innovation skills of the Technical University of Munich in the fields of informatic and transport research. The research project contributes to the design and implementation of open, provider-independent digital mobility platforms. The actual commercial implementation of these platforms is carried out by leading digital providers based on the market requirements of customer-oriented mobility solutions. Another significant achievement of the project is the networking of already established and currently arising mobility providers, service providers, developers and users on a personal, organizational and technical level. Thus, the project contributes to the establishment of a mobility ecosystem, which is necessary for the success of the mobility platform. Thereby, smaller companies and start-ups are enabled to develop their own digital mobility services with reduced financial, organizational and technical effort. The TUM Living Lab Connected Mobility thus simplifies and accelerates the exchange regarding the development of digital mobility services between university, industry and end-users. The university contributes to this digital ecosystem with current research findings from key areas of digital mobility platforms such as data analysis, app development, service monitoring, platform governance and efficient and legally secure integration of other partners. It draws on the established cooperation between TUM, the local industry, but also the local start-up scene to account for practical demands in the field of digital mobility platforms from the beginning. Furthermore, the dialogue with local and regional institutions for traffic management and operations (administrations, associations, system and service operators) places a significant role in the development processes of the Living Lab Connected Mobility.

Stichworte: Platform and Ecosystem Governance; Partner On- and Offboarding; Crowd Sourcing; Crowd Innovation; Service Mashups; Platform Business Models; Accountability; Multi-Layer Monitoring; Visualization; Sensing on Demand; Proximity Services; Data-Driven Architecture Engineering; Indoor-Maps; Eco-Sensitive Traffic Management; Traffic Management for Major Events; Collaborative Mobility Services; Temporal Geospatial Data; Geospatial Big Data Exploration