

POLIS

CITIES AND REGIONS FOR TRANSPORT INNOVATION

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CONTEXT

- Mobility transformation changing landscape of urban planning and mobility management
- Need for understanding new scenarios from public administration
- Disruptive technologies as an enabler to support policy – makers
- New legal, ethical and a policy frameworks must be designed

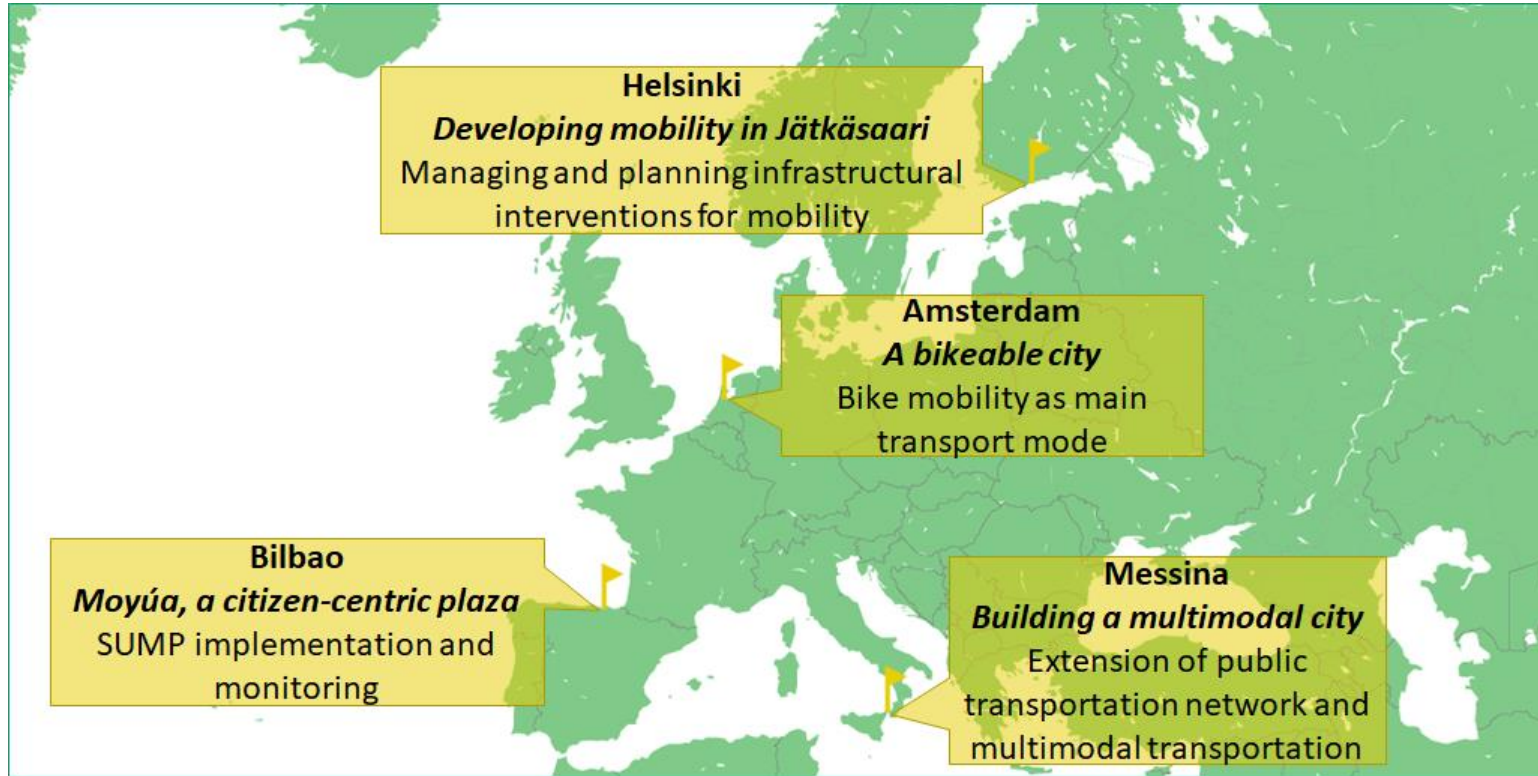
OBJECTIVE

Adoption of a Data - Driven and Evidence - Based Decision Making

- Better use of data
- Participative process and the creation of a community
- Adopt a user-centric approach

SOLUTION





UNDERSTAND CURRENT MOBILITY

- Traffic:
 - O/D Matrix
 - Evolution
 - Prediction

- Bike:
 - O/D Matrix
 - Trajectory analysis
 - Usage prediction
 - Risk Factor

- Public Transport
 - O/D Matrix

DETERMINE MOBILITY IMPACTS

- Safety index (Bike data)

- Noise analysis

- Impact in emission

SIMULATE FUTURE SCENARIOS

- Safety Index impact of a new neighbourhood

- Congestion levels due new infrastructures

- Impact of closing a centric square to private vehicles

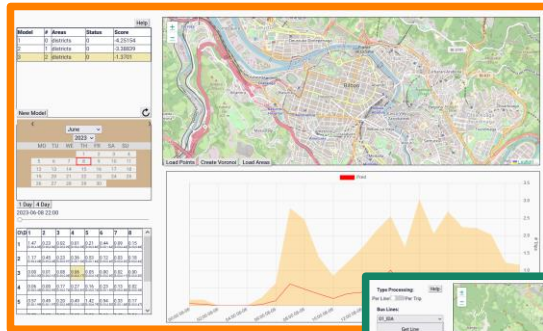


- **Context:** Implementation of the SUMP for the Horizon 2030
- **Motivation:** Exploring mechanisms and tools that may support in efficiently planning actions based on data evidence
- **Use Case:** estimating the effects of closing Moyúa square to private cars
- **Challenge:**
 - up-to-date information to understand current mobility behaviour
 - disruptive technologies to predict the impacts of a specific measure in the city traffic, mobility, air quality...
 - Translate these impacts into health and life quality indicators
- **Achievements:**
 - Implementation of mechanisms to gather data usually managed by other entities
 - Explored usability of information coming from WiFi connections
 - New technologies for collecting information about pedestrian flows

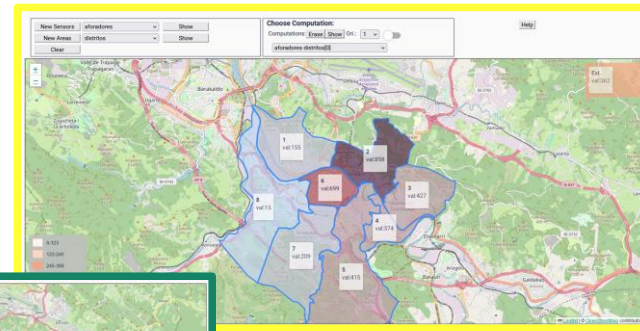


➤ Achievements

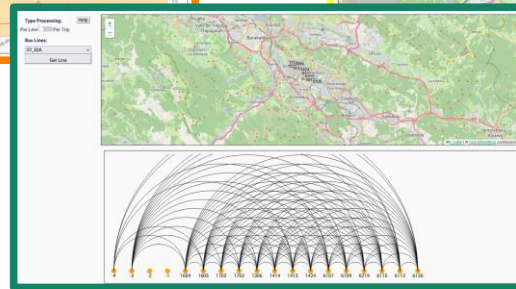
- Use disruptive technologies to analyse origin-destination matrixes for traffic, public urban buses or bike-sharing service



Bike OD Matrix Prediction



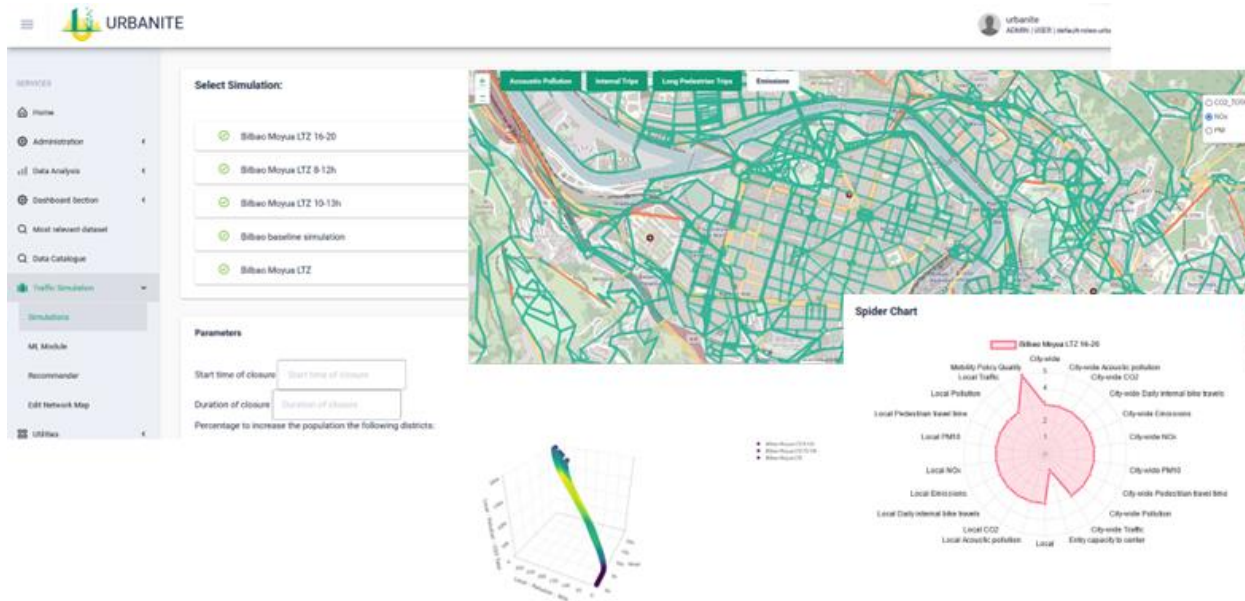
Traffic OD Matrix Characterization



Public Transport O/D Matrix Characterization

➤ Achievements

- Determine the effects of simulated future scenarios into targeted KPIs



➤ Data Challenges

- Gain awareness of existing data
- Legal framework and processes for data sharing
- Ensure quality, cleanness, completeness, and accuracy of data

➤ Openness

- should be applied throughout development and in many different respects: open standards (meet interoperability), open source, and open processes

➤ Modular and iterative development

- Modules should be able to function and serve a unique function on their own, but also be compatible and complimentary to a larger data ecosystem
- Modular development is supported by working iteratively and in sprints with smaller data sets



➤ Technology gap

- Change of mindset
- Capacity building and accompaniment to the administration in the training of using disruptive technologies
- Decision-makers are knowledgeable about the nuances and limitations of the technology they are using, and are comfortable that with using it
- Privacy and other public values are ensured by the technical systems' design
- Outputs of AI are explainable valid

➤ Participatory processes

- Including 'end-users' (decision-makers) throughout the entire design process is the only way to ensure the relevance of technical solutions.
- Start the development and implementation of disruptive technologies by identifying the problem owner. Participatory development should also include stakeholders from outside of the municipality



Thank you!

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Nos apoyan

