

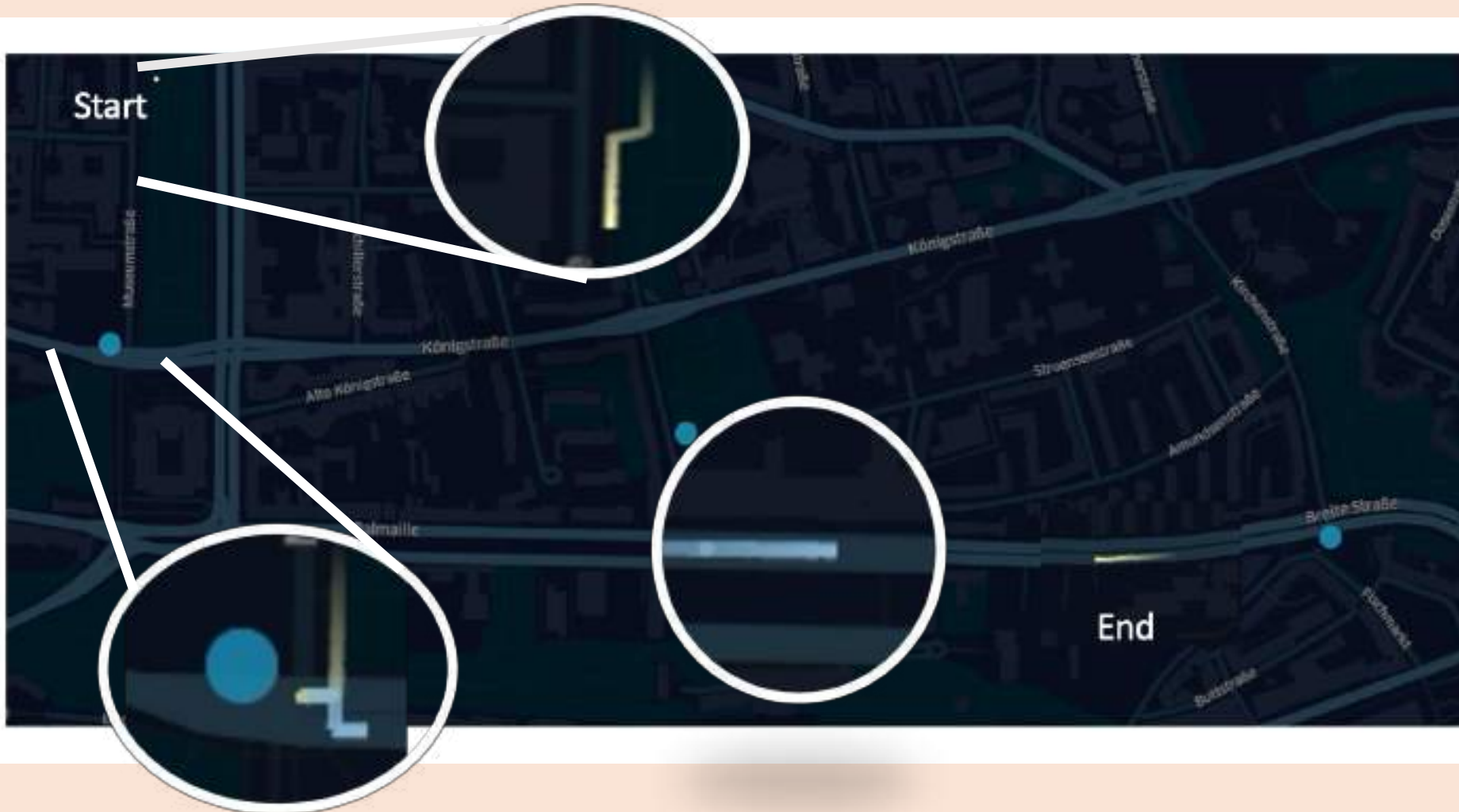
Multi-agent
simulation



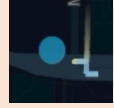
Traffic of Hamburg
First results (09/2020)



SmartOpenHamburg

Intermodal routing Walking-Cycling-Walking



-  StadtRad Station
-  Agent trajectory - Walking (yellow)
-  Agent trajectory - Bicycle (blue)
-  Modal switch at StadtRad Station from walking to riding a bicycle

Simulation:

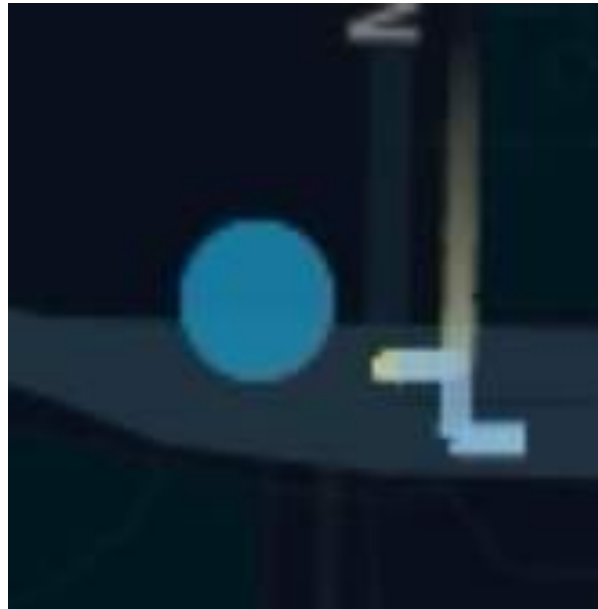
The agent has to find the best way from "a" to "b" in Altona by using a bicycle from StadtRad station

StadtRad Stations



Modal switch

at StadtRad Station
from walking to cycling



SmartOpenHamburg

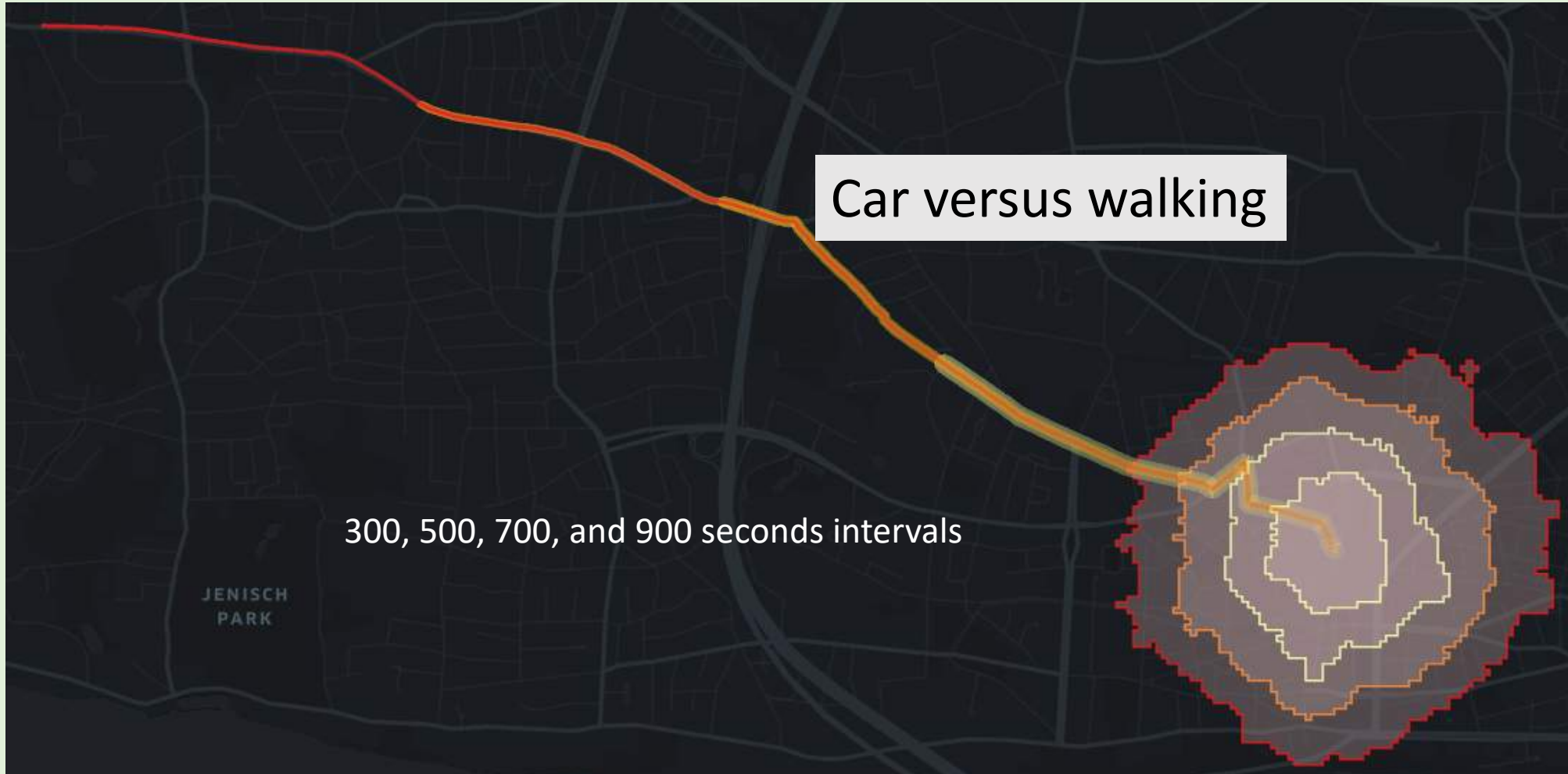
Agent trajectory
- Walking (yellow)



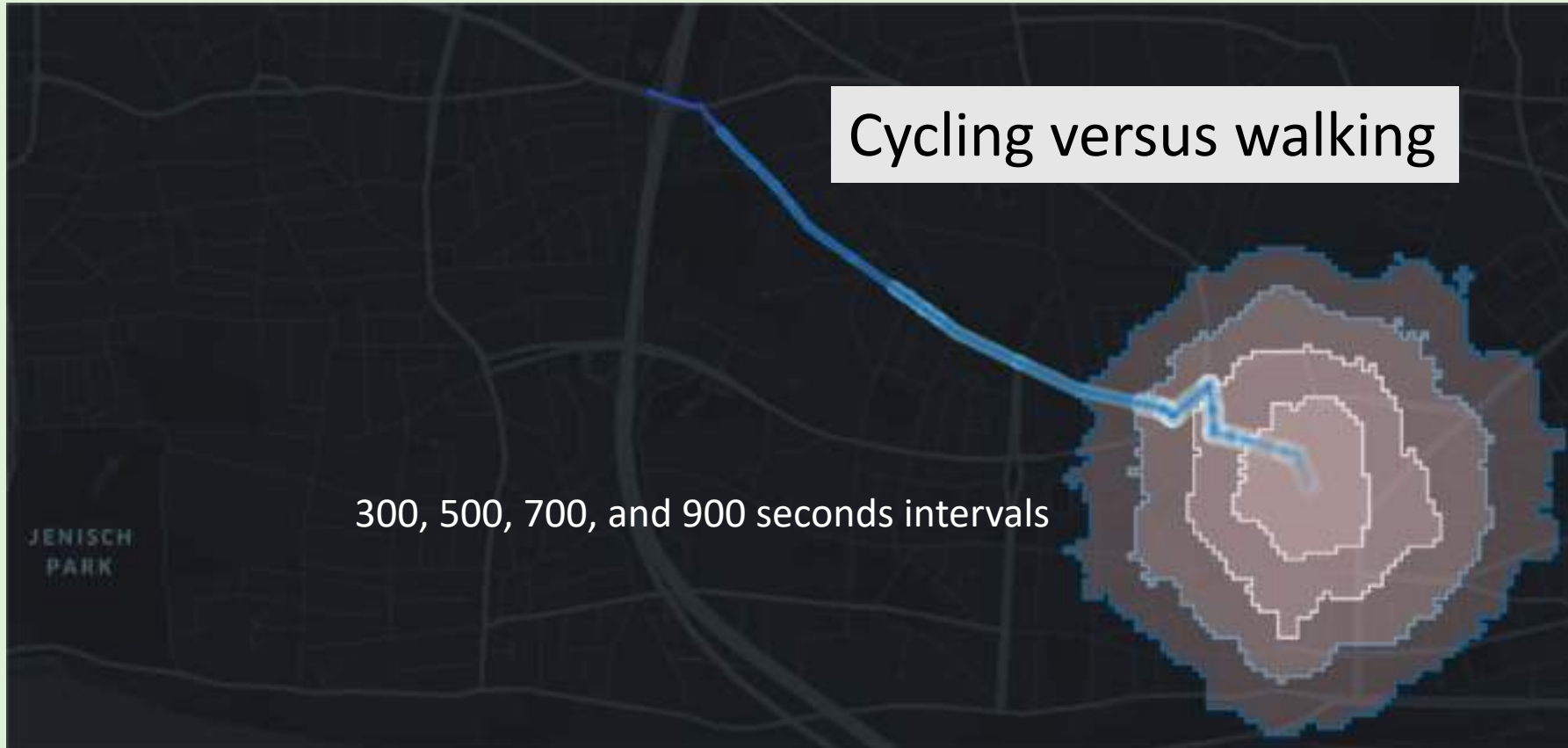
Agent trajectory
- Cycling (blue)



Isochrone maps: walking and driving distance



Isochrone maps: walking and cycling distance



References

- **BMVI (2018): Mobilität in Deutschland 2017 - Kurzreport Hamburg und Metropolregion**

Theses within MARS Group

- Ocker (2020): Entwicklung eines agentenbasierten multimodalen Verkehrsmodells mit MARS
- Mulack (2020): Multiagenten Simulation von Fahrradfahrern im Kontext urbaner Verkehrsdynamik
- Weyl (2019): Developing a generic multi-agent car model to simulate road traffic with MARS
- Löffler (2019): Smart Rescue im urbanen Raum : Ein agentenbasiertes Modell mit MARS zur Bestimmung der Helferanzahl innerhalb Hamburgs