



City of Amsterdam

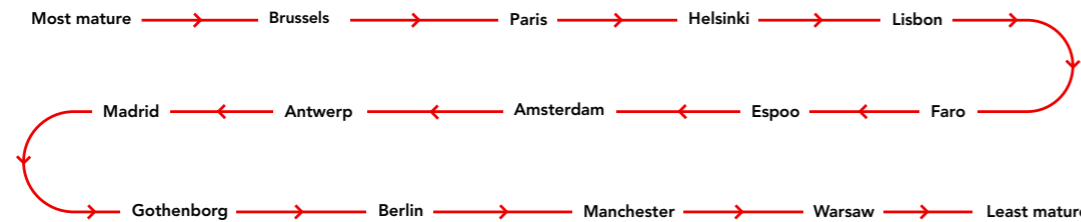
The opportunities, bottlenecks and practical possibilities of a European data standard for shared mobility operators

Introduction

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This research was commissioned by the Smart Mobility Team of the municipality of Amsterdam. This research aims to answer the following central research question: **What are the opportunities, bottlenecks and practical possibilities of a European data standard for shared mobility operators?** To answer this question, several interviews were conducted with people from mobility teams of other European cities, organizations in the Smart Mobility sector, legal specialists, data specialists, urban planners and social scientists. Moreover, a document study is executed and the following two sub-questions are used: (1) What is exactly a data standard and how does it provide value for municipalities? and (2) What are the basic principles of CDS-M and its rationale for development?

The City Data Standard - Mobility (CDS-M) is an initiative of the Smart Mobility Team that is currently in the development phase. This research contributes to the positioning of the CDS-M in the larger European market field and the understanding of the design and implementation criteria required for a European data standard for shared mobility operators. The results of this research will support choices in the next steps of the development of CDS-M and the policy of the Smart Mobility Team in 2021 with regard to data governance of shared mobility.



Methods

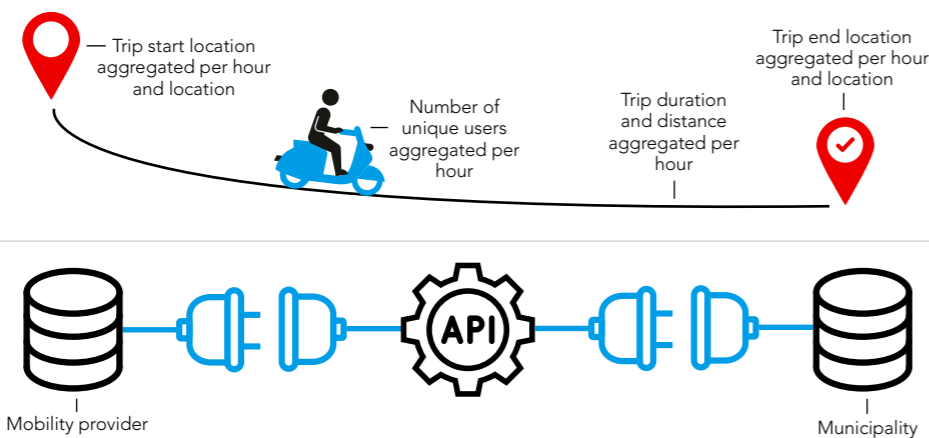
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The sources used in this research are interviews, documents and observations. The findings are analyzed by the grounded theory, an interpretive qualitative data analysis technique which exists of three phases: open coding, axial coding and selective coding.

City Data Standard - Mobility

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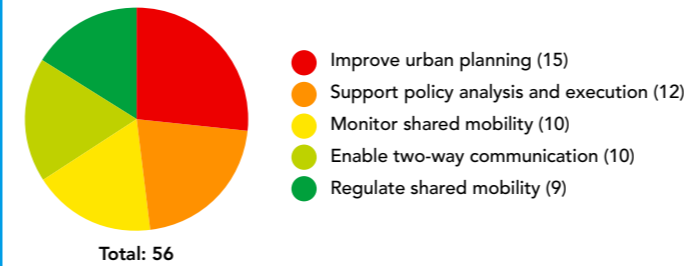
The CDS-M is an Artificial Programming Interface (API), which enables data transmission from shared mobility operators to the municipality in a standardized manner. In this way, the municipality gains insight into the activity of shared mobility in the city. This insight is necessary for the coordination and implementation of policy, in order to enable the shift to a sustainable Mobility as a Service (MaaS) eco-system in the city of Amsterdam.



Results - Value of a data standard

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Value adding aspects of a data standard



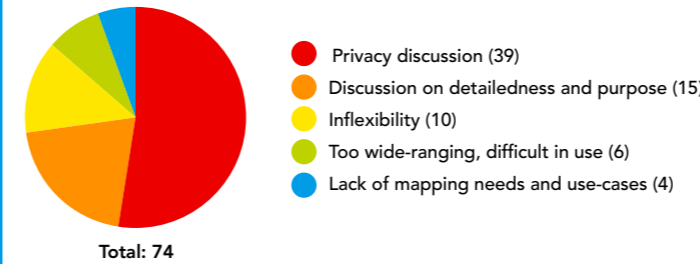
Results - Design

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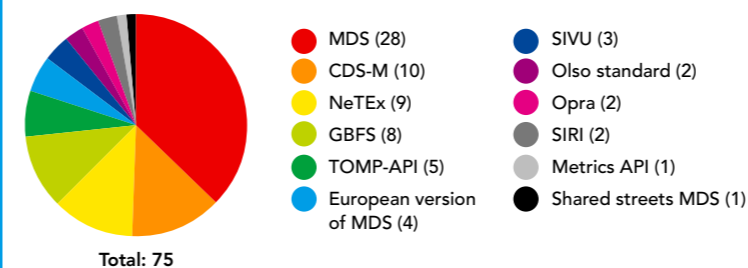
Opportunities in design



Bottlenecks in design



Practical possibilities in design



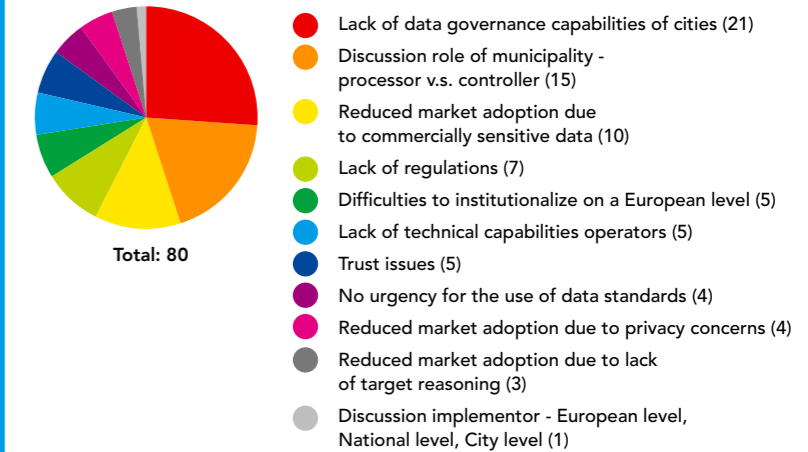
Results - Implementation

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Opportunities in implementation



Bottlenecks in implementation



Practical possibilities in implementation



Conclusion

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The opportunities in design are clear-use case mapping, aligning European data standards and cooperation with stakeholders, all to come to a qualitative design. The bottlenecks in design are the lack of mapping needs resulting in an inapplicable data standard that is inflexible. Furthermore, the obscurity of purpose and privacy hinders the creation of a European data standard. Multiple designs could function as practical possibility.

The opportunities in implementation are a strong legal framework, demand by all stakeholders, win-win offers, joint trust, strong cooperation and room for learning by piloting. The bottlenecks in implementation are the lack of data governance capabilities of cities and the accompanying resistance of shared mobility, due to unclear target reasoning, open data policies and commercially sensitive data. Lack of regulations, difficulties of institutionalization and the discussions about the role of the municipality and implementation are bottlenecks too. Practical possibilities are the use of a Trusted Third Partner, a City-based data management model, a combination of data standards and the use of a MaaS map and Toolkit data management.

Recommended further research

Research into use-cases, the pros and cons of different data standards and implementation strategies and further requirements for successful implementation.