

# Call for Master Thesis at the Institute for Transport Studies

## Working Title

Roadside infrastructure supporting automated vehicles in the urban context: analyzing impacts and the potential roles of stakeholders

## Starting Situation / Framework Conditions

Automation is a major trend in transport – whether we are looking at driver assistance systems or fully automated vehicles. Based on current studies, impacts on people's mobility behavior, urban street-design and settlement patterns are expected. However, predictions of the technological development vary strongly: from autonomous vehicles to fully connected vehicles dependent on roadside infrastructure and several types in between. These scenarios cause different requirements of type and number of additional roadside infrastructure to support automation of vehicles and raise the question who is responsible (and to which extend) for providing, financing and/or maintaining these infrastructures – the public sector or private companies?

## Aim of the Master Thesis

- To identify scenarios and level(s) of roadside infrastructure needed
- To identify impacts/consequences on public space, city governments (street authorities), different street user groups and industries
- To assess the interaction between automation in transport and roadside infrastructure and to estimate related costs
- To identify best practice examples and to analyze conventional measures as alternatives
- To contribute to the question of responsibilities of public sector or private companies as mentioned above by an independent, transparent and balanced assessment
- To gain an understanding how technologies determining our living environment have to be considered in mobility and sustainability policies

## Methods

- Literature study
- (Semi-Structured) interviews with different stakeholder groups considering different inherent interests, alternatives and societal perspective of benefits.
- Analysis of costs and benefits of investments and responsibilities
- Providing recommendations in the light of general societal benefit, sustainable traffic in cities and livable street design.
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## Co-operations

- The Vienna City Administration is supporting this master thesis by providing information on request.
- Depending of the individual choice of the research questions and the quality of the work, a presentation may be possible to an audience of experts and practitioners in the mobility sector.

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## Notice

Language: English / Deutsch