

INPUT**Travel demand**

regional & inter-regional origin-destination trip data

Vehicle types | drive-train technologies | fuels**Consumer-specific data**

(monetary budget, value of time)

Parameters on fueling infrastructure expansion

Differentiated by fuel & fueling power | Maximum possible speed of build-up | Relationship between capacity expansion and detouring time

Fuel prices | technology costs | fueling infrastructure costs | route-related/location-specific/ consumer-specific costs...

Optimization model

- Mixed-linear integer program
- System cost-minimization
- Network-based transport demand coverage
- Vehicle stock modeling
- Spatially flexible fueling activity
- Sizing of fueling infrastructure
- Consumer group based adoption of new technologies
- Reduction of fueling detour time through investments in fueling infrastructure

OUTPUT

Trips per vehicle type | technology | fuel

Vehicle stock shift

Fueling demand by location

Fueling infrastructure expansion