Understanding future freight transport

Digitalization and automation will have an impact on future road freight transport, but *how* is still an open question. On the one hand, data can be used to improve efficiency and increase fill rates in transport. This has the potential to improve how vehicles are used and reduce the demand for vehicle kilometres needed, and thereby the emissions from road freight transport. On the other hand, e-commerce is expected to increase with an increased transport demand as a consequence. Furthermore, driverless vehicles will reduce the costs of road freight transport, which might lead to increased road freight transport.

Recently ITRL led a project where four future scenarios for road freight transport was developed. More than 50 experts from 30 different organizations were engaged in the project.

In this project, we would like to investigate and analyse how road freight transport will develop in the four different scenarios: how are aspects such as transport demand, CO2 emissions and vehicle kilometres likely to develop in the different scenarios?

In the thesis, the scenarios should be modelled using System Dynamics, and the impacts of the parameters should be analysed and presented.

**We seek one student or a team of two students** with an interest in modelling, simulation, system design, and/or automatic control.

The thesis work is hosted by Integrated Transport Research Lab (ITRL) at KTH.

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

**Your application, including CV and a motivation letter, is welcome to** Anna Pernestål – pernestal@kth.se

Applications will be evaluated continuously, so please submit your application as soon as possible.

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| --- | --- |
| Application deadline |  |
| Selection process end |  |
| Start period |  |
| End period |  |

**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).