

RESEARCH BACKGROUND

Our common mobility challenges

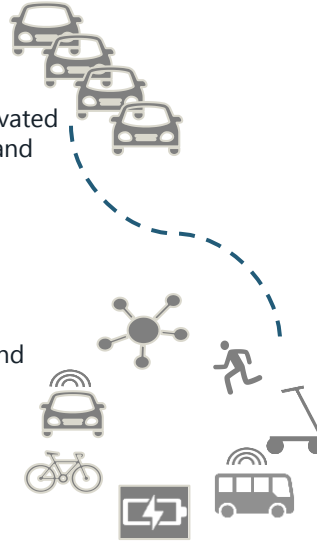
Since decades society face an increasing passenger travel activity[1]. Worldwide mobility systems are based on car ownership, individual mobility and fossil fuels. It entails aggravated mobility externalities, e.g. traffic jam, accidents, air pollution, and noise.

The nature of mobility is changing

Innovations are triggered by Shared, Automated, Connected, Electric mobility [2],

Mobility as a Service (MaaS) concepts, Mobility on-demand and the integration of Automated Vehicles,

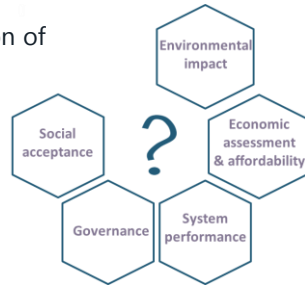
Multimodal, Intermodal mobility [3], Micro-mobility



RESEARCH INTEREST

The impacts of such innovations and technologies on mobility are still uncertain [4].

The **knowledge gaps** concerning the introduction of Automated Vehicles address [5]:

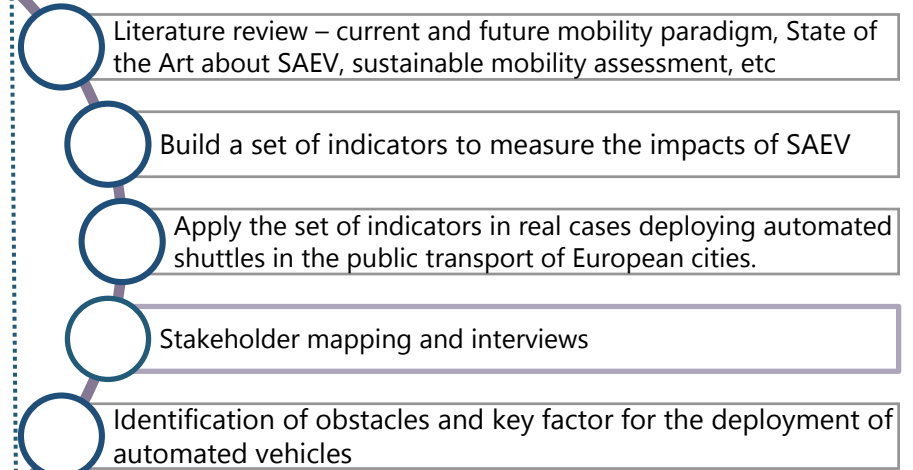


In this regard, this research aims to investigate:



What are impacts of shared automated electric vehicles (SAEV)?
How they can contribute to change of the mobility paradigm and sustainable mobility?

RESEARCH STRUCTURE AND METHODS



RESULTS AND CONTRIBUTIONS



- Multi-dimensional set of indicators for sustainability assessment of shared automated electric vehicles (SAEV)
- Results and sustainability assessment on real world test with automated vehicles integrate into public transport. Comparison among different pilot sites and countries.
- Stakeholder mapping and analysis about the introduction of Avs into the mobility system
- Transport policy recommendations towards Sustainable Urban Mobility Plans (SUMP)

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- [3] Borroni-Bird, C.E., 2012. Personal Urban Mobility for the Twenty-First Century. In: Inderwildi, O., 624 King, D. (Eds.) Energy, transport, & the environment. Addressing the sustainable mobility 625 paradigm, vol. 467. Springer, London, New York, pp. 313–334.
- [4] Shaheen, S., Bouzaghane, M.A., 2019. Mobility and Energy Impacts of Shared Automated Vehicles: a Review of Recent Literature. Curr Sustainable Renewable Energy Rep 6, 193–200.
- [5] Fagnant, D.J., Kockelman, K., 2015. Preparing a nation for autonomous vehicles: opportunities, 699 barriers and policy recommendations. Transportation Research Part A: Policy and Practice 77, 700 167–181.