Evaluation of potential value of MaaS on different defined and simulated scenarios

**This aim of the thesis** is to evaluate the potential value of Mobility as a service (MaaS) on different defined and simulated scenarios with the access to empirical evidence.

**Background**

With increasing transport demand, the current way in transport supply is deemed unsustainable and requires innovative services that could support seamless mobility and a shift from car ownership to user ship. An emerging trend towards this direction is the integration of on-demand modes in conjunction with public transport, leading to the Mobility as a Service (MaaS) concept.

MaaS aims to facilitate seamless, intermodal travel, with the goal of providing a sustainable alternative to private car. Public officials and practitioners have for several years sought assessments of the sustainability of MaaS for informed decision making, governance and service design. The roadmap of MaaS is now in place in Sweden (see <http://kompis.today/fardplanen/>). However, the impacts associated with MaaS depend on the nature of the trip being served, the type of the service provided and the service coverage. MaaS deployment and outcomes vary by region and are influenced by socioeconomics and demographics, overall trip patterns and the quality/coverage of existing public transit systems. Deployment is also affected by the availability and quality of the regional communications infrastructure, such as the availability of real-time data to support transit planning and services. It is impossible to have a one-for-all decision-making without knowing the potential impact values of MaaS in different representative scenarios.

Current literature claims that MaaS can encourage more sustainable travel behaviour and deliver net positive impacts on the transport system. However, whether these impacts are marginal or significant is unclear or limited to pilot tests (Sochor et al., 2016, Strömberg et al., 2016, Strömberg et al., 2018)[[1]](#footnote-1). This creates barriers for decision-making on the policy and regulation aspects. Without further guidance from policymakers, regulators and planners, the implementation of MaaS could be hindered. The lack of knowledge on the environmental, economic and social sustainability impacts of MaaS is a critical issue, given current levels of interest in the concept.

Hence, this thesis aims to provide reference values of MaaS by evaluating its impacts on environmental, economic and social aspects on different defined and simulated scenarios with the access to empirical evidence.

**We seek one student or a team of two students,** preferably with background on civil engineering, simulation, urban planning and transportation planning.

The thesis work is hosted by Integrated Transport Research Lab (ITRL) at KTH. The thesis is part of an ongoing research project about KOMPIS <https://kompis.me/> and could be supported by data access through projects SMSS (sustainable mobility services södertälje) and MMiB (Moden Mobilitet i Barkarbystaden).

Depending on timing and results, you may also have the opportunity to write a scientific paper based on your work.

**Your application, including CV and a motivation letter, is welcome to**:

Mia Xiaoyun Zhao – [mia.xiaoyun.zhao@itm.kth.se](mailto:mia.xiaoyun.zhao@itm.kth.se)

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| Application deadline | 2020-01-20 |
| Selection process end | 2020-02-01 |
| Start period | 2020-02-15 |
| End period | 2020-09-30 |

**About Integrated Transport Research Lab - ITRL**

ITRL is a multidisciplinary and multi-stakeholder arena that brings together experts from various fields in order to contribute to the development of a sustainable transport system. The main research question is *How can new technology contribute to a sustainable transport system?ow How*

More information at: [www.itrl.kth.se](http://www.itrl.kth.se).

1. Sochor, J., Karlsson, I. M., & Strömberg, H. (2016). Trying out mobility as a service: Experiences from a field trial and implications for understanding demand. *Transportation Research Record*, *2542*(1), 57-64.

   Strömberg, H., Karlsson, I. M., & Sochor, J. (2018). Inviting travelers to the smorgasbord of sustainable urban transport: evidence from a MaaS field trial. *Transportation*, *45*(6), 1655-1670.

   Strömberg, H., Rexfelt, O., Karlsson, I. M., & Sochor, J. (2016). Trying on change–Trialability as a change moderator for sustainable travel behaviour. *Travel Behaviour and Society*, *4*, 60-68. [↑](#footnote-ref-1)