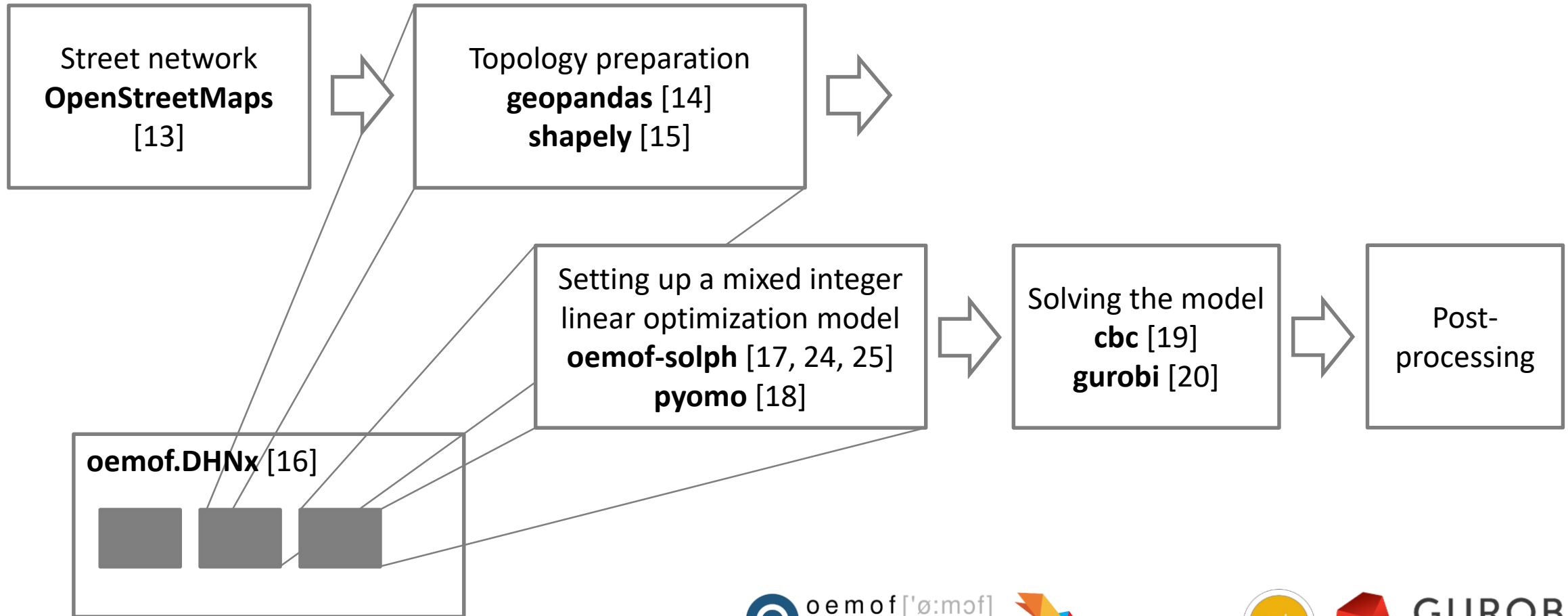


## Questions/Discussion

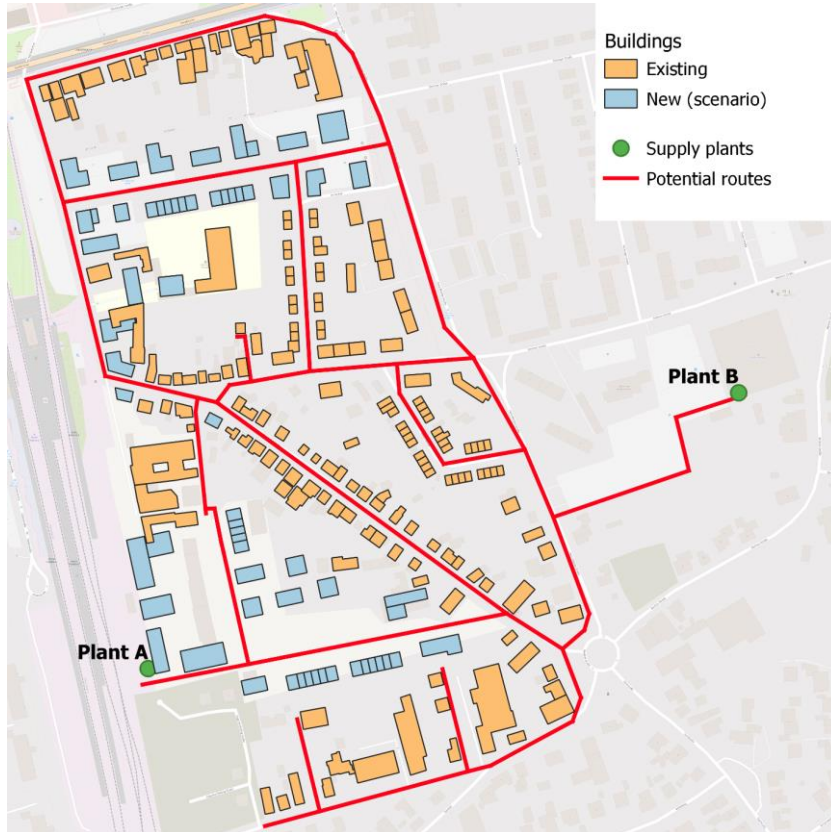
- Feedback on DHNx network optimization part? (Anybody tested yet? Intuitive examples? What should be improved?)
- Experiences with other tools for DHNx optimization?
- Demonstrate example of district heating network with DHNX?
- Any experiences with other tools (pandas pipes)?
- Discuss experiences with thermo-hydraulic simulation tools? Anybody wants to show something?

# Overview - District heating network optimization with DHNx

# Modeling approach – Overview

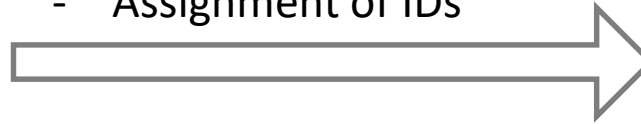


# Modeling approach – Topological input data



Potential routes for piping network;  
Background map: [13]

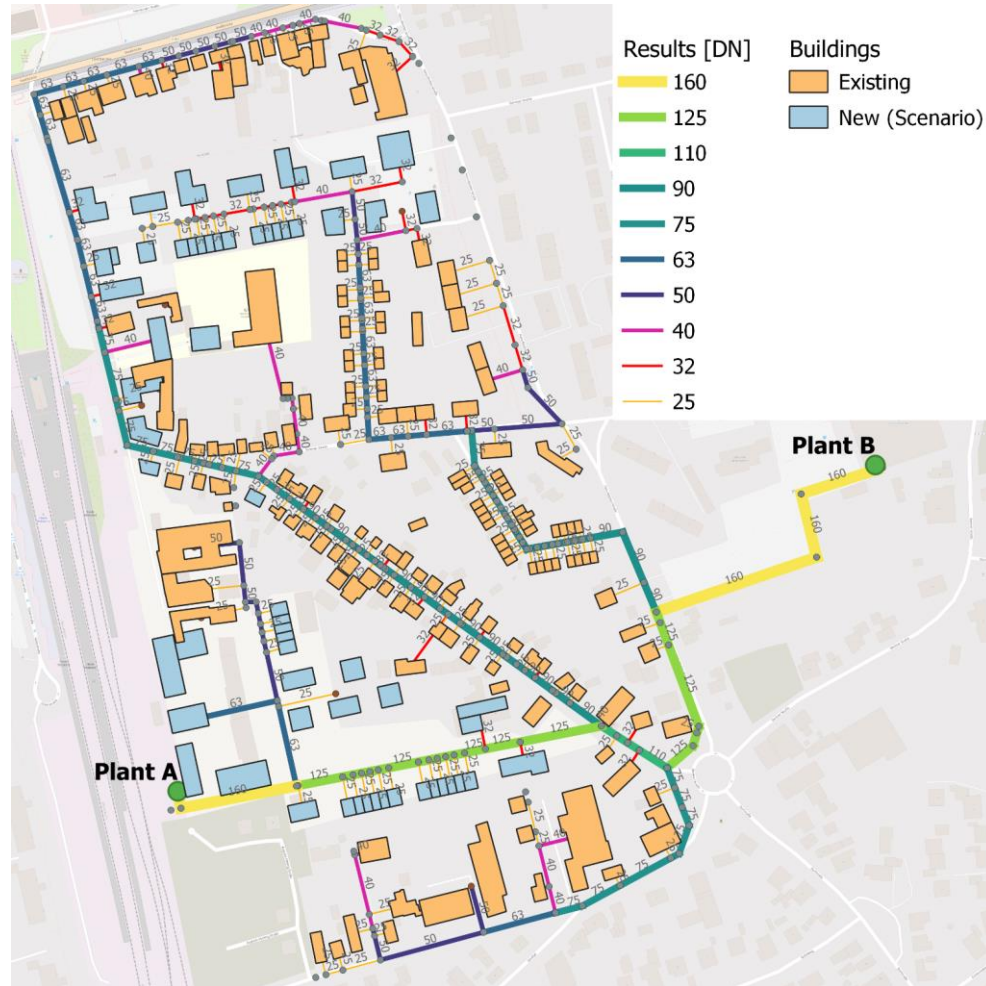
- Geometry preprocessing
- Assignment of IDs



Network after geometry  
processing; Background map: [13]

- Street network (e.g. from OpenStreetMaps [13]) serves as potential routes for the district heating network
- Detailed district heating system model (customers are represented individually)

# Results – Example





<https://oemof.org/>

<https://github.com/oemof/oemof-solph>

<https://github.com/oemof/DHNx>