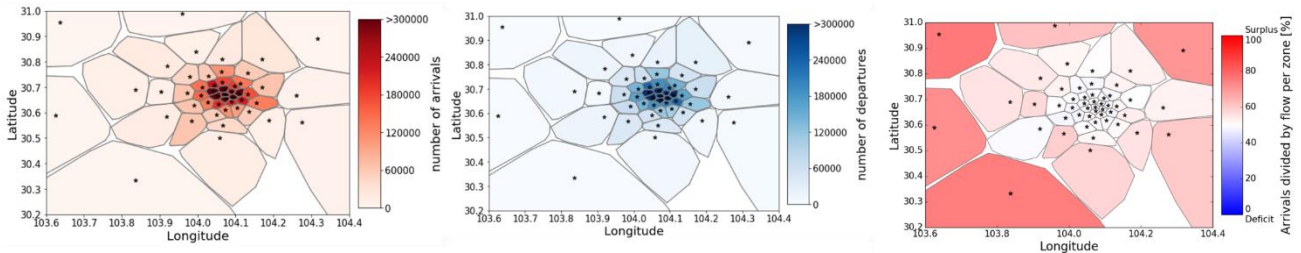


Shared mobility service providers' strategies



Problem description

Shared mobility service providers either operate a shared car/bike/moped/micro-mobility fleet or serve as a platform matching demand and supply in real-time (e.g. ride-hailing). Such services need a critical mass to thrive.

Service providers can adopt strategic business behavior in relation to market penetration e.g. invest in an aggressive strategy to concur a market share while running a loss at first and once competitors are out harvest by increasing service fees. Little is known about on how service providers' strategies may impact their market position and the level-of-service offered. Gaining more knowledge on the implications of service providers' strategies will allow devising more proactive and normative policies towards disruptive mobility services.

Assignment

In this project you will study the implications of alternative strategic behaviours that may be undertaken by shared mobility service operators that act in a competitive environment.

The project will involve the following steps:

- Develop an agent-based simulation model to mimic adaptive service providers' strategic decisions
- Design and conduct a series of experiments to test prevailing market conditions under a variety of circumstances (e.g. number of service providers, demand levels, quality of public transport alternatives, service providers initial investment barriers).
- Outline likely scenarios and possible policy pathways

The graduation project will take place as part of the on-going CriticalMaaS project.

Candidate

- Should have coding skills in Python or similar
- Should have affinity and interest in simulation models

Research group

Smart Public Transport Lab and the Sustainable Urban Multi-modal Mobility

Contact: Oded Cats o.cats@tudelft.nl or Shadi Sharif Azadeh S.SharifAzadeh@tudelft.nl