

Analysis of the impact of on-demand mobility services on mobility in the city of Munich

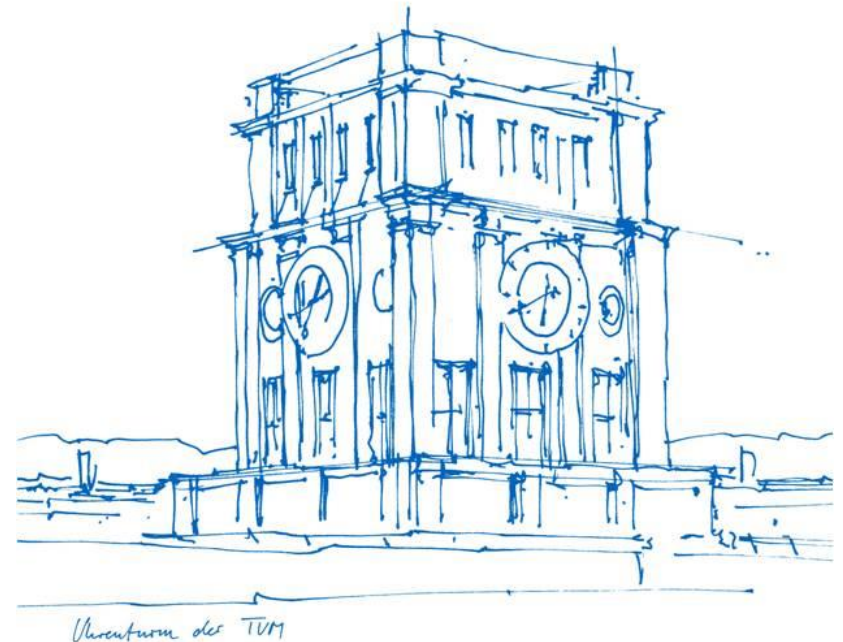
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Research Motivation

Urban Mobility Challenges

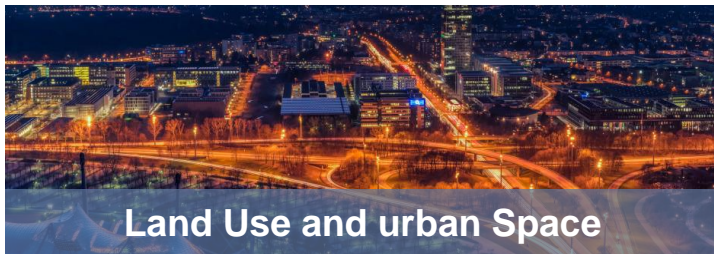


Urbanization



Traffic

Emissions



Land Use and urban Space

The Solution to all the Problems?



Pictures: Web

Objective and Research Questions

Questions: What are the Impacts of future **On-Demand Mobility Services** on **Traffic Flow, Emissions and Space** in the City of Munich?

What are the relevant **influencing factors** for the future development of On-Demand Mobility Services?

Under which general conditions can On-Demand Mobility Services lead to an **improvement** of Traffic Flow, Emission and Space in the City of Munich?

Hypothesis: On-Demand Mobility improves the traffic flow in the city.
On-Demand Mobility reduces the emissions in the city.
On-Demand Mobility reduces the land consumption in the city.



Methodology and Research Design

Literature-
Review

- Orientation in the study field
- "State of the art"
- Identification of applied methods

Explorative - Qualitative
Expert Study

- Orientation in the study field / Consideration of different perspectives
- Identification of relevant parameters / system variables

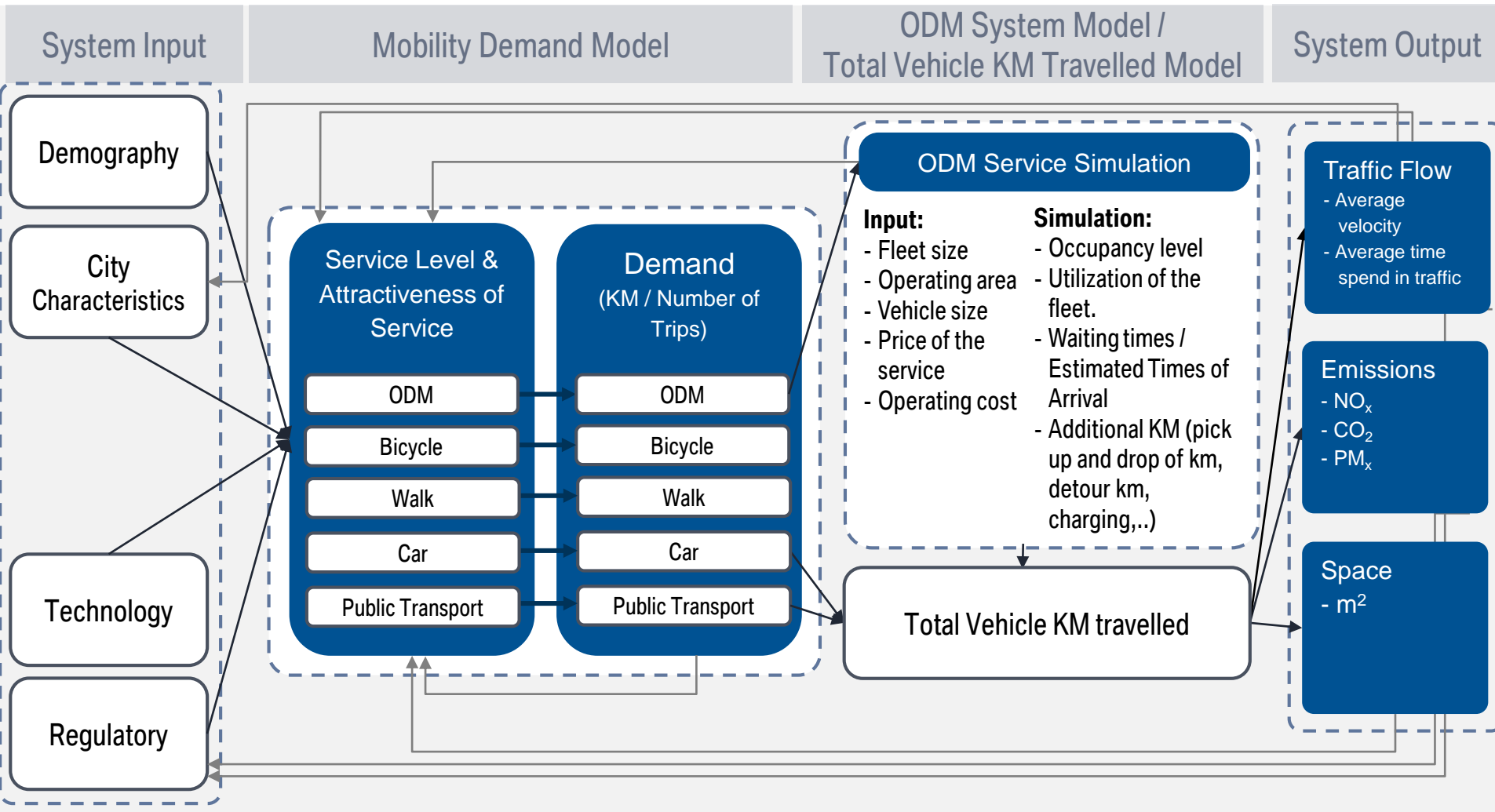
Quantitative
System Model
System Dynamics

- Application of CLDs, as well as Stock and Flow diagrams, to identify the mechanisms acting within the system
- Helps to identify patterns on the system's behaviour - understanding the impact of different system levers
- Quantitative modeling of the system model using suitable data sources and relevant scenarios
- Software: PowerSim (System Dynamics)

**Preparation and Interpretation
of the Results**

- Evaluation and interpretation
- Identification of relevant system levers
- Formulation of suitable recommendations for action

System Model - Overview



Thank you for your Attention!



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