Project introduction

Green mobility data models and services for smart ecosystems

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Objectives
The mission

- Definition and development of harmonized data models for green mobility
- and green mobility services
  - Air quality index calculation and forecasting
  - Traffic impact calculation, forecasting and recommendations
  - Noise impact calculation and forecasting
  - Bikes real time availability and forecasting
- by leveraging on high value open data sets provided by
  - City sensors and cameras
  - European cities in their public portals,
  - European Data Portal
  - Copernicus,
- to allow third parties to provide high value services in green and smart mobility for citizens, companies and public administrations

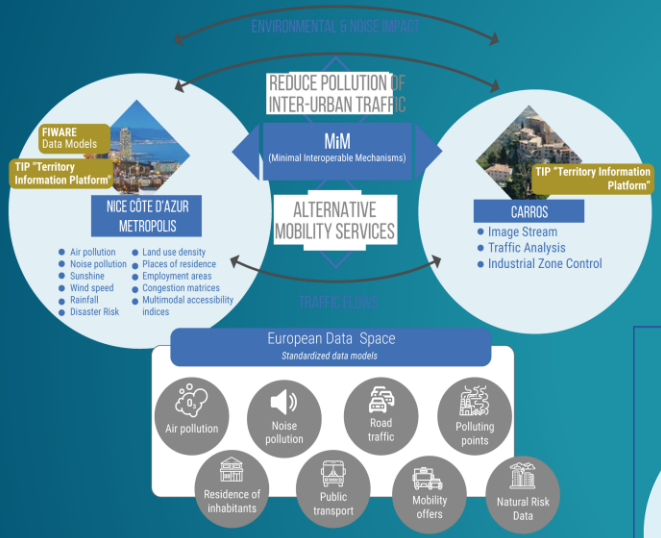
Expected impact

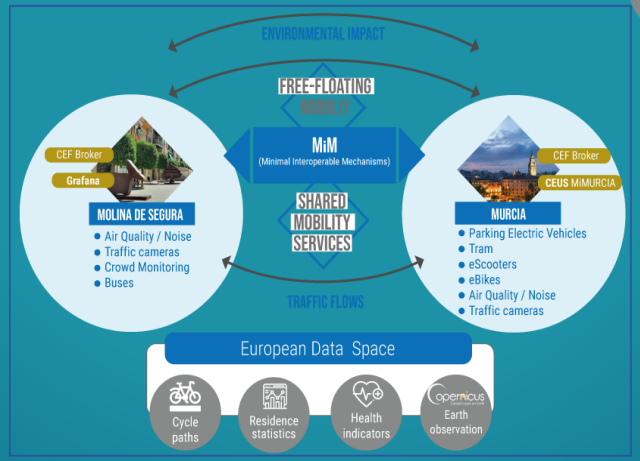
By type of user

- For FIWARE:
  - Contribution to Smart Data Models repository
  - Context Broker enhancement in scalability
  - New generic enabler for managing federation of Context Brokers
- For cities:
  - Reusability of mobility services
  - Increase efficiency and reduce cost of infra
  - Avoiding data silos
- For IT companies:
  - Easier development of added value services for mobility
  - Facilitate access to open mobility data
- For citizens:
  - More efficient mobility services
  - Living in more sustainable cities

Use cases

Nice, Flanders, Murcia/Molina

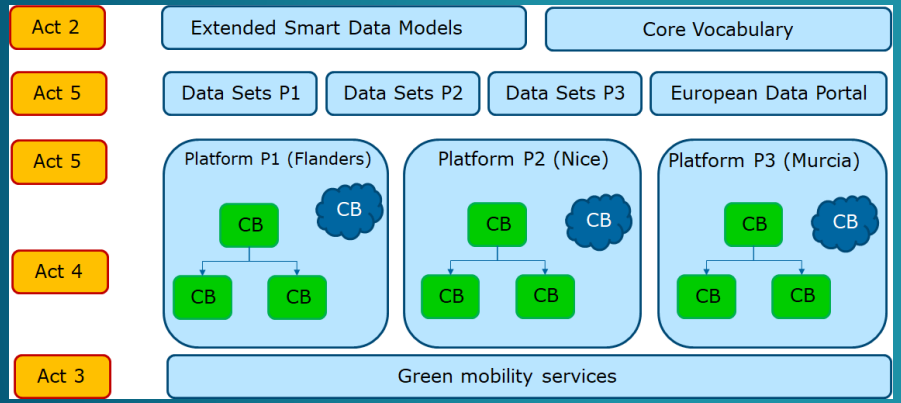




Main technical challenges

- Harmonization of the data sets from different sources , usually in silos
- Cross-services which integrate data from different sources (cities, data portals, sensors, Copernicus) to allow cities share functionality by the combination of different data sets
- Interoperability between different administrations (cities, regions) which are able
  - to share data,
  - to share services
  - and to share benefits (cost reduction, environmental commitment, citizens satisfaction, creation of local business)
- Scalable architecture to address real-time data in mobility scenarios

Proposed high level concept



- set of data models and a core vocabulary to allow the harmonization of data across cities
- data provided by the onboarding use cases in the proposal and from European Data Portal
- conceptual architecture of Context Brokers to respond to intensive-use and real-time features: serverless and federation
- Deployment of architecture in each pilot by using own technology, data and customized services
- common green mobility services by considering the commonalities from the use cases and typically requested by most cities in a context of green mobility

Tangible outcomes

Take away from GreenMov

- Extended and new Smart Data Models
- New building block for federated queries
- Advance green mobility services for cities/regions
- Reference architecture for scalable Context Broker and set of guidelines for practical deployment
- A white paper on how to make mobility and environment data interoperable to European Cities with lessons learned from the project and pilots

GreenMov card

- Acronym: GreenMov
- Title: Green Mobility data models and services for smart ecosystems
- Funding Body: European Commission
- Funding program: CEF-TC-2020-2
- Project reference: 29397608
- Total budget: 1,3 Meuros
- Total funding: 993 Keuros
- Duration: 24 months
- Starting Date: 1 Sep 2021

- Coordinator

- Partners

Thank you!

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