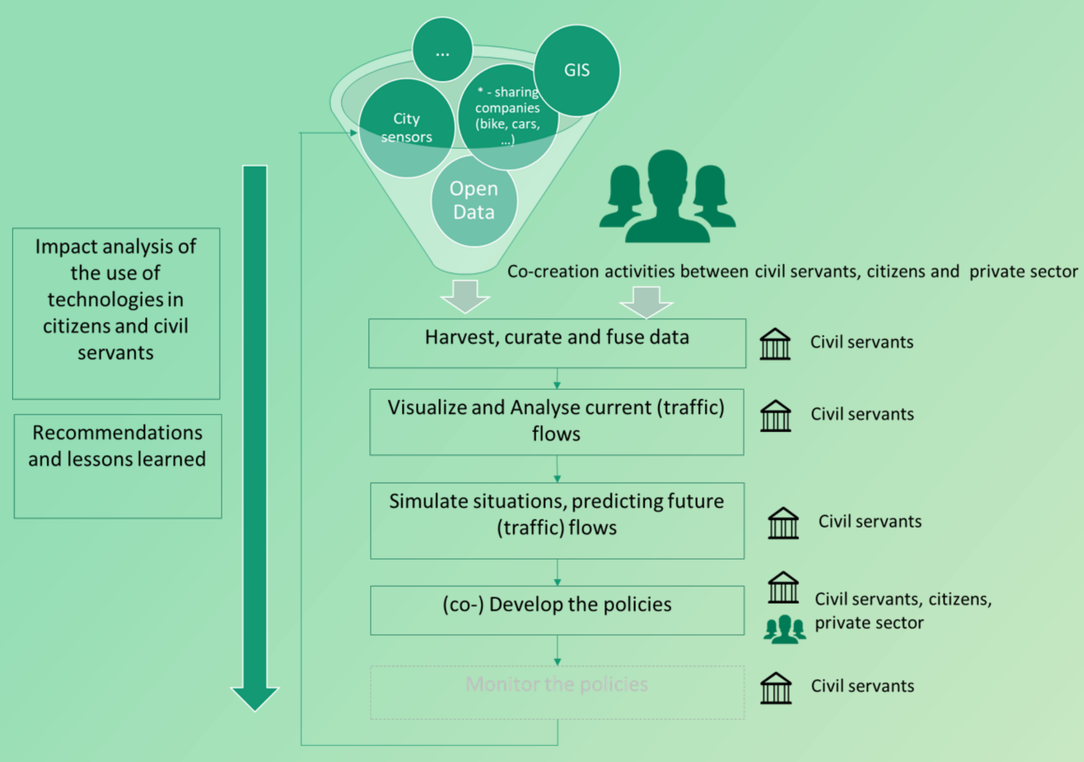
Supporting the decision-making in URBAN transformation with the use of dIsruptive TEchnologies

INTRODUCTION AND CONTEXT

Urban mobility faces more significant long-term uncertainty and complexity generated by two main factors: the demand for growth in urban environments, the pressure and urgency for a more sustainable models, and a reduction in pollution levels. On the other hand, the accelerated technological development in the transport modes themselves, business and ownership models, that mark specific challenges in its deployment. These new technologies, disruptive business models and trends are **changing the landscape of urban planning and mobility management in cities**. All these challenges require **new advances in the mobility planning processes and methods, aiming to help public administrations and policy makers to a better understanding of this new context**, supporting them in **making policy–related decision**. Now, **disruptive technologies such as big data analytics as well as decision support systems can support policy–makers decisions**.

APPROACH



Create an in-depth knowledge on the implications of the use of the disruptive technologies (e.g. AI), in the public sector and other stakeholders of the mobility and urban transformation value chain.

Provide automatic mechanisms to harvest, curate, fusion and visualization of existing open and proprietary data coming from different sources related to urban mobility and transportation

Facilitate the policy decision-making processes in the context of mobility and urban transformation with a scalable, integrated and modular ICT ecosystem built upon disruptive technologies

FEATURES

URBANITE explores the **specific challenges to favour the acceptance of such technologies in a data-driven decision making in the urban mobility planning** by using a **participatory approach** and a **technical platform** providing this features:

- **Make the most out of data**
- Make the **data management process more efficient**
- **Learn from short-intermediate- and long-term trends** to improve urban mobility
- **Anticipate behaviours and delimit unforeseen consequences**
- Identify **potentially problematic or otherwise important events**
- **Create public policies and services “with” people and not just “for” them**.
- Foster **cross-departmental collaboration** by creating an urban ecosystem
- **Boost and guide an efficient and successful digital transformation** :

Validate URBANITE Key Results in 4 real use cases: Amsterdam, Bilbao, Helsinki and Messina

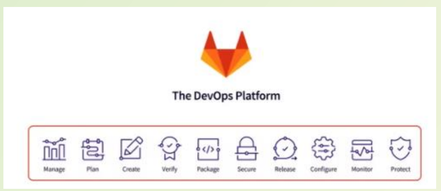
Develop a viable business model to ensure the sustainability of URBANITE

DATA AS THE KEY

- A **Data Managment Platform** that:
  - Ensures that the harvested data is **checked and evaluated based on a defined format** that ensure **interoperability**. **Vocabulary, model definition and data harvesters**, following the **EU vocabularies and DCAT-AP metadata standards**.
  - **Curates data** and **handles the semantic processing as well as the aggregation and deduplication** of the data that originate from distinct sources.
  - **Fuses data**, **integrating the cleaned** data obtained from the curation activities with other data sources with the **aim of building more sophisticated models that can be used for analysis**.
  - when necessary, **data anonymization** and **pseudonymization**, according configurable rules.

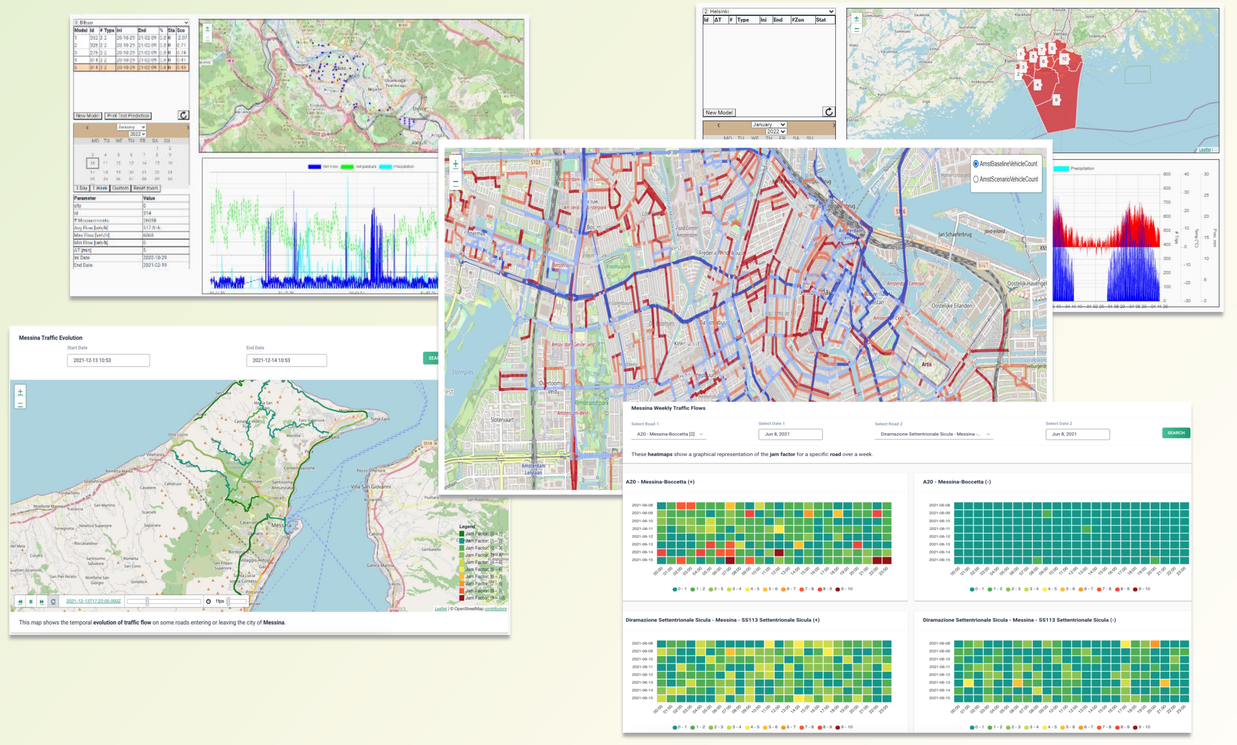
EASY DEPLOYMENT

- A **DevOps** (**Software development (Dev) and IT operations (Ops)**) approach that includes the use of **version control** tools (e.g. Github or GitLab), **continuous integration** tools (e.g. Maven for managing dependencies and Jenkins) as well as the **deployment as micro-services components** (e.g. Docker containers) for **an easier portability and reconstruction of the solution).**



DECISION SUPPORT

- **Data-based analysis capabilties** as **traffic analysis/prediction city bikes patterns analysis, analysis related to traffic and public transportation, as Weekly Traffic Flows or LPT Critical Areas Identification**.
- A first **set of simulations** focused on:
  - A better understand the consequences of **densifying city areas**.
  - **Improvement of the public transport services**, with new lines and/or frequencies or stops.
  - **Deployment of new infrastructures**, for vehicles, pedestrians or bikes.
  - Adding **urban Limited Traffic Zones** (LTZs).



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D3.4. URBANITE data structure and semantic model specification. https://urbanite-project.eu/sites/urbanite.drupal.pulsartecnalia.com/files/URBANITE_Deliverable_D3.4_v1.1%20.pdf

GO-MOBILITY, FICOBA, IRÚN. April 27 - 28 2022

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This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 870338