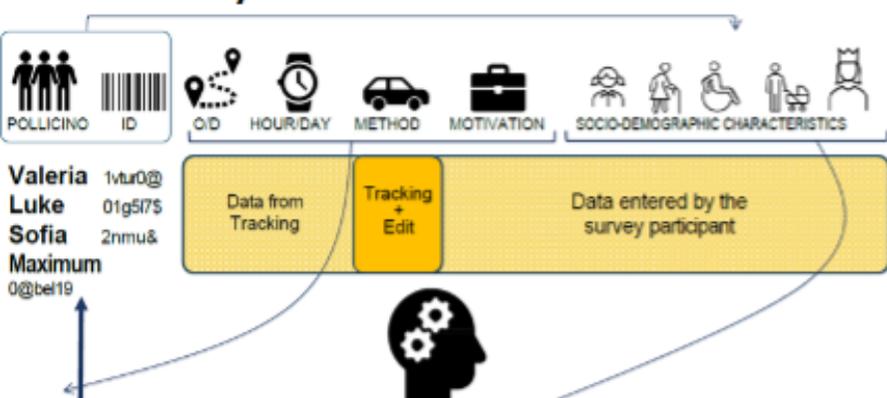


Behavioral change model in Bologna

The taxonomy of data



"How Citizens Move: Taxonomy of Mobility Data and Modal Split in Bologna"

About

The behavioural change model for Bologna is an impact assessment tool designed by cambiaMO|changing MObility to analyse how demographic and socio-economic factors (such as age, income, education, car ownership, and household size) together with psychological aspects (including attitudes, motivations, and habits) influence mobility patterns. The behavioural change model of Bologna was nourished by the passive tracking data with self-reported information collected through the Pollicino app to identify the key drivers of travel behaviour and to support policies that encourage a shift toward more sustainable transport modes.

Key Features

Integrates sociodemographic, motivational, and trip-related data for deeper insights.

Supports choice modeling to simulate behavioral shifts toward sustainable transport.

Who will use it:

Researchers in collaboration with the local authorities, transport planners, and researchers in Bologna who are aiming to design user-centred policies that foster public transport and active mobility.

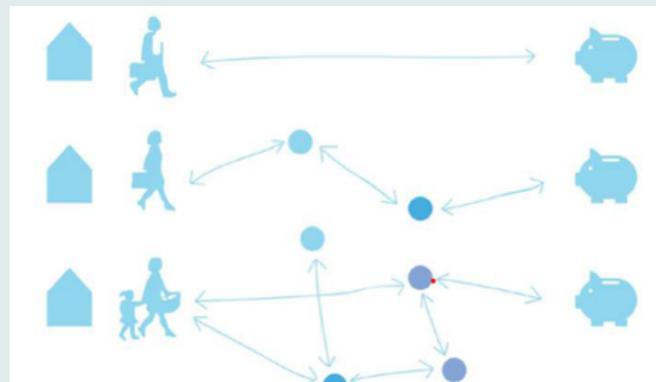
What could be the impact?

The model can help increase the attractiveness of public transport by identifying the main barriers and drivers of mobility choices across different social groups. Incorporating gender, income, age, and household size, it highlights inequalities in mobility access and use. This evidence-based approach allows Bologna to design tailored interventions. For instance, women often undertake more complex, care-related mobility patterns and face greater safety concerns, requiring targeted interventions to make public transport more reliable and safe.

Younger people tend to prefer active modes such as cycling and walking, while older individuals often favour more comfortable options. Income strongly affects choices, with low-income groups relying more on public transport and higher-income groups shifting toward private cars. By capturing these dynamics, the model supports tailored policies to reduce car dependency, expand public transport uptake, and promote equitable, sustainable mobility.

Development & testing in SPINE:

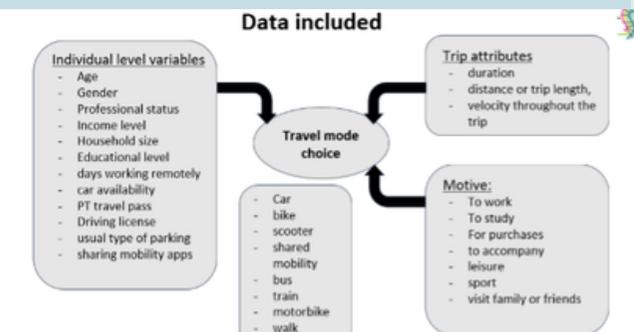
In SPINE, the solution is currently being tested by CambiaMO through surveys and real-world data collection with the Pollicino app in Bologna. Data from over 750 observations provide a detailed view of citizens' daily mobility patterns. The behavioral change model is under development using discrete choice methods, enabling scenario analysis to support policy recommendations.



Graphic representation of the Mobility of Care framework

Can it be transferred?

Yes. The model requires a mobility survey data including voluntary participation of a representative sample aligned with sociodemographic and trip variables. It can be adapted to other cities with a policy ambition of promoting modal shift.



Determinants of Travel Mode Choice: Variables, Trip Attributes, and Motives

What's next:

In the final phase of SPINE, Bologna will refine the model with cross-city comparisons (e.g., Valladolid). Beyond the project, the methodology can be scaled up to monitor long-term mobility trends, support dynamic transport planning, and strengthen participatory approaches that incorporate behavioural and equity dimensions into mobility policies.