Introduction to Smart Mobility Ecosystems and Services Minitrack

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This HICSS minitrack focusing on different aspects of Smart Mobility Ecosystems and Services is now organized for the third time. Advances in technology in terms of increased autonomy, connectivity, and electrification as well as diverse mobility business models of shared vehicles are changing mobility and transportation in profound ways. At the same time there is increasing demand for more sustainable transportation. Digital platforms and services are elemental in orchestrating sustainable smart mobility service ecosystems: data that represents accurately, for instance, location of passengers and service providers, weather, usage, and maintenance is the basis for new service design. Identification and communication systems that link specific physical things to specific digital addresses offer possibilities to communicate, transact, pay, build trust, sense, and activate "things" from the internet – and to design novel services based on the data generated. Autonomous vehicles, electric cars and mobility related sharing economy services are all built on platform thinking. The three papers in this minitrack deal with services in this area.

In the **first** paper, "Delivery Drones - Just a Hype? Towards Autonomous Air Mobility Services at Scale", *Sara Ellenrieder, Nicolas Jourdan,* and *Melanie Reuter-Oppermann (*all from Technical University of Darmstadt, Germany) derive a structured overview of challenges for autonomous drone operations based on semi-structured interviews with drone and aviation experts. They also provide practical insight into promising solution approaches that could transform the current hype into sound business models. The findings point to a multitude of operational, technical, social and legal issues that have not been identified in earlier literature. Especially societal adaption and the development and interaction with AI-based systems pose a major challenge to providing autonomous air mobility services in the near future.

In the **second** paper, "Lessons from the Regulation of E-scooters through the MDS Standard: Policy Lessons for Connected Vehicles", *Daniel Rudmark (*RISE Research Institutes of Sweden)*, Johan Sandberg (*Umeå University)*, and Richard T. Watson* (University of Georgia) explore new data streams generated by connected vehicles and what can be learned from how public entities leverage ubiquitous data streams for policy development and enforcement. The authors draw on a case study of the standard Mobility Data Specification (MDS) and its use by cities to regulate E-scooter operators. The findings suggest that the richness of real-time data changes the speed of policy revision, data access enables moving some micro-decisions to the edge, and policies will be formulated as fixed or flexible with different amendment rules.

In the **third** paper, "Utilizing Fleet Data: Towards Designing a Connected Fleet Management System for the Effective Use of Multi-Brand Car Data", *Felix Sterk, Samir Frank, Isabel Lauster,* and *Christof Weinhardt (*all from Karlsruhe Institute of Technology) focus on how in professionally managed fleets, car connectivity promises additional benefits in terms of costs, environment, and maintenance, but problematically many fleet managers are unaware of using connected car data and still associate telematics with retrofitting each vehicle. By following a design science research approach and by utilizing multi-brand data from car manufacturers' backend shared by data marketplaces, the authors aim to develop a connected fleet management system to increase fleet operations' efficiency and effectiveness. Drawing on the theory of effective use, the authors propose meta-requirements and tentative design principles and instantiate them in a prototype artifact.

Together, these three papers present a snapshot of the emerging issues relevant to the field. Furthermore, this minitrack is intended to provide a venue to present findings, create future research collaborations around the emerging phenomenon and initiate debate on the future of these service.

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