Mona
The Modeling Expert

Main Tasks:
- Modeling of transport systems and road networks
- Model and simulation of macroscopic road traffic

Practices
- Process and clean data from different sources
- Integrate data from different sources into models
- Calibration and validation of models using traffic counts and travel time data

Tools
- Google Maps: Use travel time information on specific road sections
- An internal tool to visualize the traffic counts by section during the validation of the model

Challenges
- Many types of data are not available :
  - Trucks and commercial transportation are not included in Origin-Destination surveys
  - Missing data on some intersections
  - Not enough data to calculate road capacity on a monthly or weekly basis
  - Must trust Google Maps to validate the model, but the API has various limitations
- Difficulty in measuring vehicle occupancy rates
- Access and retrieval of data on the servers are slow

Needs
- Get data to build models
- Understand the trend in the data
- Automate data analysis procedures

Tools
- Support the calculation of road capacity
- Replace Google Maps with data she understands
- Extract data from different types of files (for example, csv, pdf)
- Export and import data from different tools

Visualisation
- View different indicators on the map
- Simple graphics to help understand the data
- Manipulate and visualize raw data for model building
- Manipulate visualization, for example, by dates, types, and regions, to support data mining.