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Life as a Service in the smart city

Fair play in information systems design, data integration and planning

Ronit Purian PurianRo@tau.ac.il; Jos van Hillegersberg j.vanhillegersberg@utwente.nl;
Charles Catlett catlett@anl.gov

The unprecedented growth of population in cities over the last decades makes the smartification of cities an urgent topic, mutually embedding software development and urban planning. In a new economy of platforms which are ubiquitous, embedded, pervasive and subsidized, the digital is augmented in the physical world, from transportation to social interaction, pollution and food, stress and speed. But little attention is paid to the generative mechanisms along the evolution of the digital infrastructures. A framework of open mobility data can be of great value for transport policy and planning, addressing the direct and indirect effects of transportation on sustainability, inequality (e.g., Banister, 2018), etc. However, municipalities and governments worldwide create partnerships with new service providers such as Uber, Lyft, Bird, Via and the like, often without guarantee of access to their own citizens' mobility data. We propose new standards for open mobility data. Defining the minimal required data is in process (spatiotemporal data; speed; circulation – access on the outskirts of the city, suggesting equity-efficiency tradeoff; personal characteristics – indicating distribution of wealth; public transport usage). Data can be obtained in different ways (e.g., Ricciato et al., 2018). By doing that, we emphasize the integration of urban data, carefully crafting planning processes into new hierarchies of system goals, with multiple data sources. Research into Agent-based models that capture complex human behavior will allow us to study innovative urban designs and technologies and their impact on sustainability and resilience of smart cities (Benenson & Torrens, 2004). Today, in the age of technological acceleration and global cities (e.g., Castells, 2010), there is a need in a new perspective that integrates not only the silos into a holistic view but also the many systems and service providers into a principal-agent problem of collective action. Claiming for mobility data and better planning is a step forward.

The authors work in CODATA's task group, "Applying Data Integration and Data Science Tools toward Research of Urban Life and Smart Cities", to promote collaborations aiming to achieve this goal. CODATA is the Committee on Data of the International Science Council (ISC).

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