

Overview

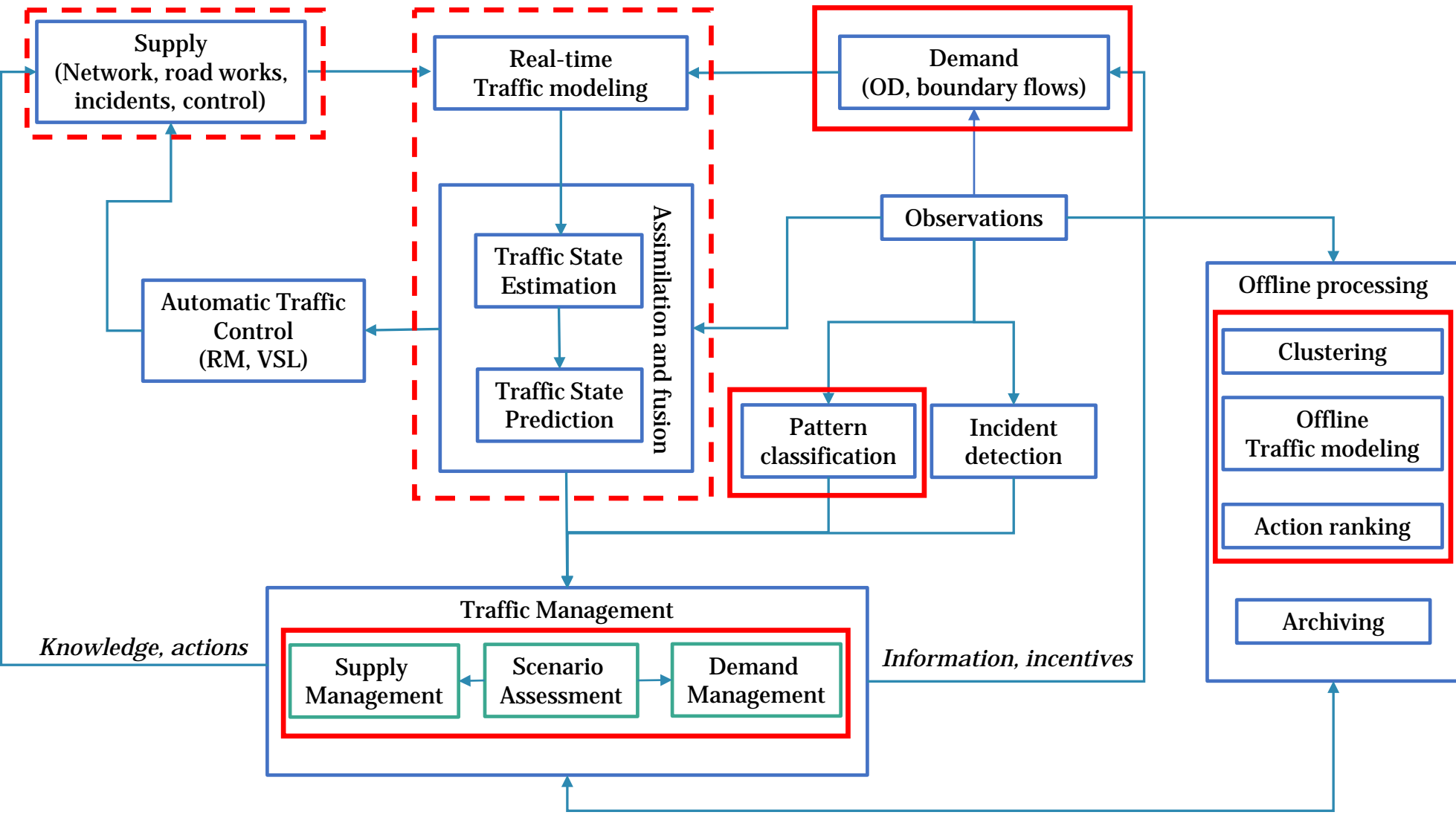
The aim of the project is to build a framework that enables efficient real-time scenario evaluation for traffic management decisions.

Existing components:

- Supply modeling
- Estimation/fusion
- Real-time macroscopic traffic model
- Short-term prediction

Components in development:

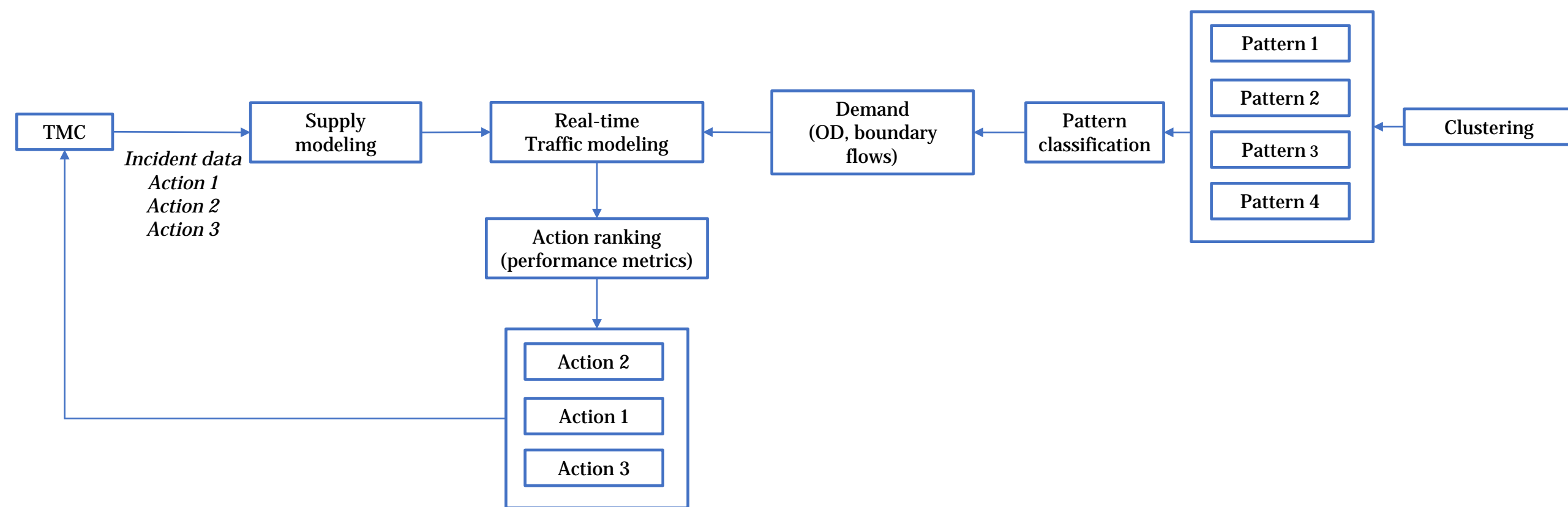
- Clustering
- Demand estimation
- Type-of-day classification
- Route set generation



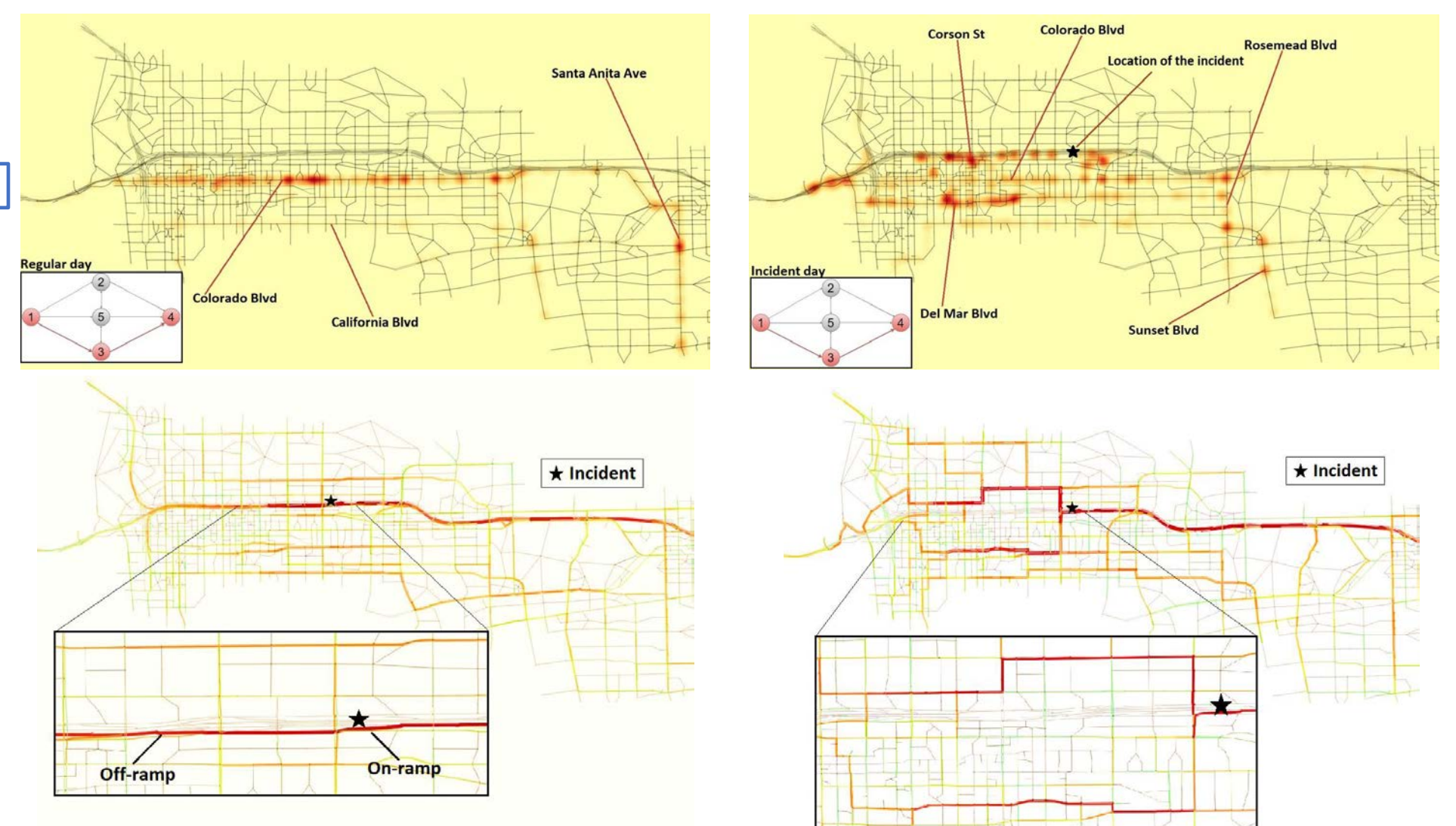
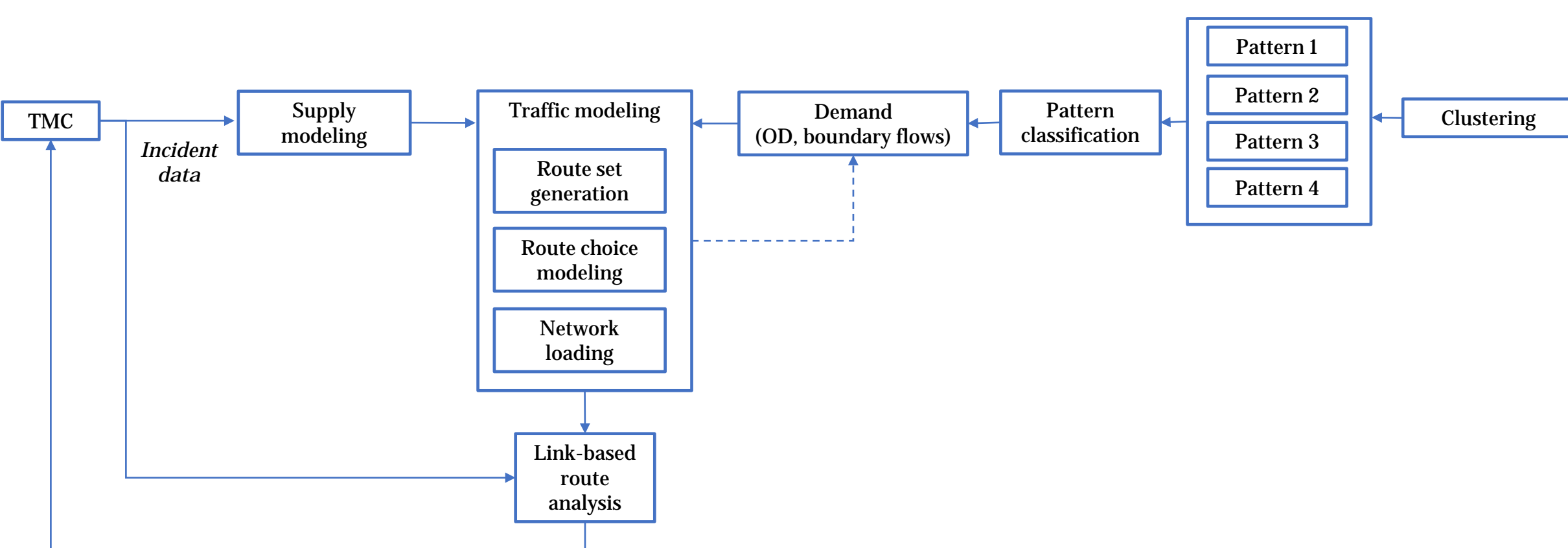
Scenario evaluation

First use case scenario evaluation:

- Major incident on highway
- Classify/predict type of day
- Evaluate queue situation for different scenarios
- Input on how to inform travelers
- Evaluate how demand/route choice was affected

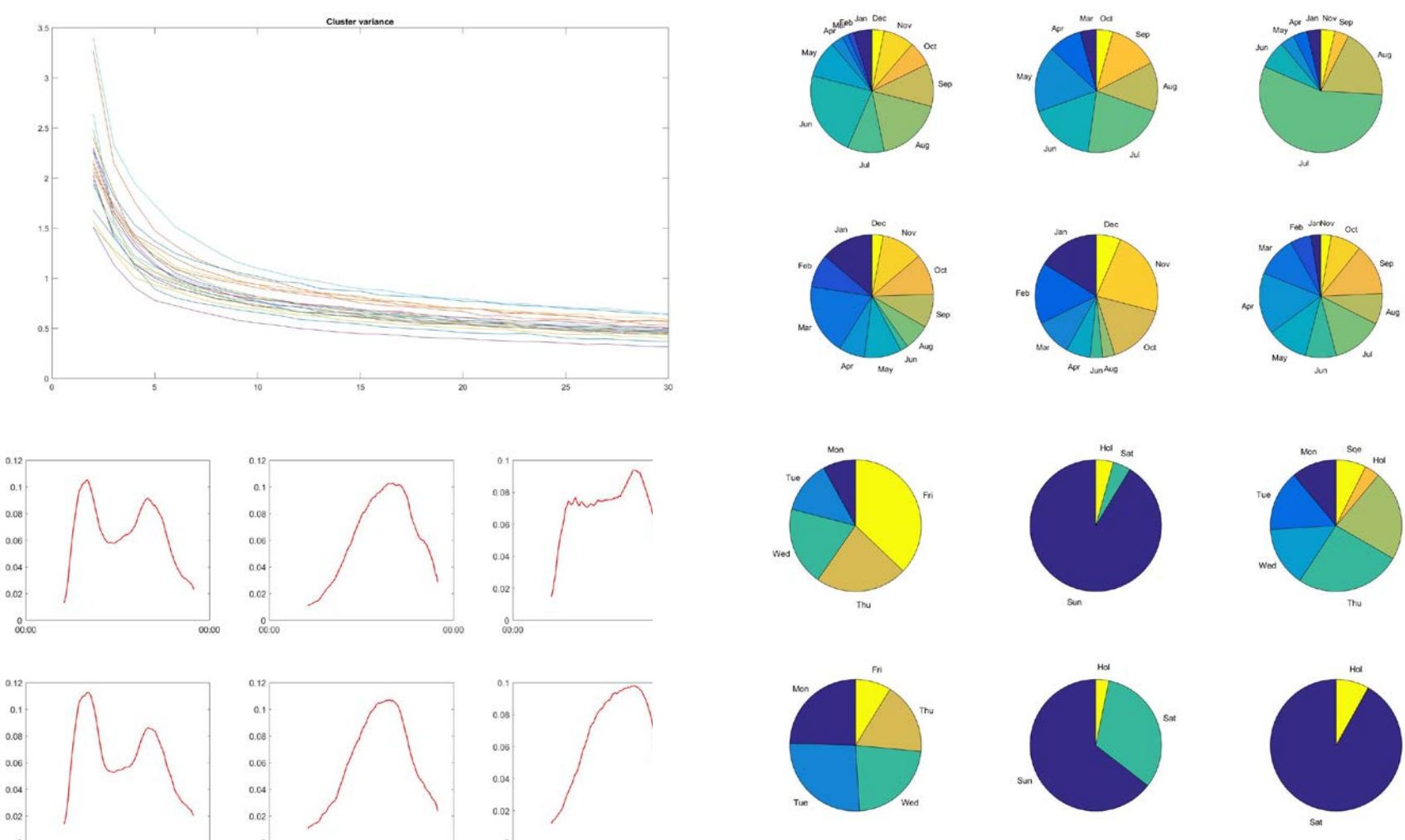
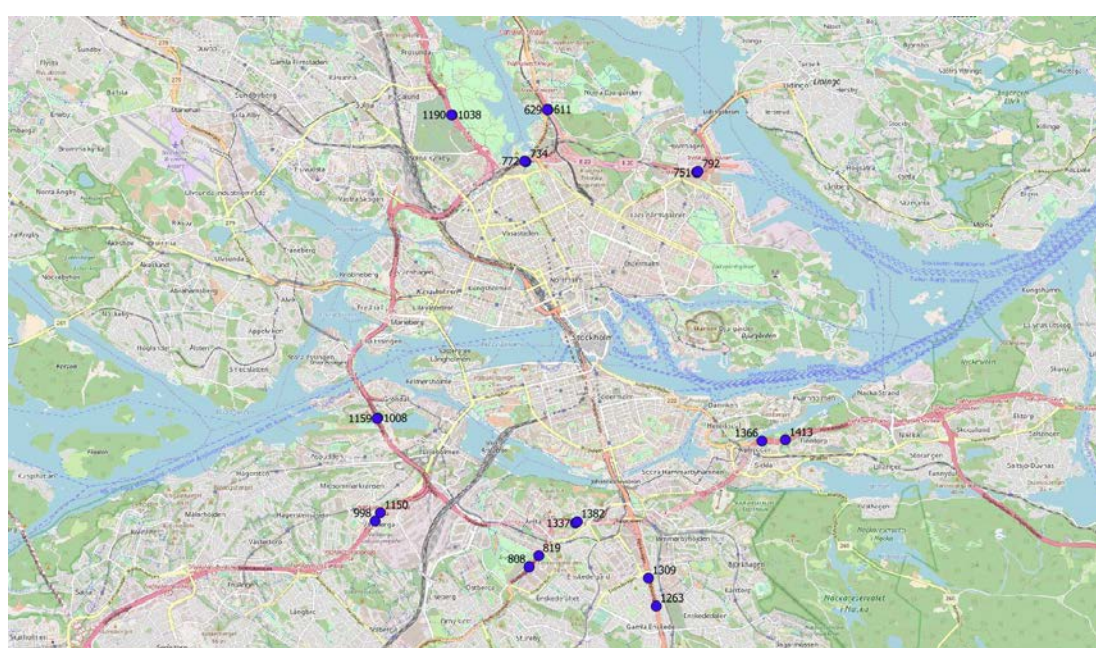


Route choice



Clustering

Day classification (MCS sensors)



Effects of the spatio-temporal clustering on the prediction accuracy (probe data)

- Data driven PPCA prediction for 11,340 links
- Prediction accuracy significantly improved
- Computational cost decreased
- Real-time prediction

