Urban Air Mobility

Miloš Balać

Institute for Transport Planning and Systems

Some of the current players in UAM - passangers
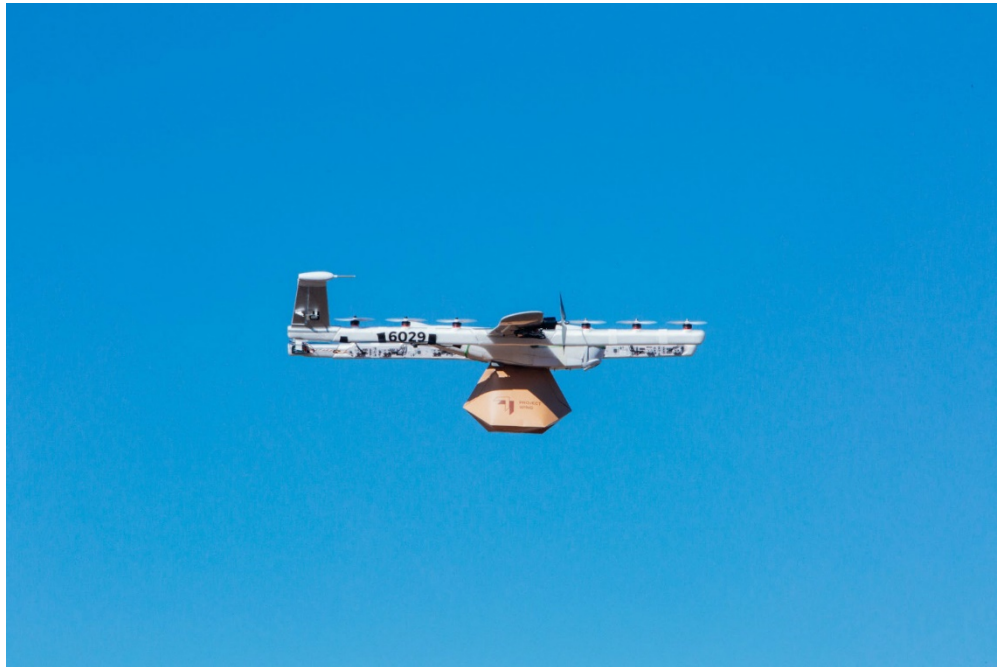

Volocopter
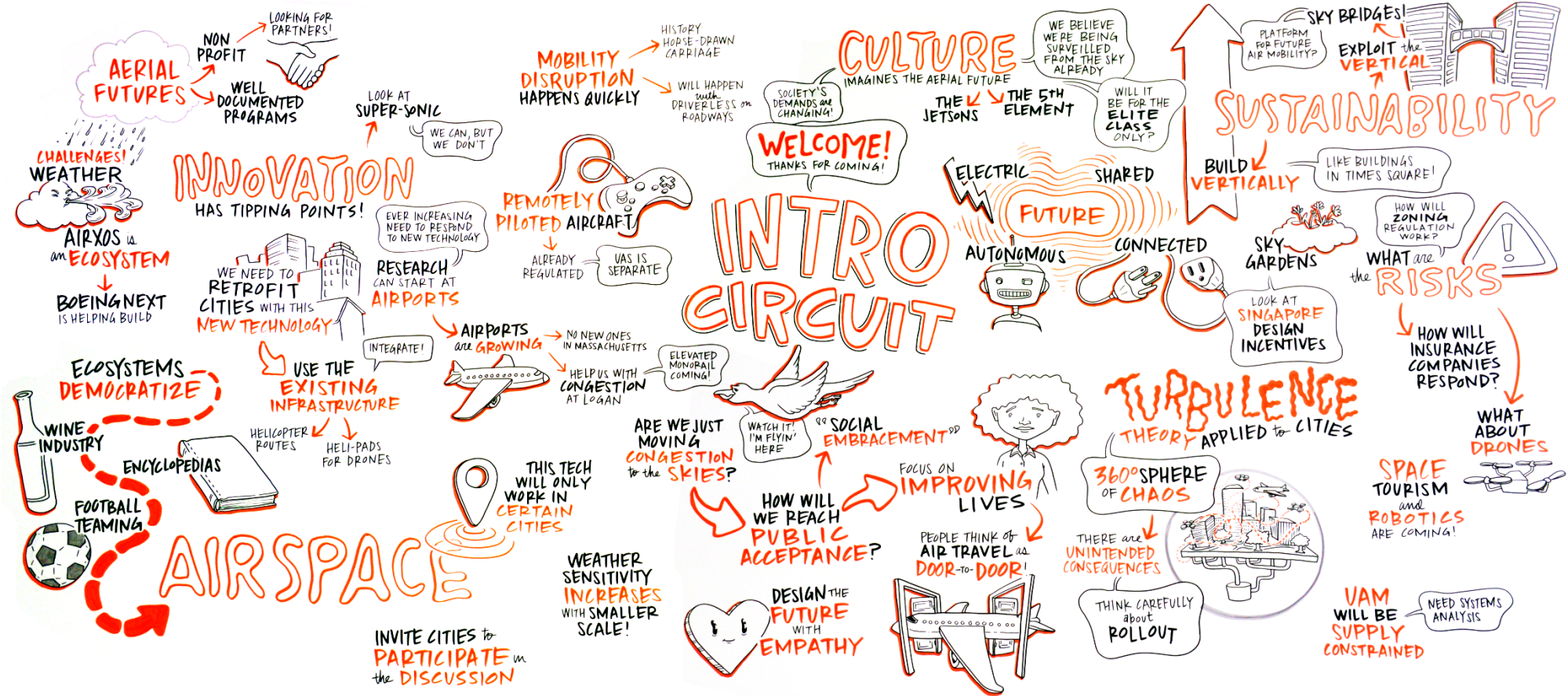

Lilium

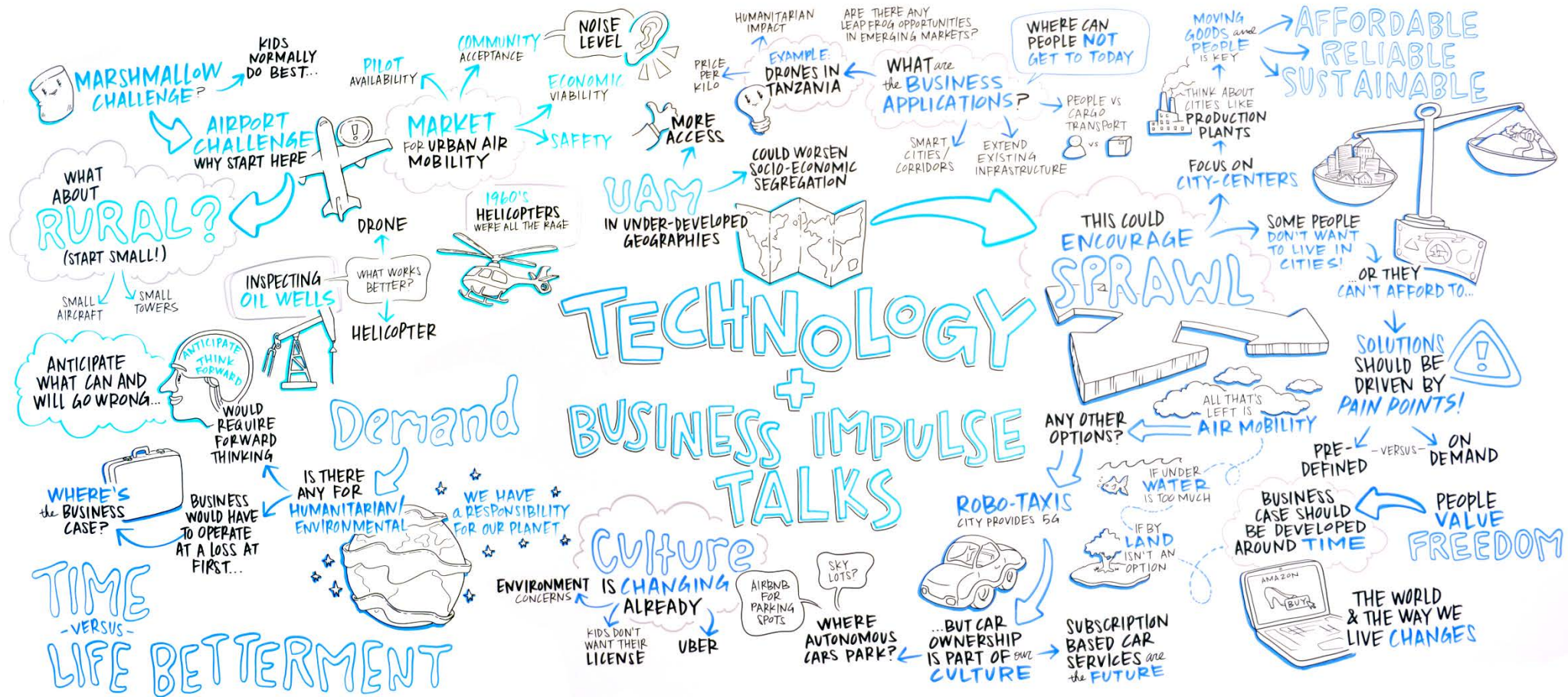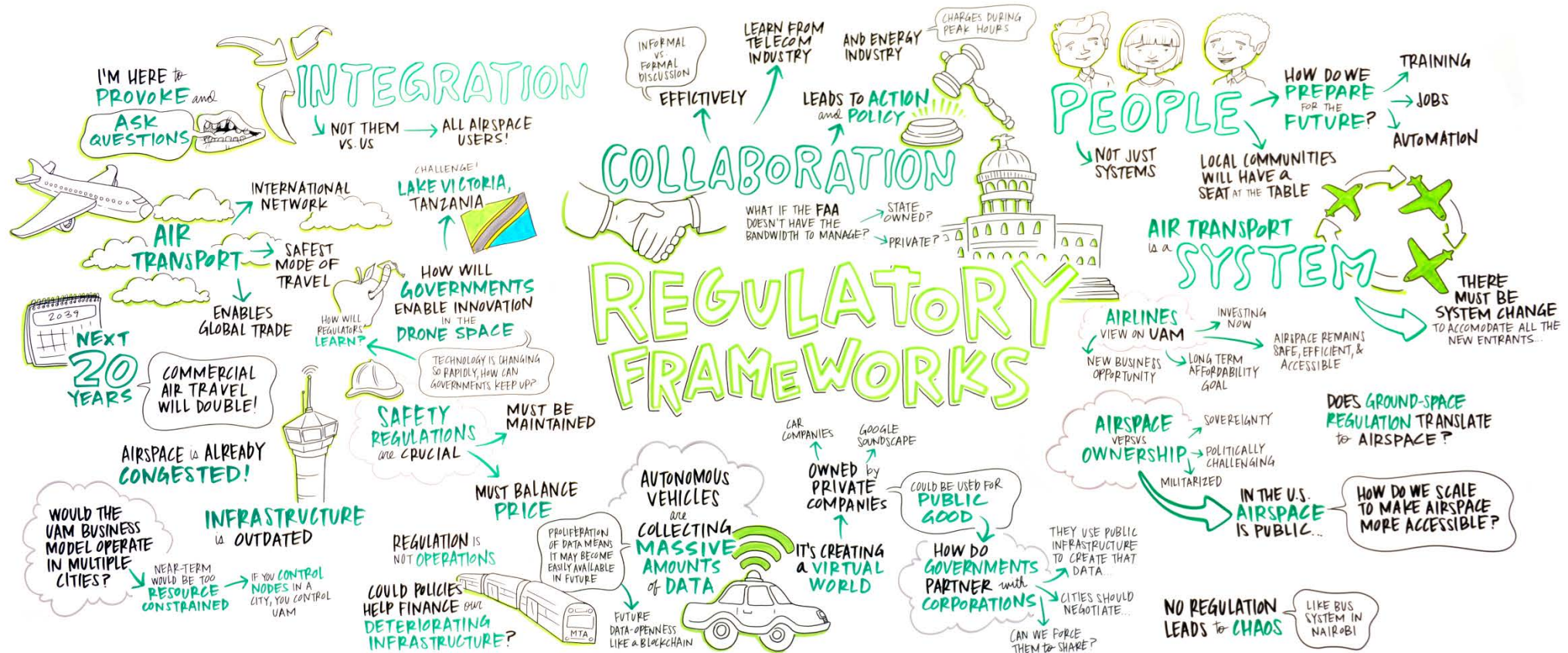# Some of the current players in UAM - delivery

Wing

Uber

UAM Think Tank

UAM Think Tank

UAM Think Tank

UAM Think Thank

- "…mobility future will be electric, shared, autonomus, connected…"

- "…pre-defined vs on-demand…"

- "..mobility disruption happens quickly…"

- "…no regulation leads to chaos…"

- "..are we just moving congestion to the skies…?"

How to Model UAM?

- Transport Simulator (Micromobility, Intermodality, On-demand)

- Air Traffic Control

- UAM Flight Simulator

How to Model UAM?
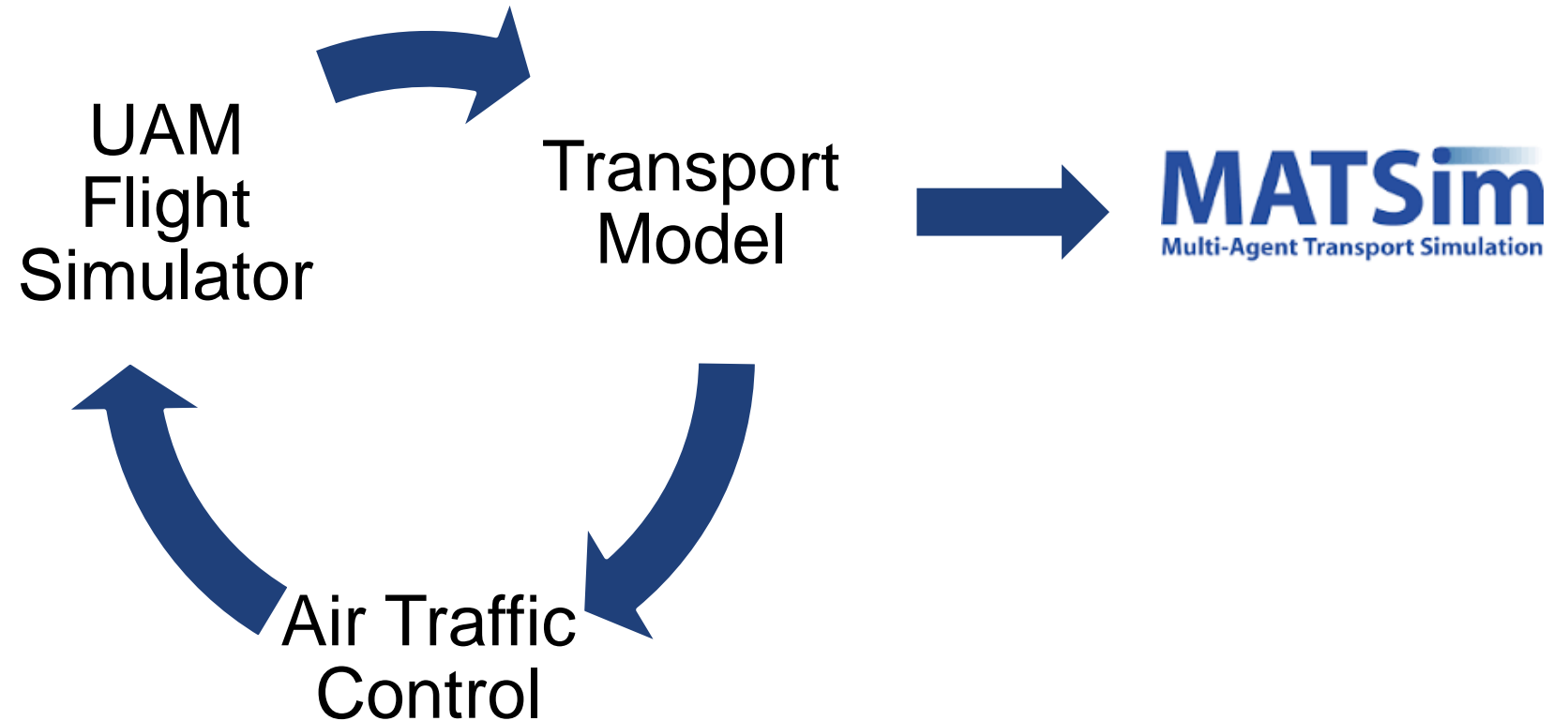
UAM extension pluggable in MATSim

Developed on behalf of Airbus by ETH and BHL

Features:

- UAM Network characteristics (landing stations, flight paths, altitude, allowed speeds)

- UAM Vehicle characteristics (capacity, vertical and cruising speed)

- Landing stations characteristics (landing capacity, parking capacity, turnaround time for VTOL vehicle)
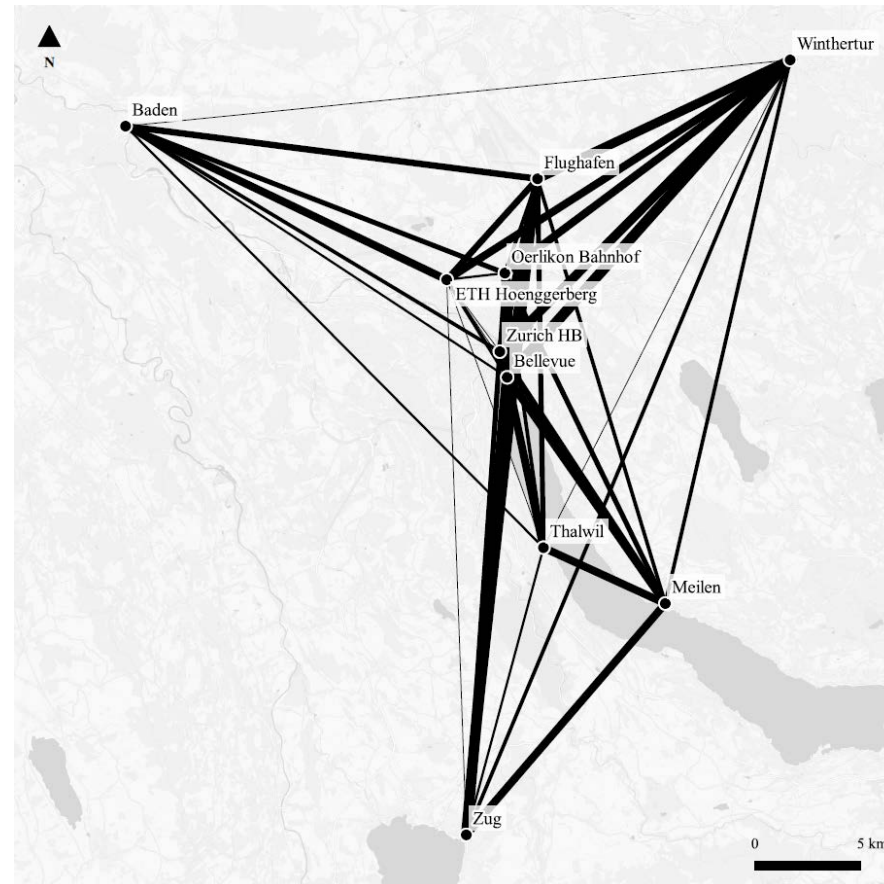
- Intermodality

- VTOL dispatching and relocation

UAM extension pluggable in MATSim
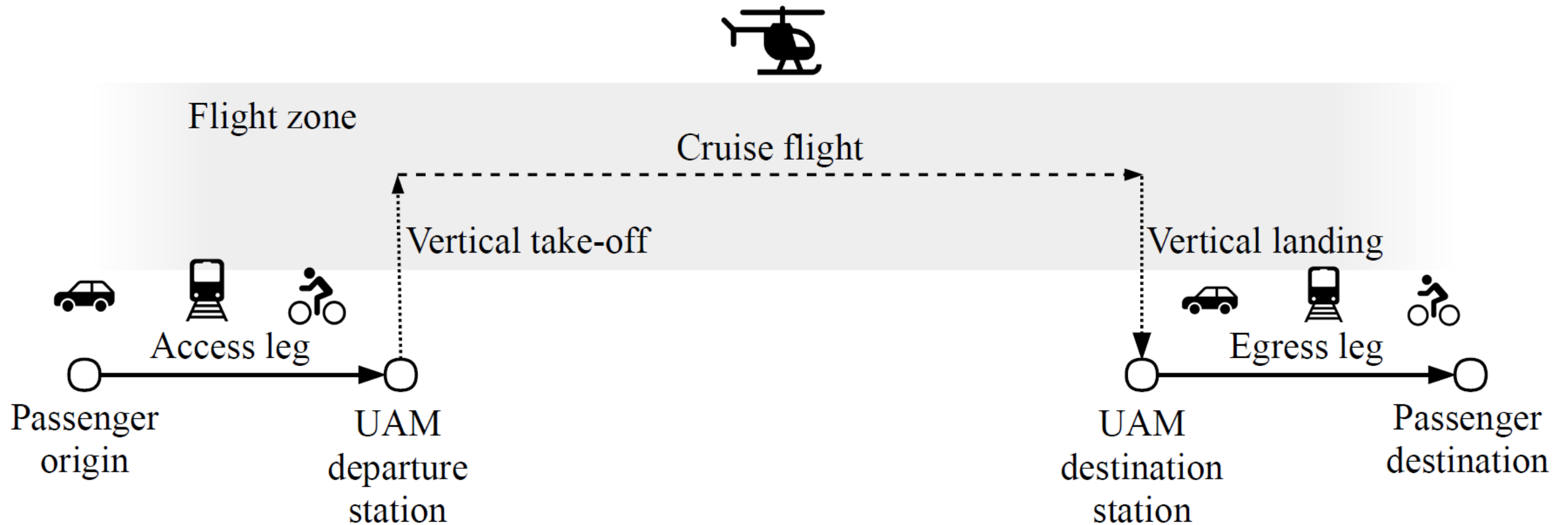
Zurich case study – Air Taxis, on-demand, limited locations
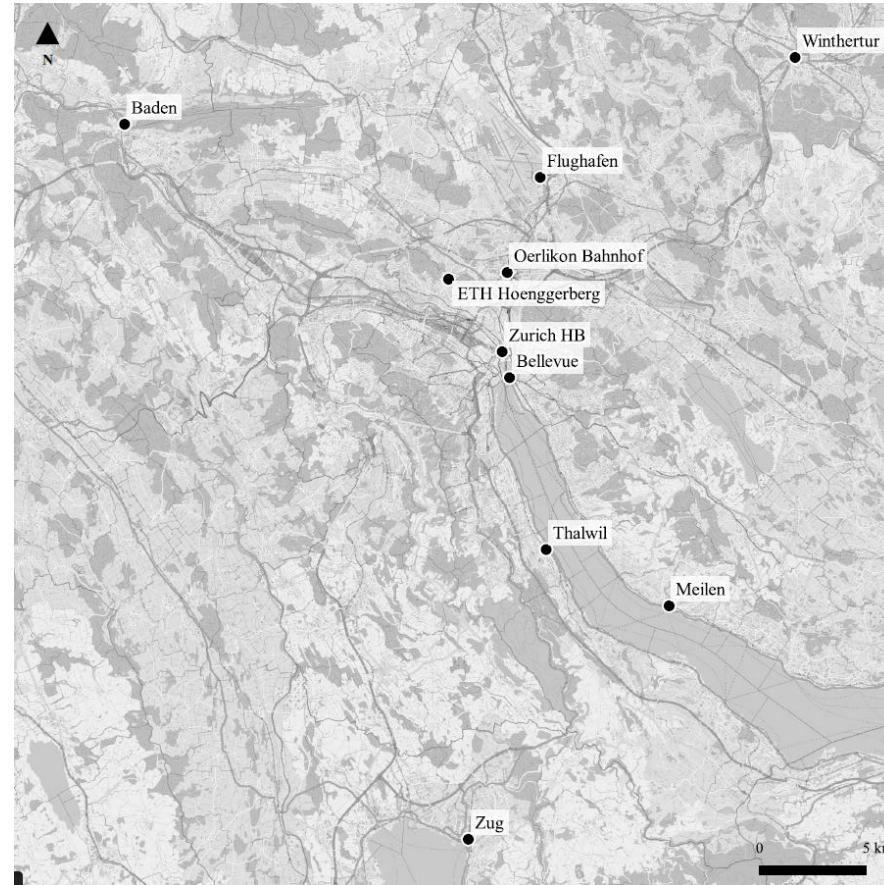
Zurich case study – Air Taxis, anytime, limited locations

Final Remarks

- UAM as part of an intermodal trip travel

- Detailed spatial and temporal availability and compatibility with other modes

- Impacts on environment, noise, etc.

- Future work on incorporating information from Air Traffic Management

Questions