



Does ride-sourcing absorb the demand for car and public transport in Amsterdam?

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Structure

- Mobility trends and objective
- Modelling framework
- Amsterdam scenario
- Simulation scenarios
- Results and Conclusion





Mobility trends worldwide





User operator interaction

Flexibility of travel





Mobility trends worldwide



Car and public transport increasingly lose their share

Timely to assess the potential of such services





Ride-sourcing service replacing private cars







Modelling framework







Agent based simulation model for Amsterdam

Agent based simulation model

- Users as agents
- Autonomous decision making
- Activity based travel plan
- One iteration = one day

Amsterdam network

- 168,103 people
- 17,375 nodes
- 31,502 links

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2,517 public transport stops







Service definition

Public transport



Privately owned cars



Active modes



Ride-sourcing services

- Real time requests (no pre booking)
- Offers door-to-door service
- Private taxi like service









Fleet size to provide similar los for all PT trips



1417 (1%) vehicles is able to achieve door-to-door travel time

2834 (2%) vehicles is able to achieve stop-to-stop travel time





TUDelft

Impact of ride-sourcing on PT sub networks





Fleet size to provide similar los for all car trips



4251 vehicles (3%) is able to achieve near to similar travel time as car trips in base case

The fleet size corresponds to 9.1% of cars in base cases







Future direction

- Impact of a simultaneously shared service
- Multiple ride-sourcing operators
- Impact of cost on market share of users





Thank you!!!



