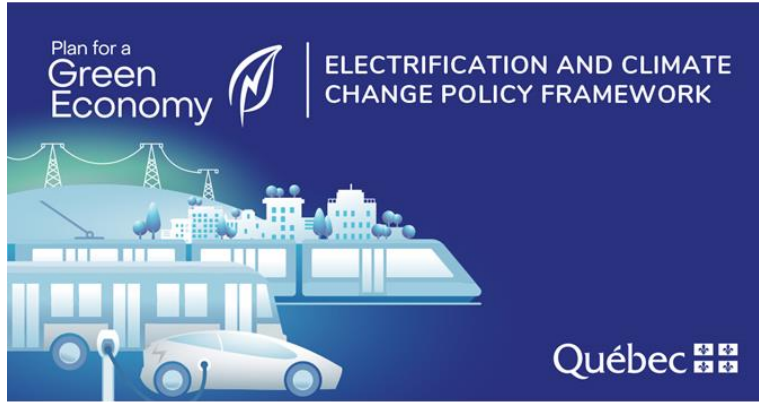
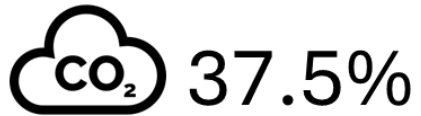


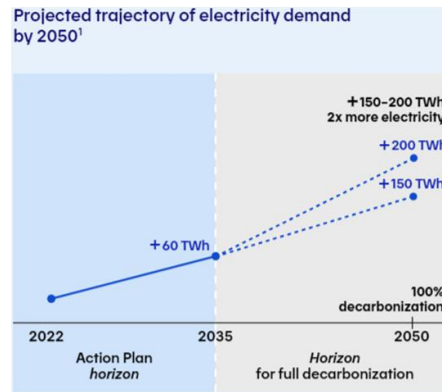
CityCharge: A Comprehensive Tool for Modeling Urban Electric Vehicle Charging Demand



Reduce



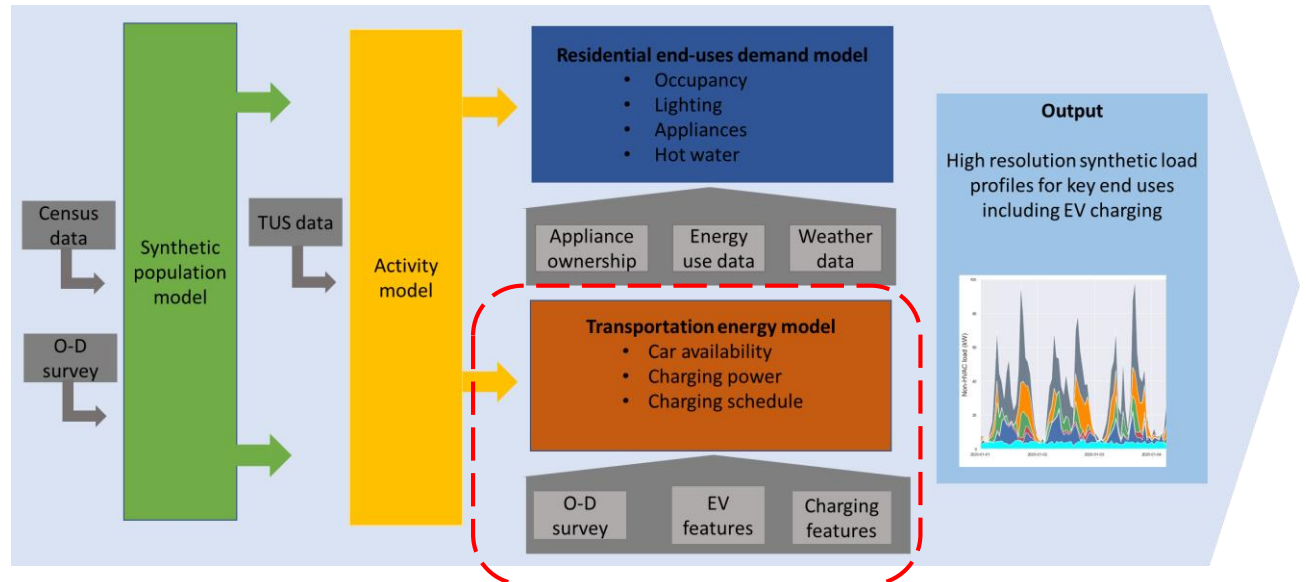
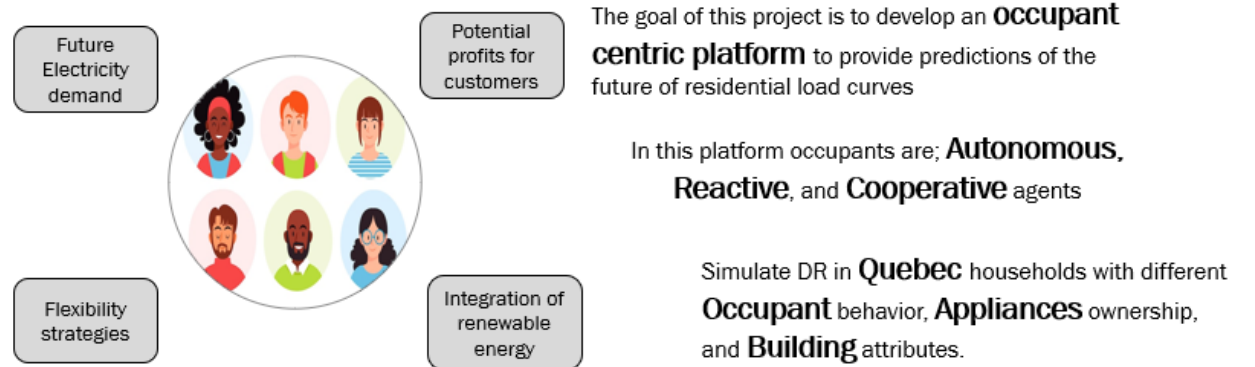
Increase



Transform

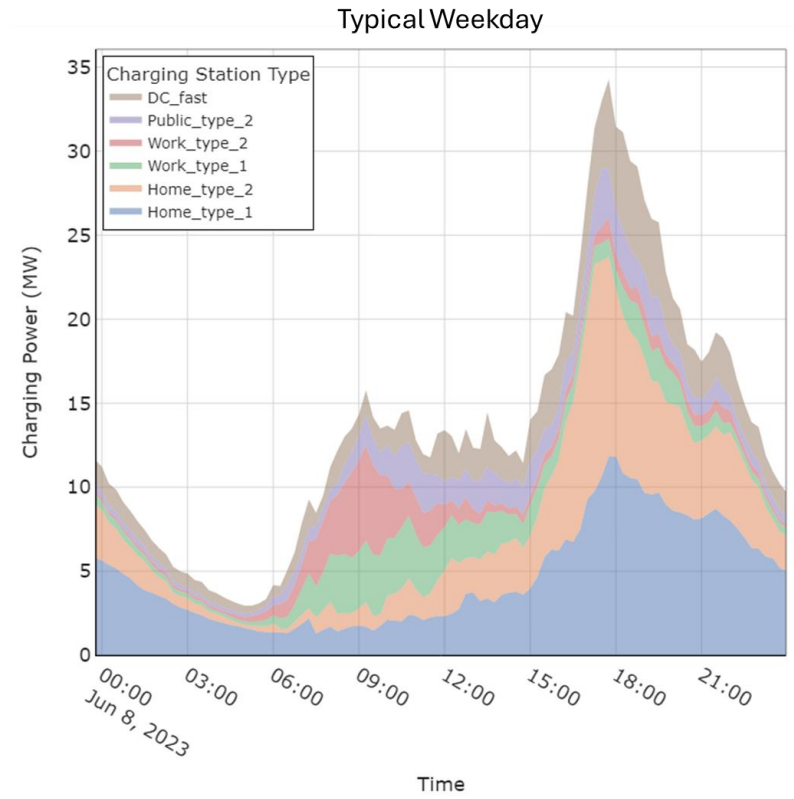
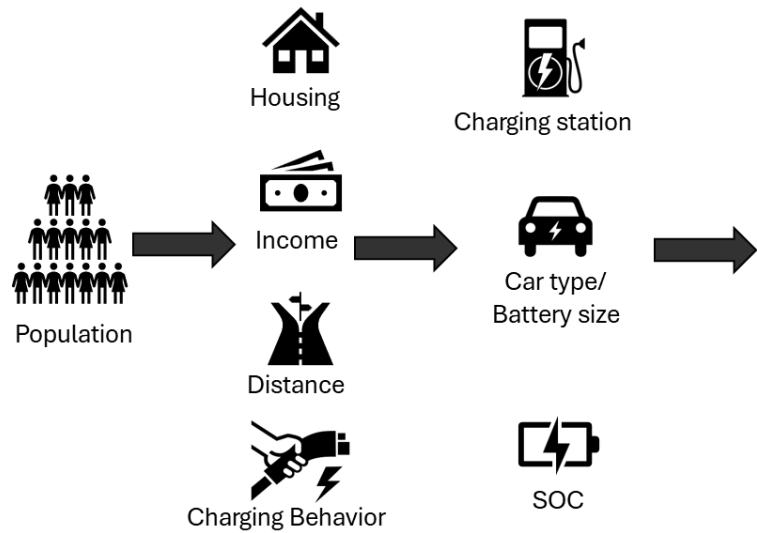
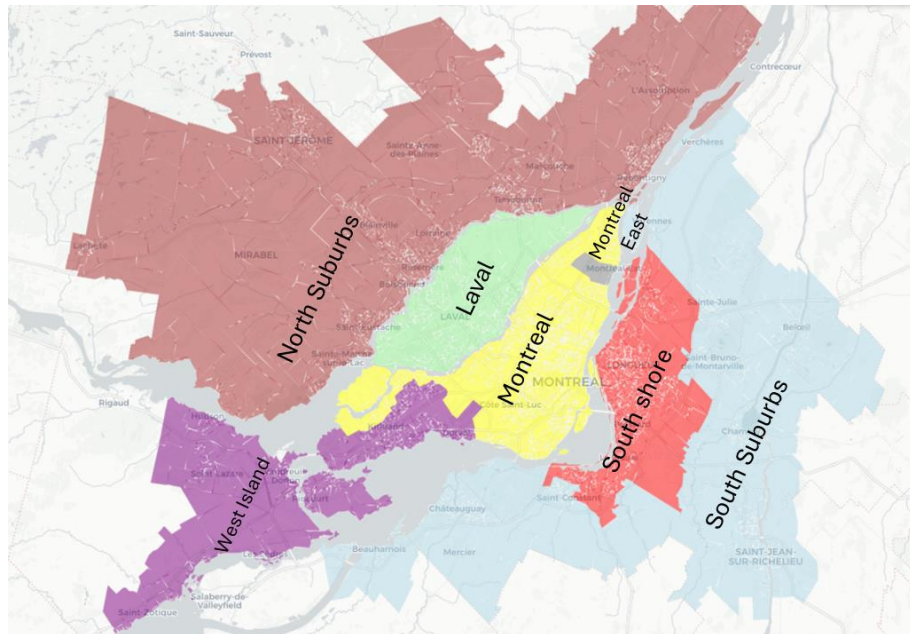


Research Objectives



CityCharge: A Comprehensive Tool for Modeling Urban Electric Vehicle Charging Demand

The project aims to develop a tool for modeling EV charging demand, focusing on real-world complexities



City Agent: An Integrated Tool for Generating Synthetic Populations and Modeling Human Behavior in Urban Simulations

Demographics

This section likely refers to general information about the people living in the city. It may include details such as age, gender, income, household size, and type of household.

Energy habits

This section refers to how people in the city interact with energy efficiency or demand response programs.

Activities

This section likely refers to the indoor and travel activities that people in the city conduct during the day.

Building parameters

This section likely refers to the characteristics of buildings in the city. Include Building age, status, heating system

Thermostat behavior

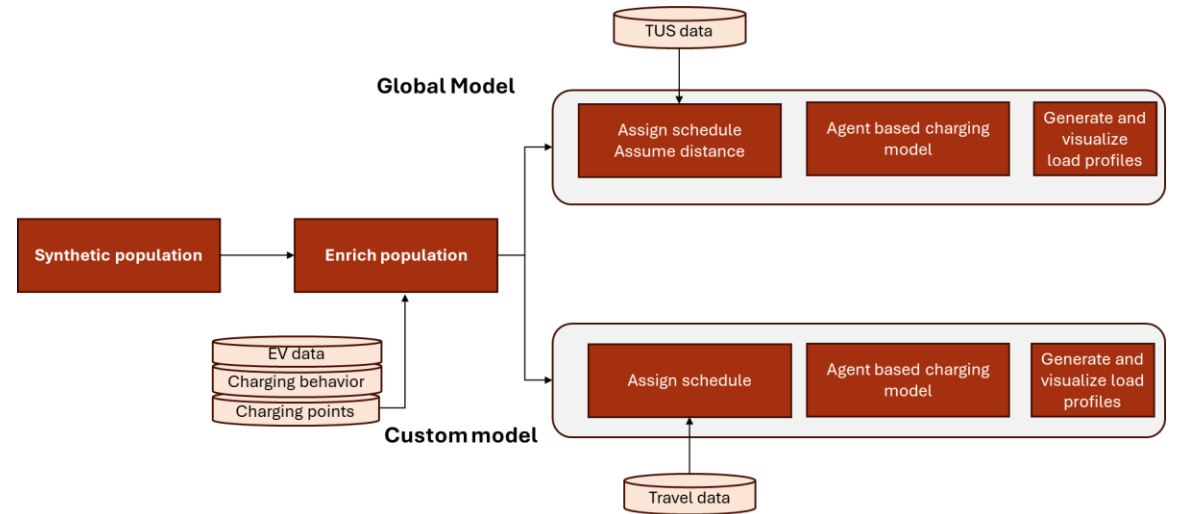
This section refers to how people in the city use their thermostats. Heating setpoint, cooling setpoint, thermostat schedule

Appliances ownership

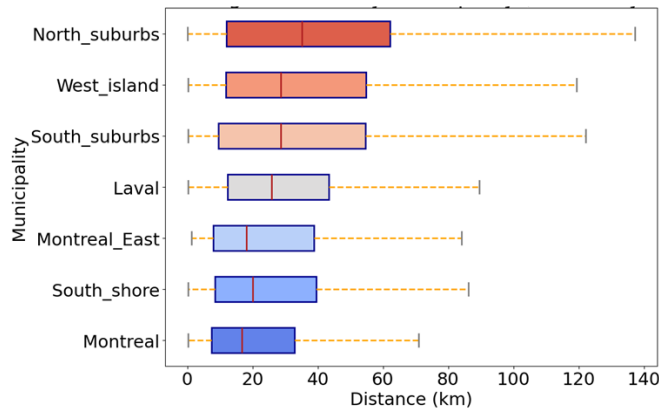
This section refers to appliances' ownership, such as refrigerator, laundry, dishwashing, etc.

Car ownership

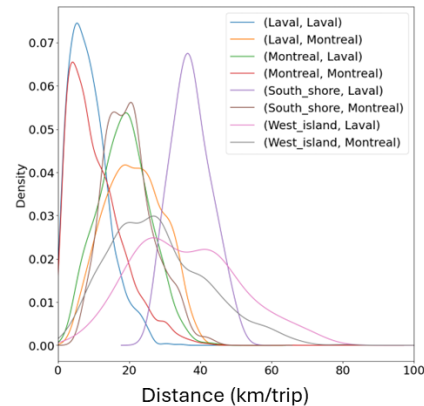
This section likely refers to how many cars people in the city own. Adoption of EV cars, preferred charging location, and charging behavior



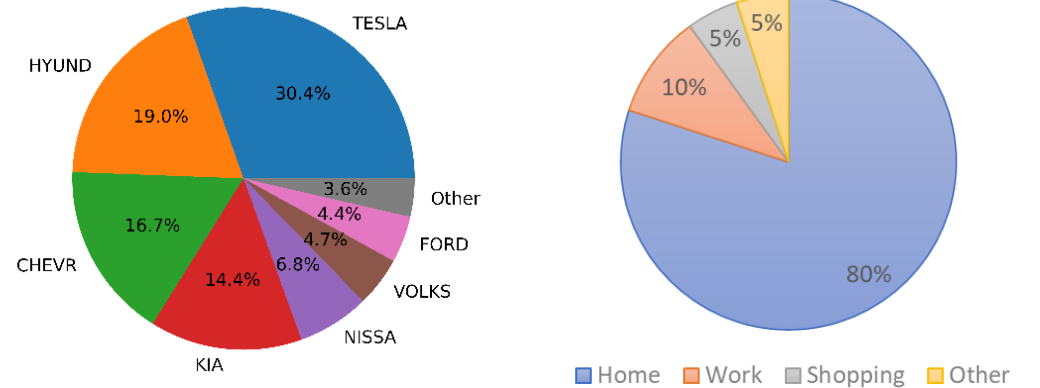
Total daily Distance (km/day)



Home-Work Distance (km/trip)



Charging location



Modelling

Parameters



Number of
cars



Charging
Behavior



Charging
location



Charger
type

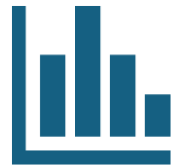


Temperatur
e

Applications



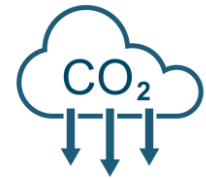
Impact on
grid



Rate
design



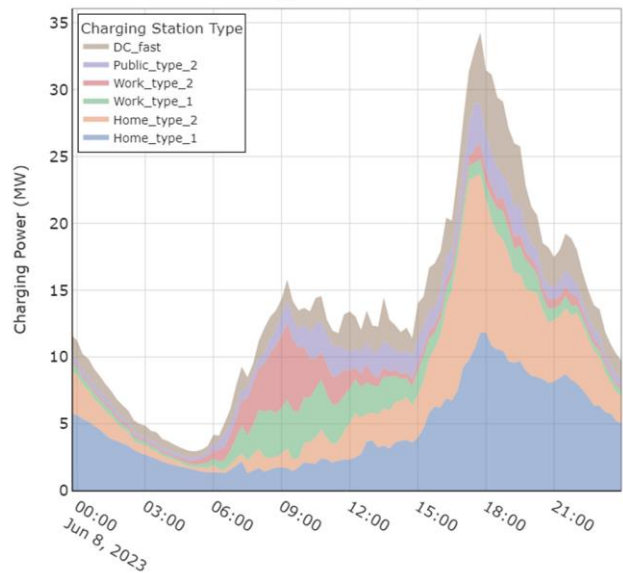
Vehicle to
Grid



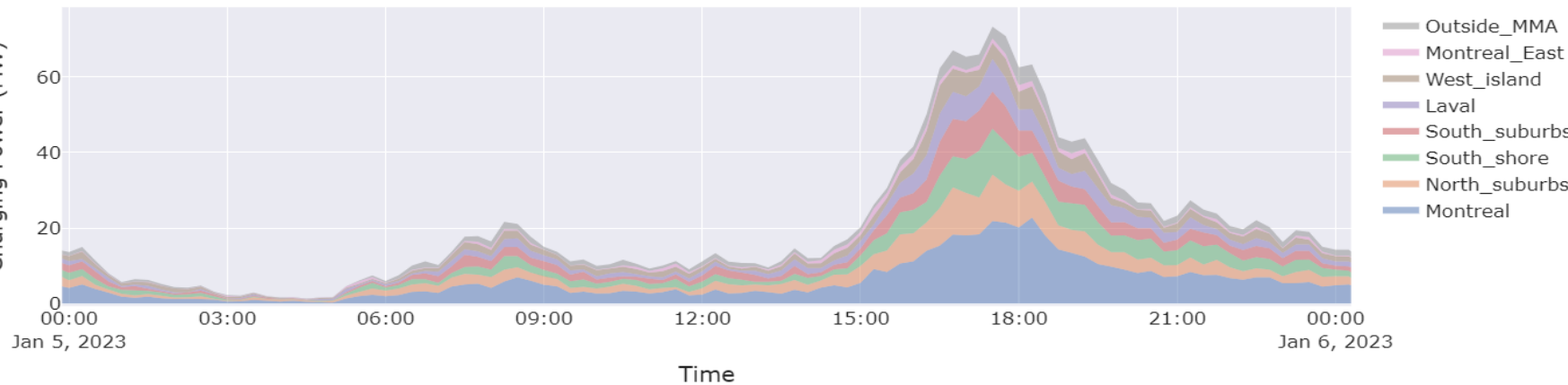
Co2
emissions

Results

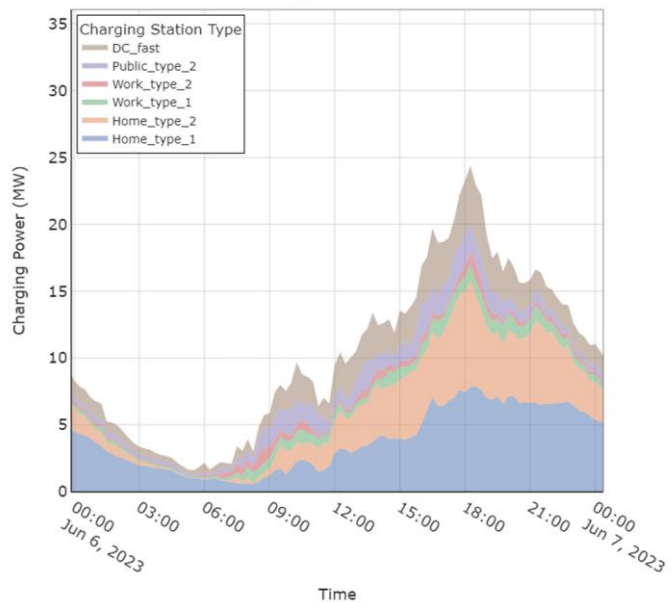
Typical Weekday



Charging Power (MW)



Typical Weekend



Charging Demand for all Charging Stations

