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FairMOVE

ARTIFICIAL INTELLIGENCE FOR A SMART, MULTIMODAL, SUSTAINABLE AND INCLUSIVE MOBILITY

Project proposal for the call "Il Futuro Parte da Qui"

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WHY FairMOVE

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CLIMATE CHANGE EMERGENCY

In 2021 the monthly global CO2 concentration peaked at 416 ppm. The decarbonization trend and the European Green Deal targets require a radical change in mobility habits.

HUMAN FACTOR CENTRALITY

The adoption of new mobility schemes implies a substantial change in personal habits, as approaching shared transport means, which strongly depends on the socio-economic identity of each individual.

Fair MOVE

FairMOVE GOALS

INCLUSIVE MOBILITY

Mobility as a service accessible to everyone, through the adoption of fair policies, to improve integration, avoiding the formation of "urban ghettoes" and reducing the social gap.

CUSTOMIZED MOBILITY

Mobility solutions optimized on actual needs and preferences of citizens to make the transition to a sustainable mobility more attractive and effective.

SUSTAINABLE MOBILITY

Decrease the environmental impact by promoting intermodal travel solutions involving the use of innovative means of transport, such as electric and sharing vehicles.

FairMOVE PILLARS

PROFILING

- Citizens clustering into comprehensive categories, represented by a reference person;
- Analysis to support the decision making of strategies for effective mobility.

PLANNING

- Artificial intelligence to learn the actual user's mobility pattern;
- Customized travel solutions based on actual needs and preferences.

CUSTOMIZATION

- Qualitative and/or quantitative monitoring;
- Data-driven customized planning improvement;
- Analysis for partner stakeholders.

SUSTAINABILITY

- Encourage green transition for even the most reluctant user leveraging the Nudge Theory ;
- Partnership with sustainable mobility stakeholders.

PROFILING

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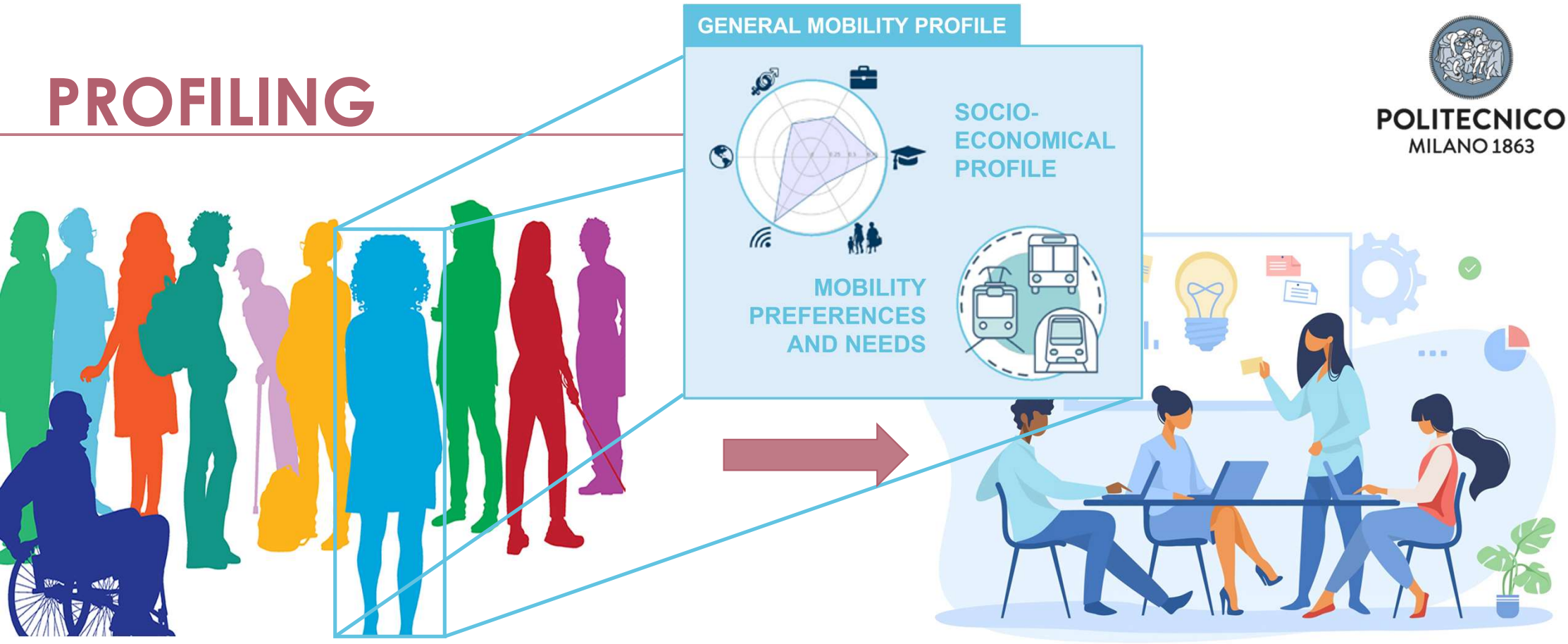
MACHINE LEARNING

CITIZENS

TARGET INDIVIDUALS

PROFILING



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TARGET INDIVIDUALS

DECISION SUPPORT

PLANNING

MODES OF TRANSPORT

Multimodal mobility solutions that:

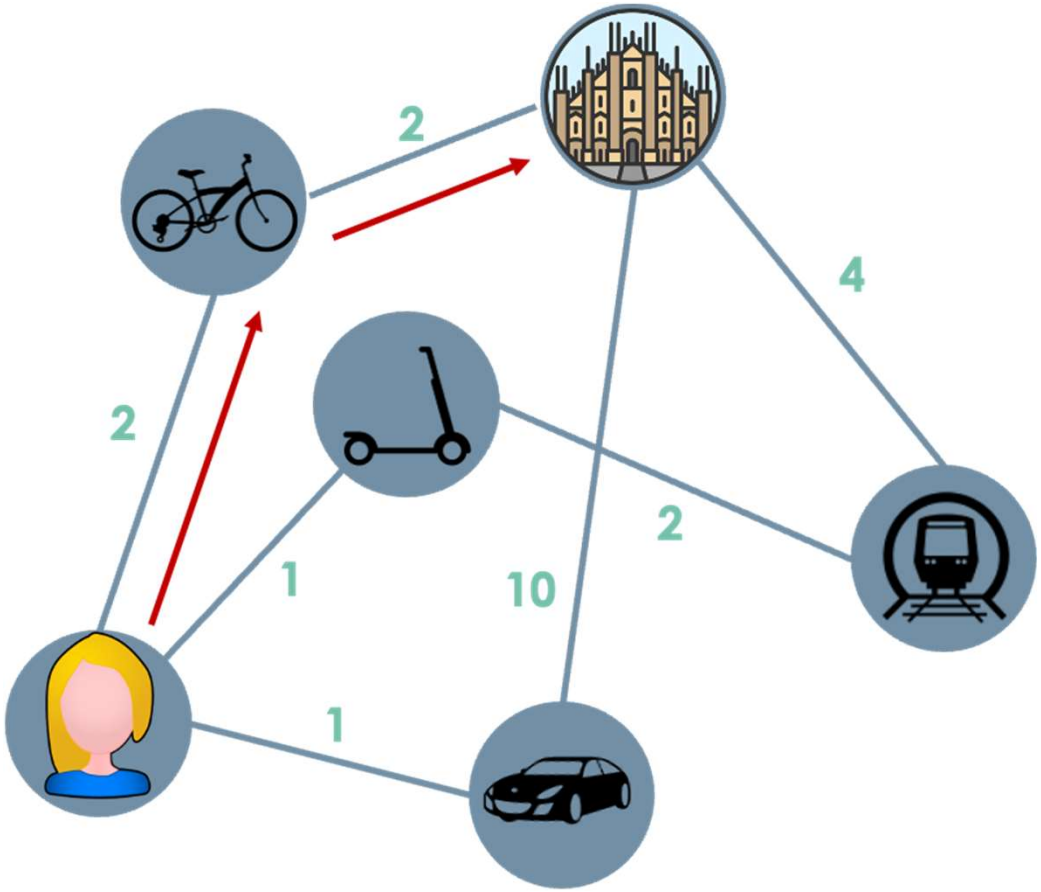
- Consider each user's preferences and needs;
- Suggest multiple solutions sorted by sustainability.

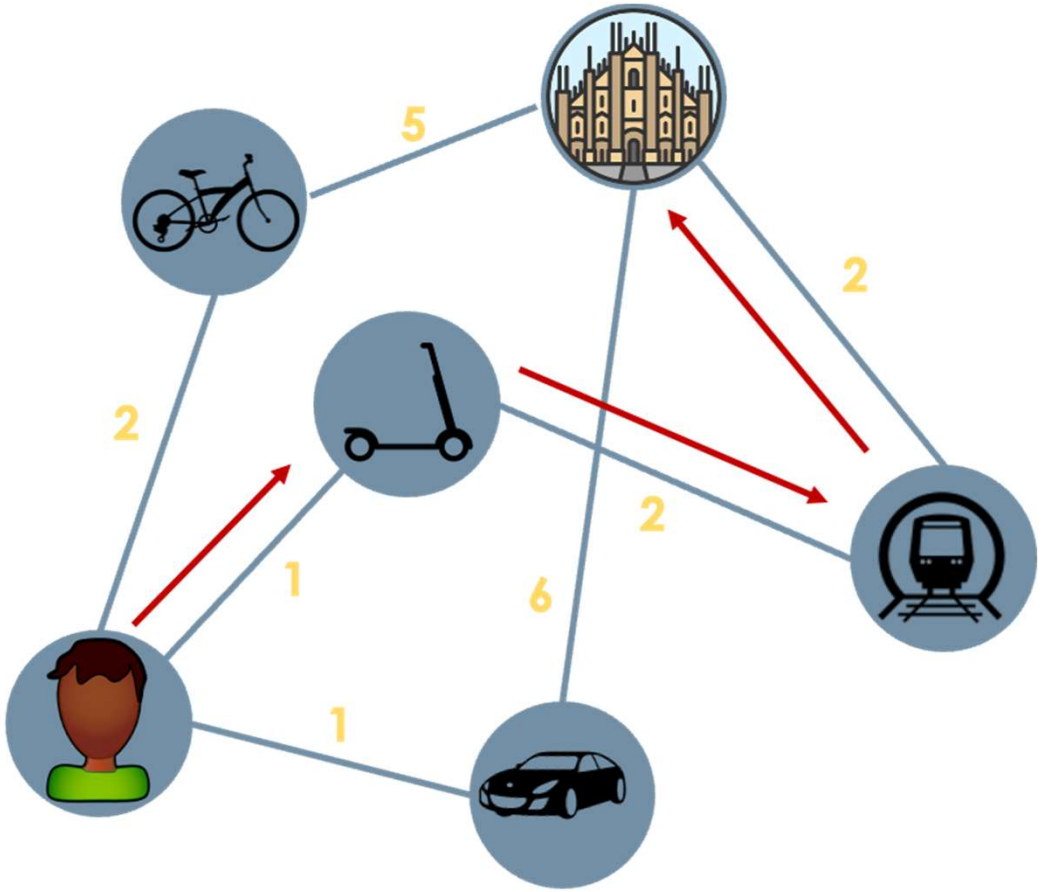
OPTIMAL PATH

The path planner algorithm evaluates:

- Reasons for the trip;
- Compatibility between route and selected mode;
- Total cost of the trip.

PLANNING





CUSTOMIZATION

QUALITATIVE USER EXPERIENCE MONITORING

QUANTITATIVE USER EXPERIENCE MONITORING

CUSTOMIZATION

CUSTOMIZED SOLUTIONS

DATA ANALYSIS FOR STAKEHOLDER

SUSTAINABILITY

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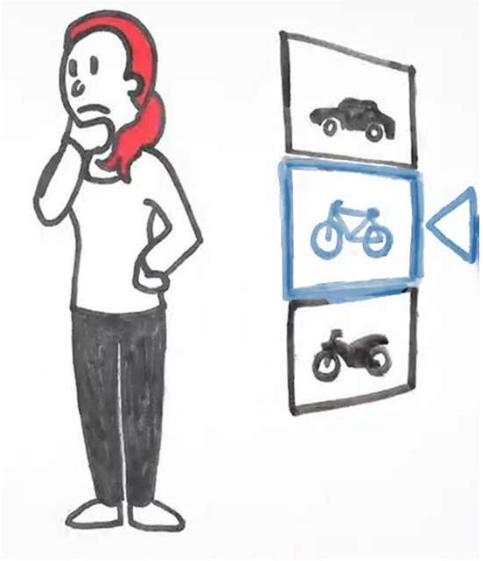
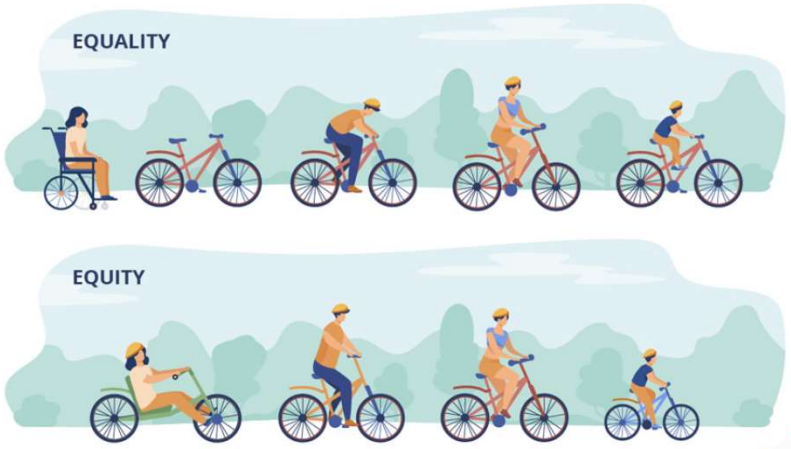
PROMOTE SUSTAINABLE SOLUTIONS





INCLUSIVE AND FAIR DECISION POLICES

DATA SCIENTISTS FOR

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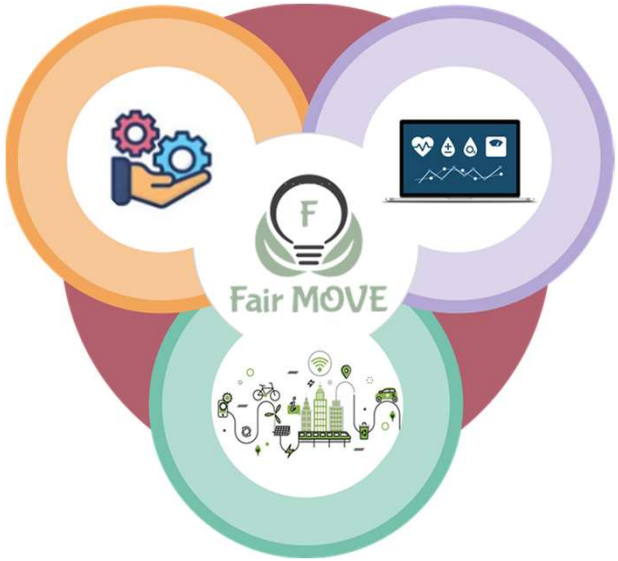
DECISION MAKING

Machine Learning tools to provide a syntetic socio-economic representation of the society supporting the decion making process in the mobility sector.



CUSTOMIZED SOLUTIONS

Artificial Intelligence algorithms to classify users experience from phisiological data collected from past journeys and further personalize FairMOVE solutions.

- M.Sc. **Math** Engineering @PoliMi
- Ph.D. in **Data Analytics** @PoliMi with PON Scholarship on **Green mobility**
- Experience on **Fair MPC** for resource allocation

SUSTAINABLE PLANNING

Design diversity-aware and intermodal smart-mobility solutions for an inclusive and sustainable society adapting efficient graph optimiziation algorithms to our objectives.

- M.Sc. **Biomedical** Engineering @UIC and PoliMi
- Ph.D. in **Data Analytics** @PoliMi
- Experience on **stress monitoring**

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THANKS FOR YOUR ATTENTION

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