

Applying German Spatial Planning



Ruby.Kim@abley.com

**Insightful solutions.
Empowering advice.**



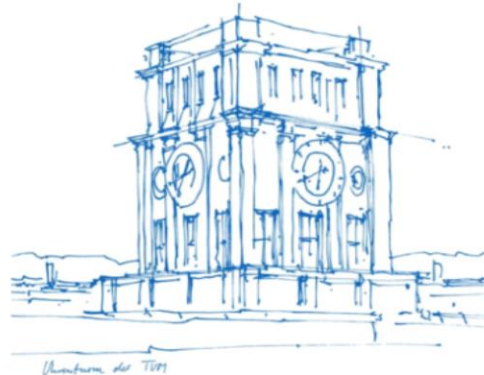
Assistant Professorship of Modeling Spatial Mobility
TUM Department of Civil, Geo and Environmental Engineering
Technical University of Munich



Northeast Munich: Forecasting the Land Use and Transportation Impacts of the Proposed Urban Development

Ruby Kim

12. December 2017



Landeshauptstadt
München
**Referat für Stadtplanung
und Bauordnung**

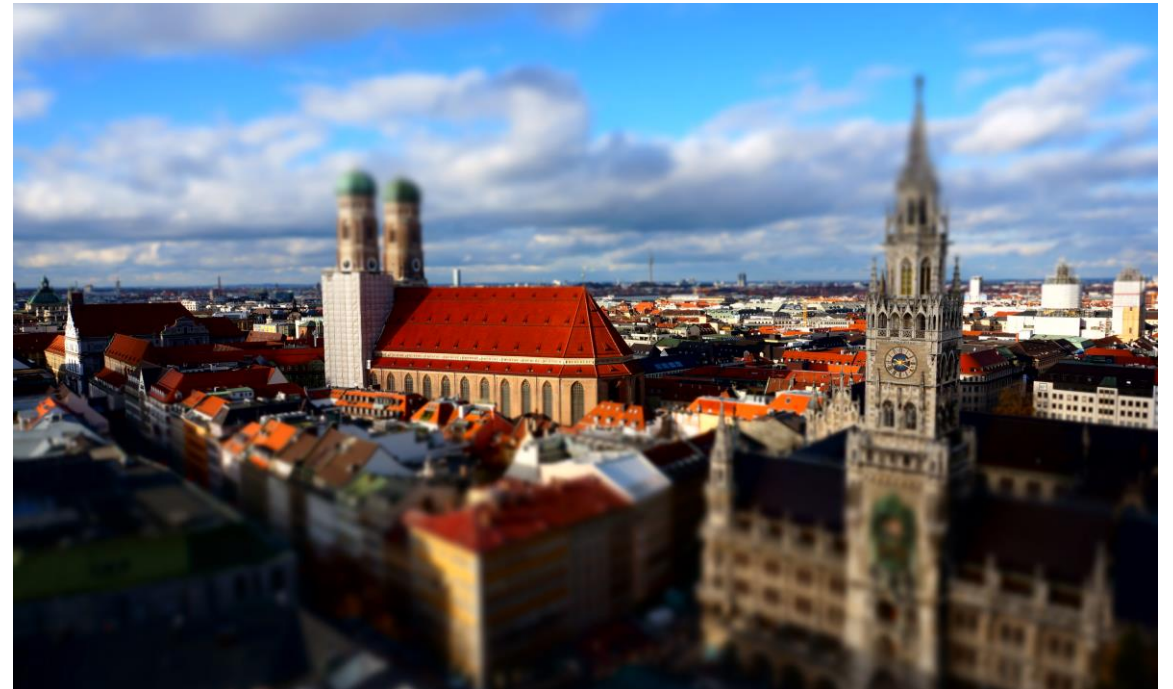


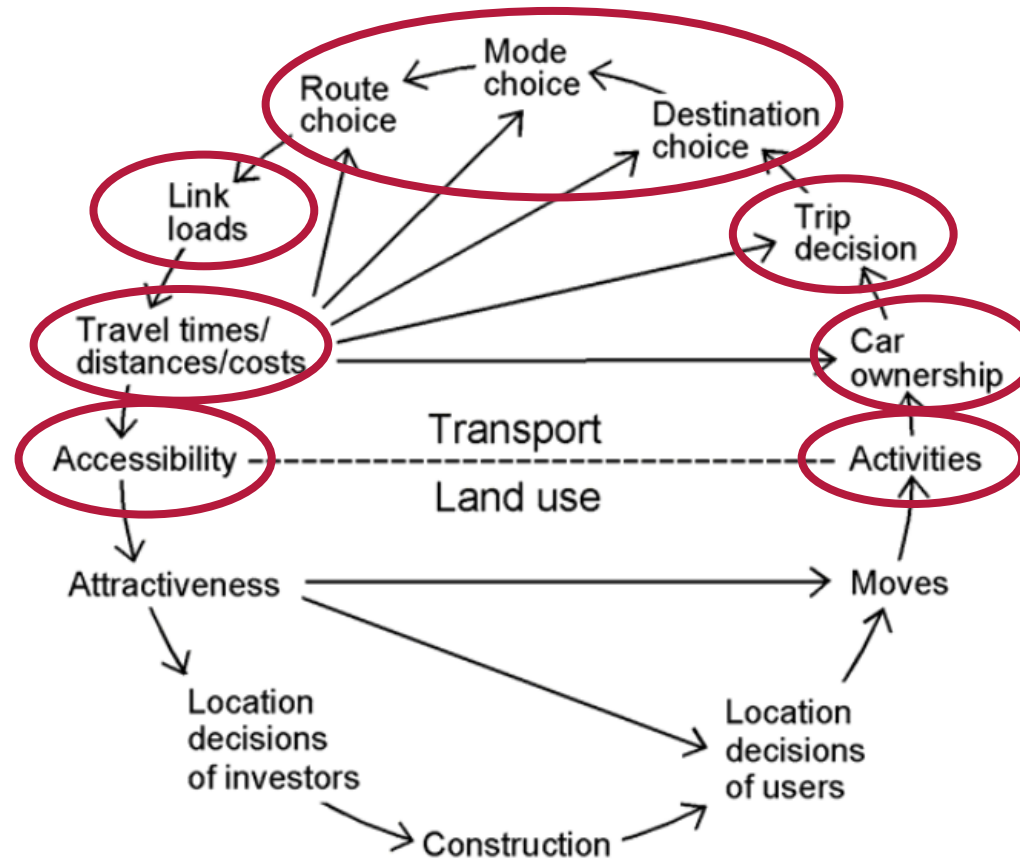
City of Munich
**Department of
Urban Planning**



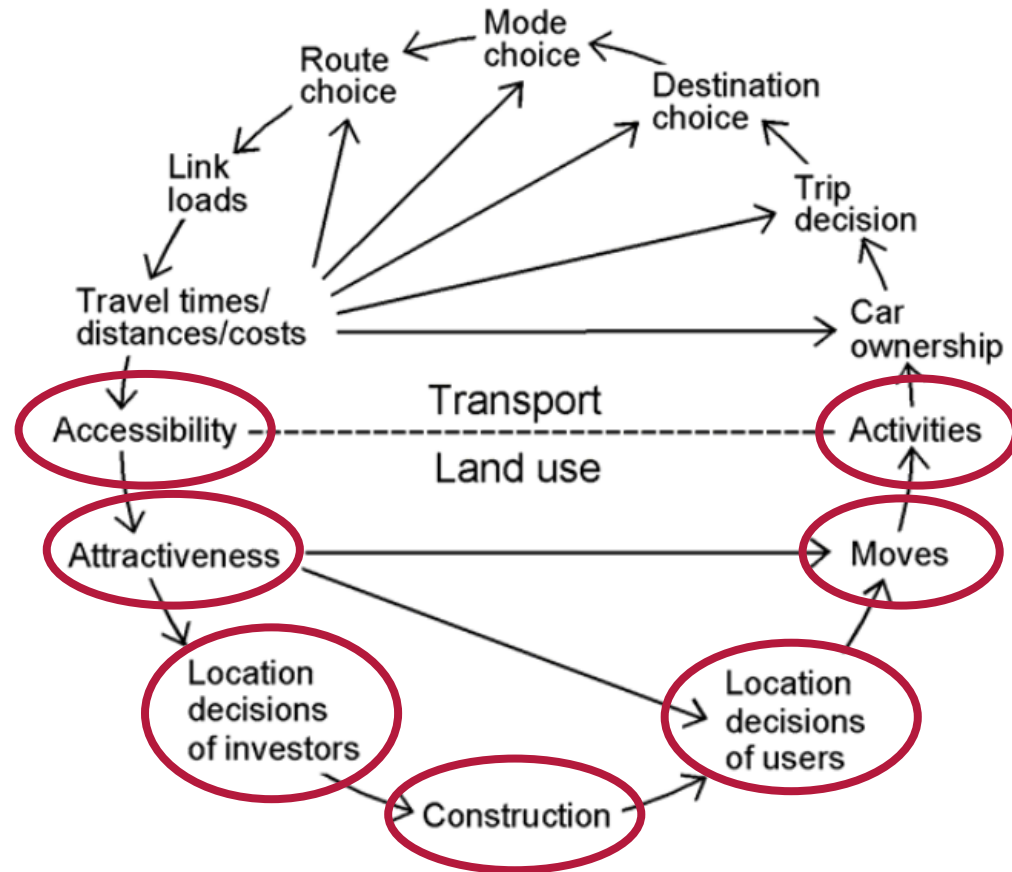
Why Integrate?

- Land Use and Transport Integrated (LUTI) model
- LUTI models are dated back to the 1950s
- Land use and transport are intrinsically linked
- Larger transport projects and urban developments need assessment

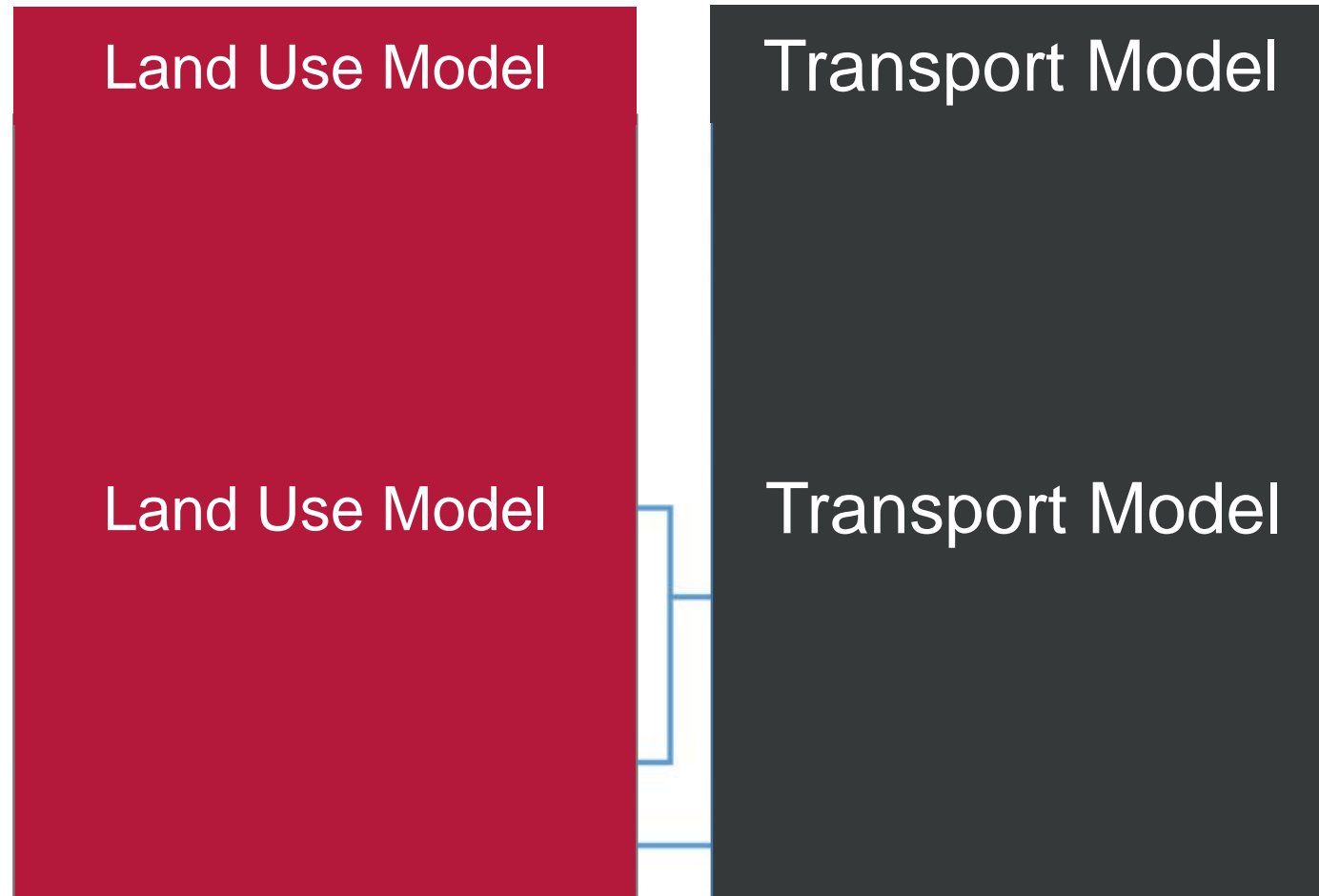




Land Use and Transport Feedback Cycle (Wegener, 1994)



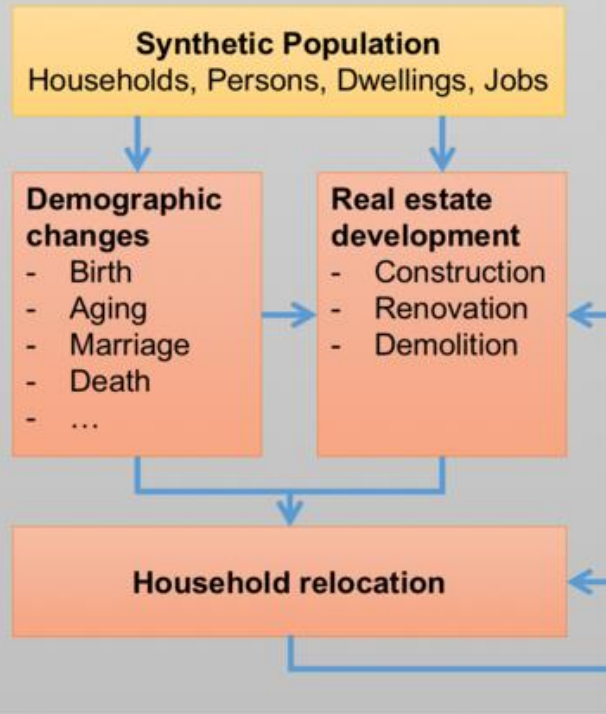
Land Use and Transport Feedback Cycle (Wegener, 1994)



SILO/MATSim Integration (Professorship of Modeling Spatial Mobility, 2017)

Land Use Model

SILO

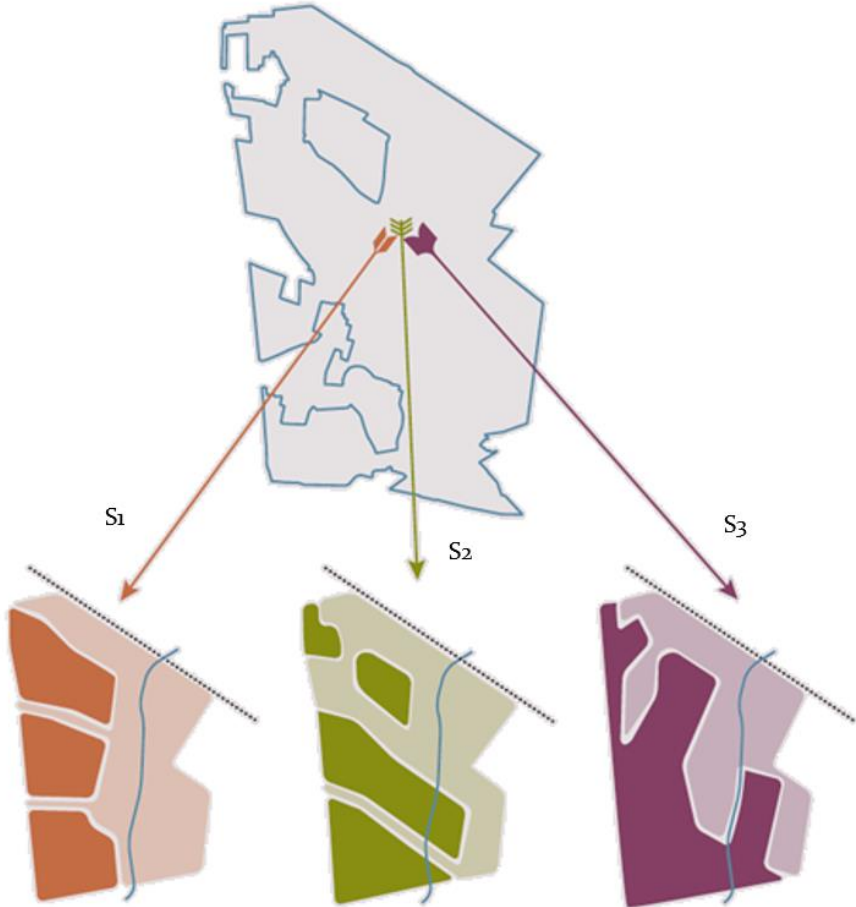


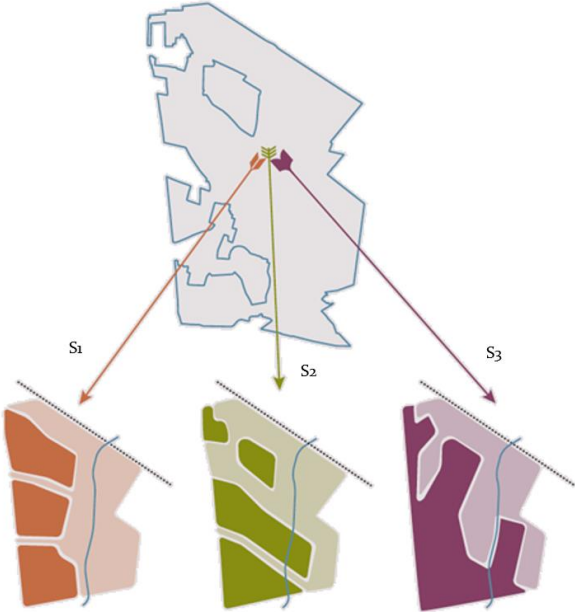
- Synthetic Population
- Each demographic change is modelled yearly
- Real estate development is modelled yearly
- Households choose to stay or move

Introduction → LUTI → What the Germans are doing? → **How are they using it?** → Conclusions



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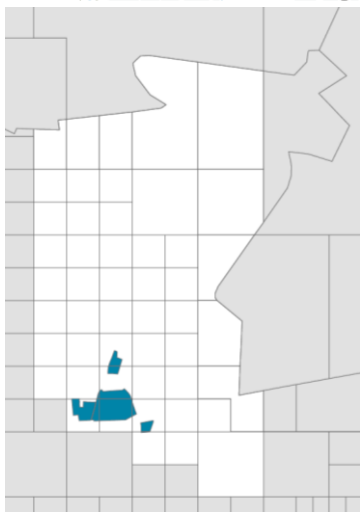
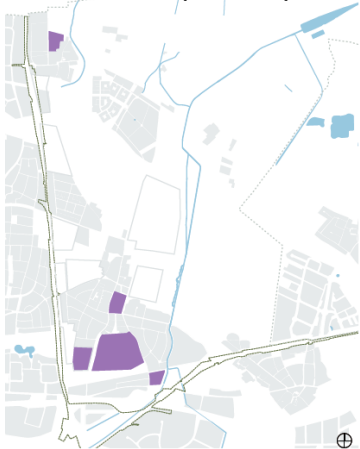


Scenario 1
29,100 people
7,900 jobs
1 new U-Bahn stop
Least room for development

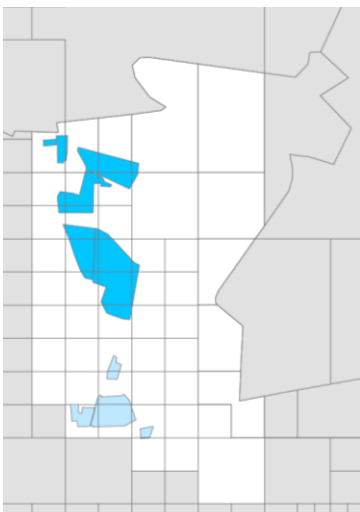
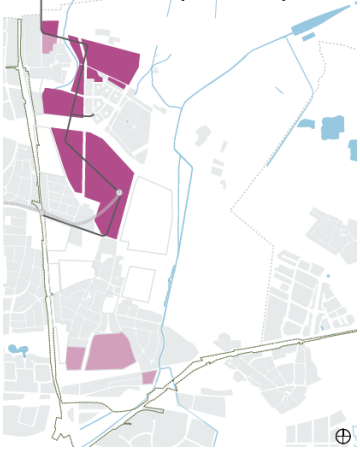
Scenario 2
30,100 people
9,400 jobs
1 new U-Bahn stops
Largest population numbers

Scenario 3
29,800 people
10,500 jobs
2 new U-Bahn stops
Largest employment numbers

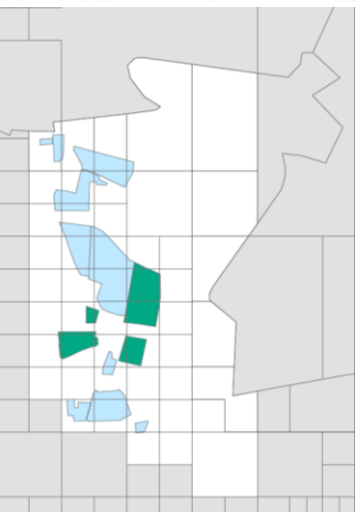
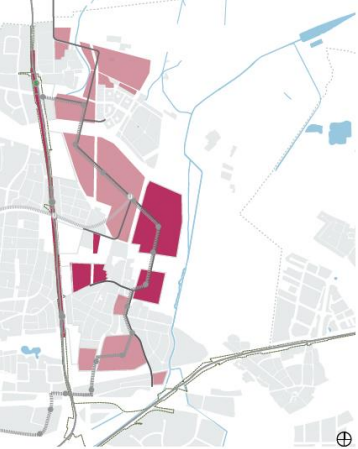
Phase 0 (2020)



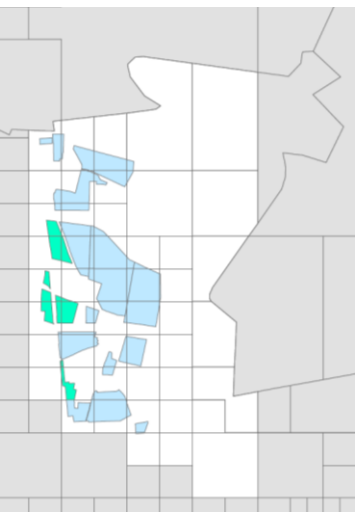
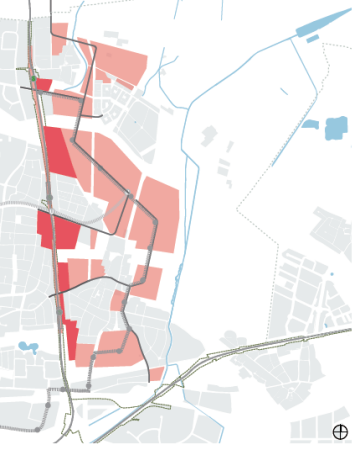
Phase 1 (2030)



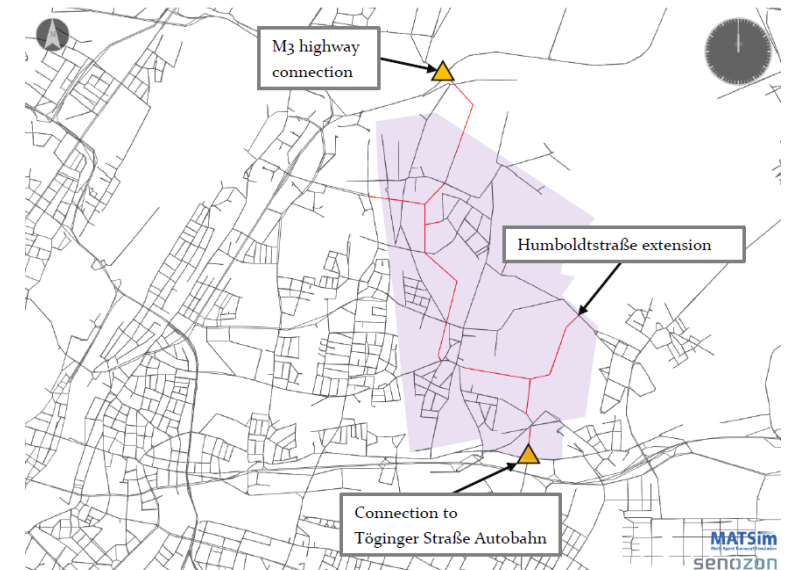
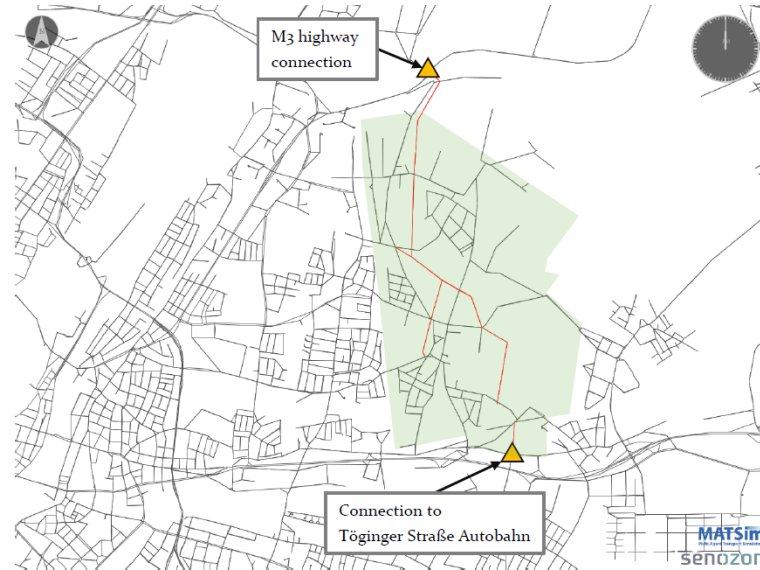
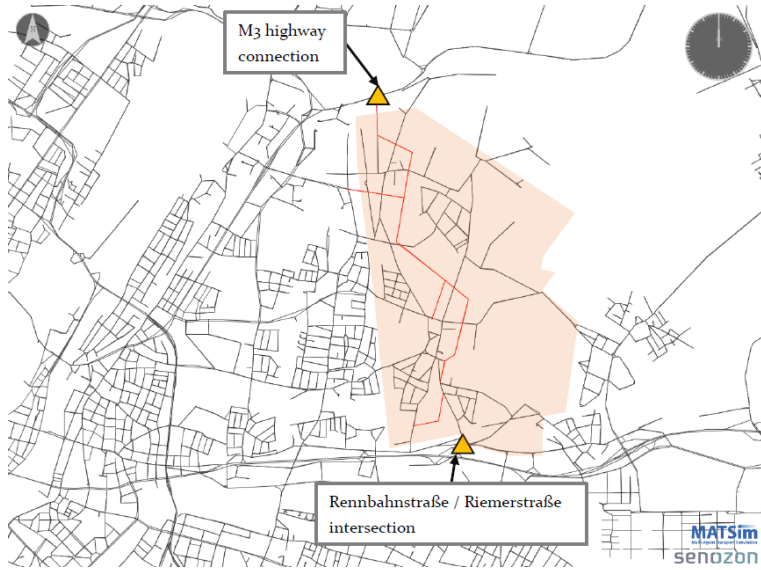
Phase 2 (2040)



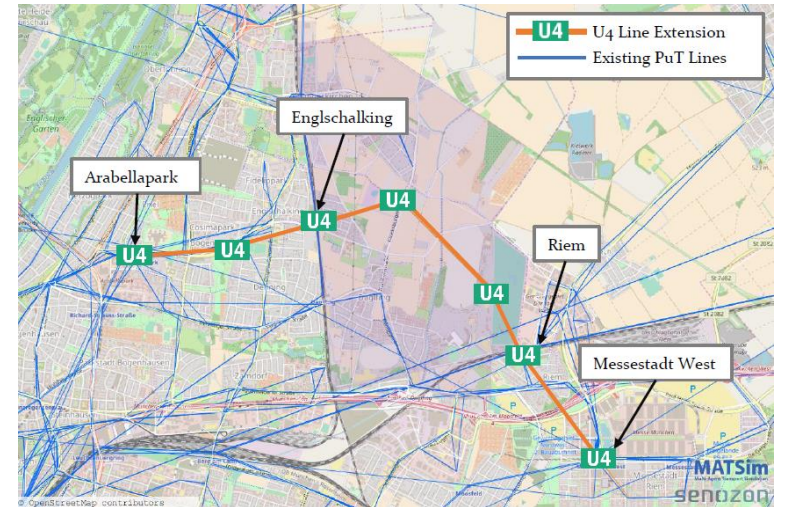
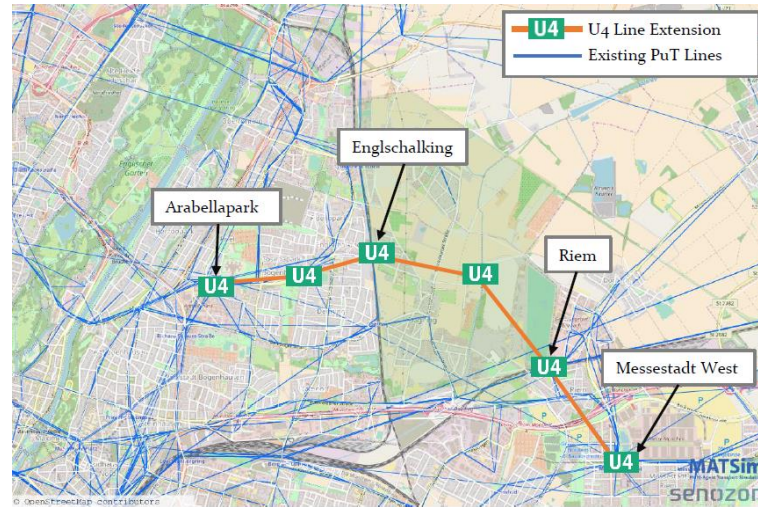
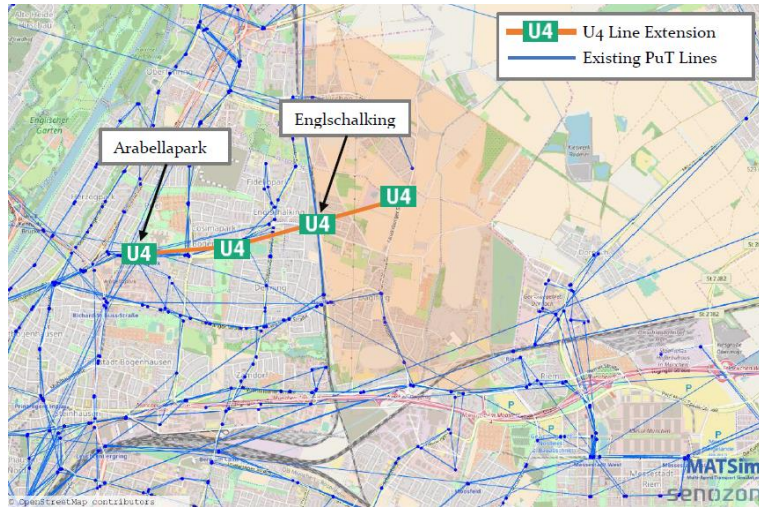
Phase 3 (2050)



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Results

Population / Workplaces

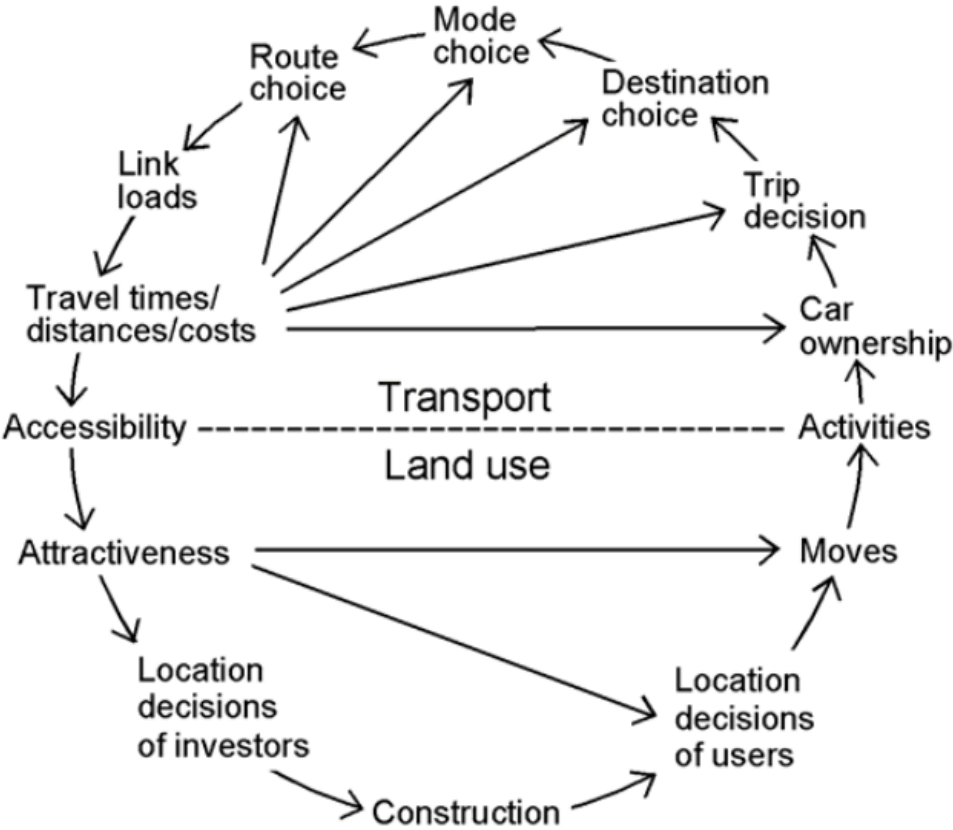
Commute times

Dwelling occupancy
(percentage and rate)

Average price of dwellings

Demographics of new
population

What about Auckland? Wellington? Christchurch? Tauranga?



Thank you...

Ruby Kim

Ruby.Kim@abley.com

+64 09 320 5011