SPACE
4Cities

Eurisy Members' Day

Space applications for urban challenges: Sustainable mobility

16 December 2024
Alan Mandrillon

SPACE4Cities

SPACE4Cities in short

Via a Pre-Commercial Procurement of innovative and smart use of satellite data, the SPACE4Cities project aims to build replicable solutions for better and more **dynamic** management of public areas, green spaces, transport infrastructure and city maintenance – and cities' overall resilience and functionality.

Pre-Commercial Procurement project, funded by Horizon Europe
- Budget 5.2 M€
- Incl. 2.87M€ budget for SMEs/suppliers

Timeline 42 months: February '24 to July '27
- Phases: Open Market Consultation; Solution Design; Prototyping; Field Testing; Exploitation and scaling

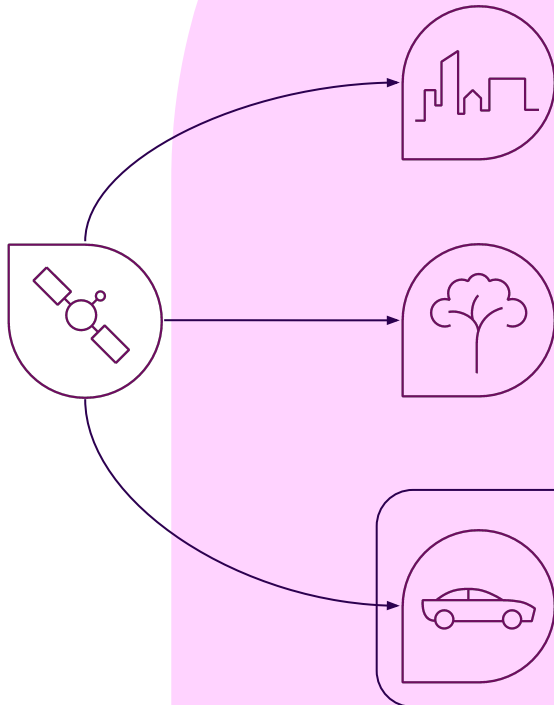**Demonstrators developed in the Buyers Group ('26-27)**
- In 5 partner cities: Amsterdam, Athens, Ghent, Guimaraes and Helsinki
- Smaller pilots in 10 replicator cities around Europe (OASC's task)
- An expert partner: Aerospace Valley

The Pre-commercial Procurement
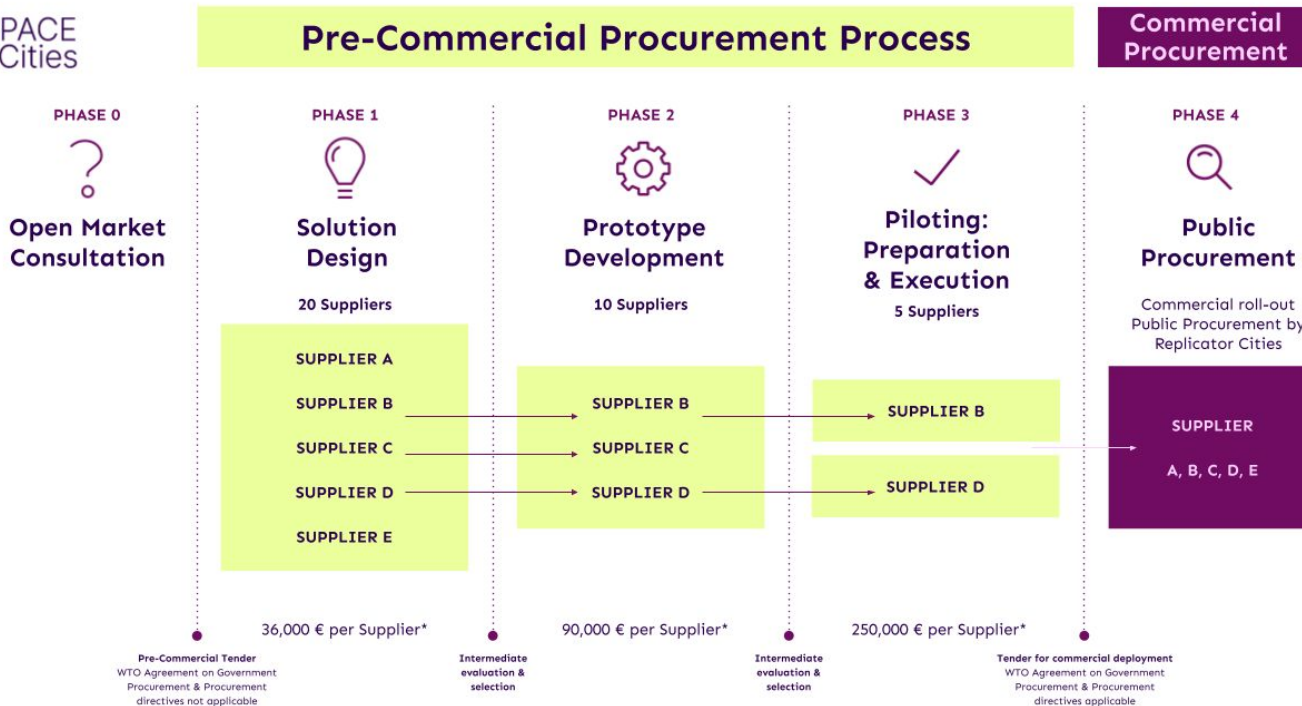
SPACE4Cities Challenges

Urban Planning & Management

- Digital City Models & Data Inventories
- Policy simulation

Climate Resilience

- Environmental Risk Modelling & Prediction
- Dynamic Emissions & Air Quality Management
- Energy Transition
- Green Cities

Sustainable mobility

- Active Mobility
- Public Transportation
- Public space and logistics management
- Accessibility of infrastructure
- Drones in urban environments

EU policy on urban mobility

SPACE 4Cities

A stronger public **transport network**

Modern stations that connect rail with public transport, and provide shared mobility services

Easier and more attractive options for active mobility such as **walking and cycling**

Bigger and better **park-and-ride facilities**, equipped with recharging points for zero-emission vehicles

Efficient zero-emission **urban logistics** and last-mile deliveries

More **multimodal terminals** and freight consolidation centres

Better management of **mobility flows**, through multimodal hubs and digital solutions

More sustainable and well-functioning **passenger transport-on-demand** services such as taxis and PHVs

No mention of space

New Urban Mobility Framework, 2021

The *Trans-European Network Transport (TEN-T)* **Regulation, revised in 2024, will require** <u>data</u> **from 431 cities by 2025, at least on:**

- greenhouse gas emissions,
- congestion,
- road deaths and serious injuries,
- modal share and access to mobility services,
- air and noise pollution.

No mention of space

Urban mobility topics

SPACE4Cities

Main domains

Road vehicles
Cycling
Walking
Shared mobility
Micromobility
Public transport

Logistics
UAM

Mobility infrastructure

Main challenges

Health
Liveability
GHG emissions
Air pollution
Light pollution
Noise
Resilience
Demand variations
Congestion
Spatial constraints
Accessibility
Urban road safety
Last-mile deliveries
Soil sealing

Space-relevant solutions

Public transport optimisation
Location Based services
Management of street lights
Smart parking, geofencing
Autonomous electric transportation
Real-time monitoring of noise and pollution
Disaster and Emergency tracking
Supporting advanced urban planning
IoT and city assets tracking
Low-emission zones (LEZ) and UVAR
Recharging and refuelling infrastructure for electric and hydrogen vehicles
Mobility-as-a-service (MaaS) apps
Intelligent Transport Systems (ITS)
Mobility infrastructure planning and monitoring

Urban mobility use cases

SPACE
4Cities