



## Spatial and Social patterns of passenger demand in Amsterdam

### General description

Public transport services strive to offer a high level of accessibility to all users. Notwithstanding, the accessibility offered by public transport services exercises inherent spatial variations. Public transport services are often oriented towards the busiest activity areas. Urban economics will often result with higher real-estate prices in the city centre where accessibility is highest. This can have consequences for the average distance (and thus fare) travelled by users residing in different neighbourhoods and having different income levels. At the same time, areas with higher density and higher levels of public transport usage may be better served by public transport, hence resulting with a non-trivial relation between accessibility and socio-economic characteristics.

### Assignment description

The master graduation project will involve the following activities, all in relation to the case of the public transport system in the Amsterdam region:

- Computing public transport accessibility indicators
- Analysing origin-destination demand patterns
- Segmenting the demand patterns in relation to key socio-demographic variables
- Investigate the relation between service accessibility and socio-demographic characteristics
- Consider implications for fare policy strategies

This analysis will ultimately allow answering questions such as whether passengers living more centrally perform fewer and shorter trips? do passengers with a lower income tend to perform longer trips? do people with higher income benefit from higher levels of accessibility?

### Candidate background

T&P or TIL students who have knowledge and interest in public transport planning and have affinity with data analysis and spatial analysis.

### Research group

Transport & Planning Department, Dr. Oded Cats, o.cats@tudelft.nl

### External support

The project will be performed in cooperation local public transport stakeholders in the Amsterdam Area, including internship possibilities.