

“Integrating Galileo and Copernicus downstream applications to support dynamic use of public spaces”:

SPACE4Cities



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SPACE4Cities mission:

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.

SPACE4Cities in Short

Pre-Commercial Procurement project, funded by Horizon Europe

- Method for public sector procurers to buy R&D from several suppliers in parallel
- Steer development of solutions that meet their needs
- 7 consortium partners: 5 cities + Aerospace Valley + Open & Agile Smart Cities network
- Budget 5.2 M€, incl. **2.87M€ budget for SMEs/suppliers**

Timeline 42 months: February '24 to July '27

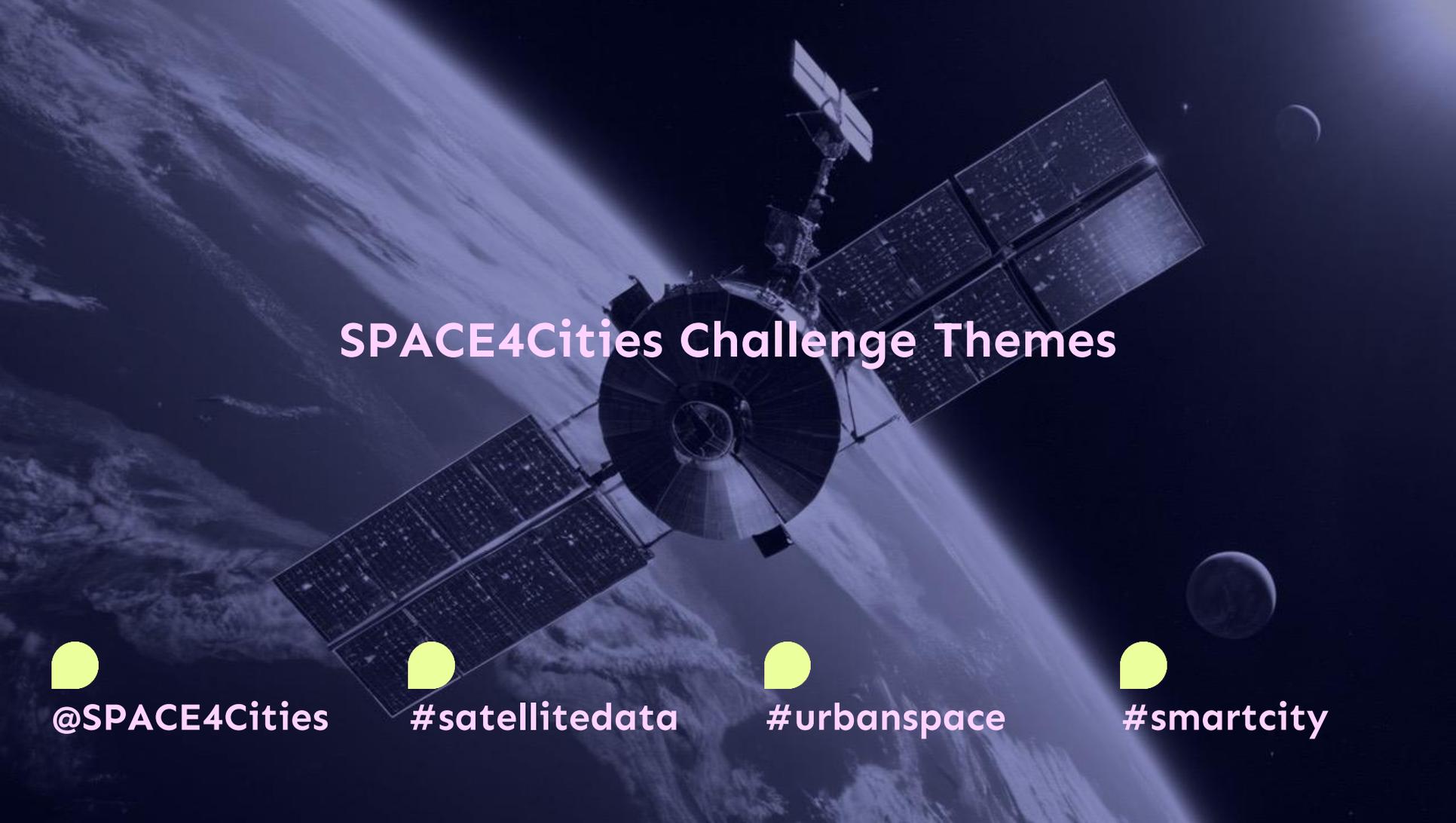
- Phases: Open Market Consultation; Solution Design; Prototyping; Field Testing; Exploitation and scaling

Piloting by the Buyers Group ('26 and '27)

- In 5 partner cities around Europe: Amsterdam, Helsinki, Ghent, Guimaraes, Athens
- Smaller pilots in 10 replicator cities
- Each of the 5 winning Suppliers pilots in 1+2 cities

SPACE4Cities expected outcomes

- 5 highly innovative, **beyond the State of the Art solutions**, ready to be commercialised
- **Solutions bring radical improvements to the quality and efficiency of public services** by encouraging the development and validation of breakthrough space-based solutions
- **Solutions are replicable** and come with a clear roadmap for Europe-wide implementation of space data-based solutions
- **Shorter time-to-market** facilitating the access of SMEs and startups to the procurement market and increased exploitation of IPRs and R&D results.
- **Project outcomes uptaken by 50 Follower cities** via peer learning and capacity building.

A satellite with large solar panels is shown in space, orbiting Earth. The Earth's surface is visible in the background, showing clouds and landmasses. The satellite is the central focus, with its solar panels extending outwards. The overall scene is set against the dark backdrop of space, with a crescent moon visible in the upper right.

SPACE4Cities Challenge Themes



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How do we define public spaces?

- **Streets:** roads, pavement, streetlights, curbs, sidewalks, quays, bridges, car parks, cycle paths, etc.
- **Open spaces:** parks, gardens, woods, public forests, plazas, squares, river banks, beachfronts, cemeteries, playgrounds.
- **Public facilities:** government buildings, schools and universities, health facilities, markets, sport facilities, metro and train stations, bus stops, post offices, ports.

SPACE4Cities Challenge Themes

Urban Mobility

- Emission reduction
- Active mobility
- Public transportation

Sustainability and Climate Adaptation

- Monitoring urban water, green spaces, heat, air quality
- Disaster response and preparedness

Urban Planning and Management

- Simulations and digital twins
- Infrastructure and maintenance
- Crowd management, demographics, citizen participation

Wild Card

- Solutions not fitting the Challenge descriptions, but constitutes a use case fulfilling Buyers' Group needs in terms of dynamic management of urban space.

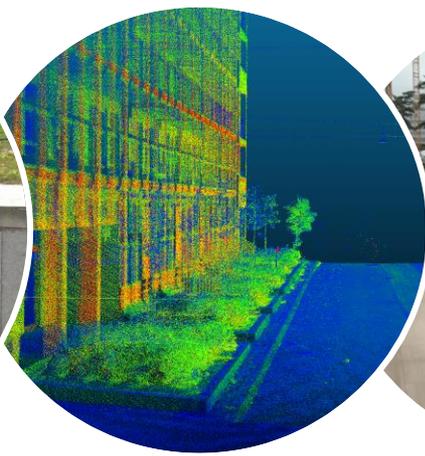
How are urban environments mapped by cities?



Airborne
photography and
laser scanning
(Lidar) from planes
and helicopters



Drone based
photogrammetry
(and laser
scanning)



Mobile mapping
systems (vehicle
mounted) with
cameras and laser
scanners



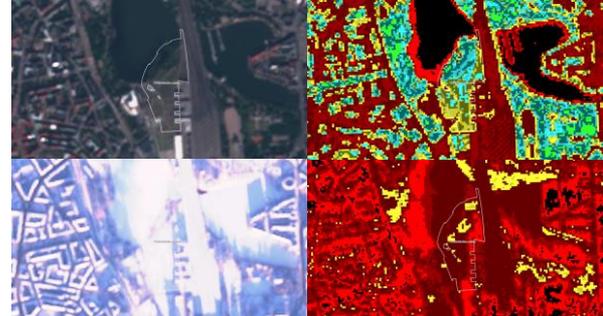
Conventional land
surveying &
terrestrial laser
scanning



*Fixed camera and
Lidar installations
for monitoring*

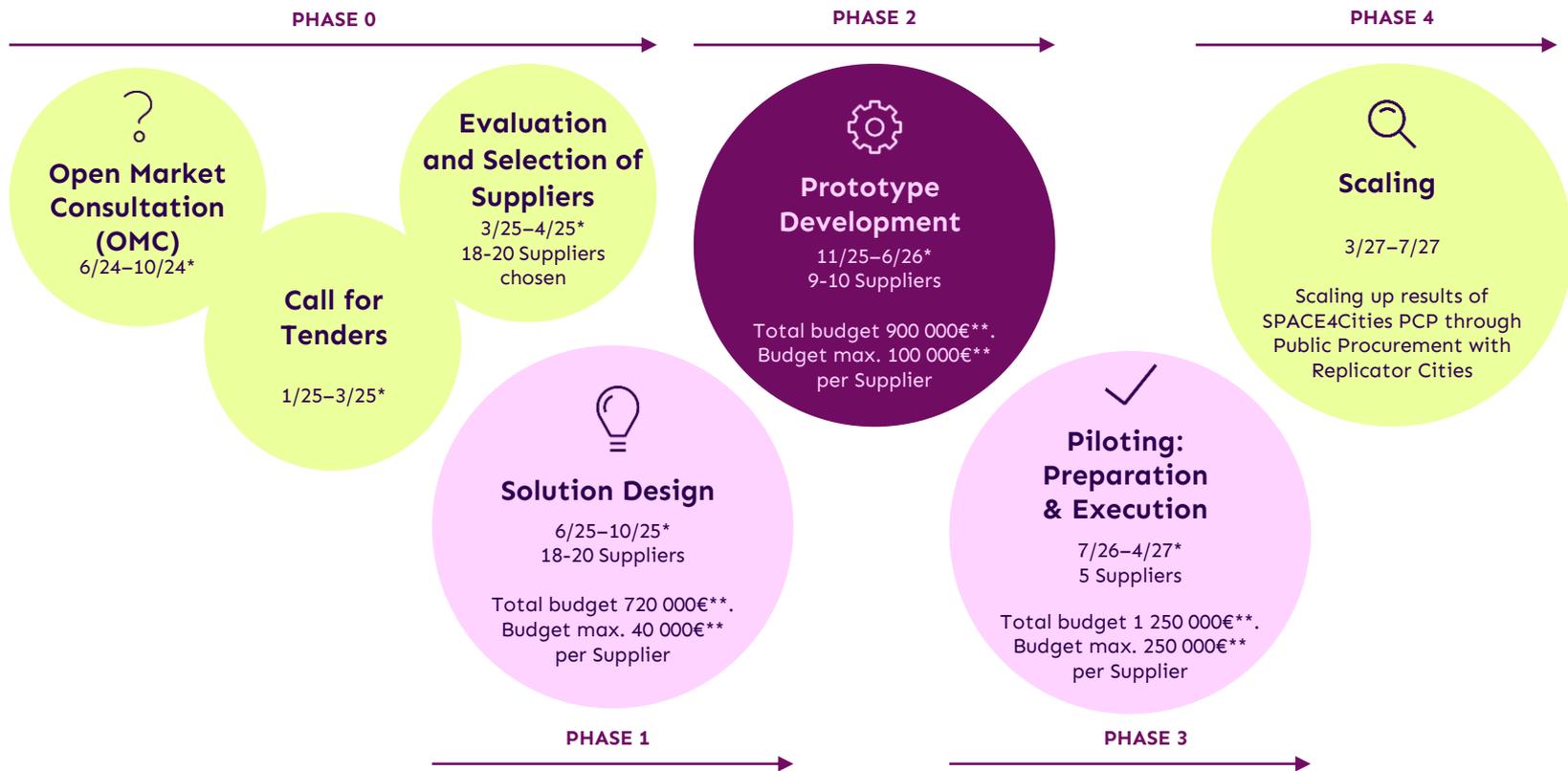
Satellite data can be complemented!

- Different mapping methods **not competing but complementing**. Best combinations need to be discovered
- **Combination with other data sources** possible (e.g. existing digital twin / city data)
- **Automation, analysis and AI technologies** allowed to implement to manage large datasets and produce insights.
- Each supplier is **required to use at least ESA's Galileo and/or Copernicus** services in their pilots.



Sentinel data 2023-2024 by Sentinel Hub.
Polygon © Helsinki - CC 4.0.

Pre-Commercial Procurement Process



(*) Dates, number of suppliers and budget are indicative until the Call for Tenders is published.

(**) Financial figures are VAT 0%. Total maximum budget per supplier 390 000€.

Opportunities for Suppliers: benefits of PCP

- **Funding support** up to 390k€ per Supplier; **lower investment** to generate new market opportunities
- New opportunities unlocked through **collaboration/competition with other Suppliers**
- **IPR** generated through R&D is **retained by Supplier** after the PCP
- **Risks shared** with the procurers
- **Supported field testing and replication opportunities** which can be **referenced** for further commercialization. Commercialization opportunities beyond the project
- Better preparation to address future market through **early collaboration with public authorities**; More knowledge on space technology in wide range of European cities

How to get involved?

Finnish National OMC Webinar

9 Oct -24

Fill out the S4C [Supplier Survey](#)!

General OMC Webinars

Join the S4C OMC Community on [LinkedIn](#)!

Urban planning

28 Aug -24

[QnA](#) available on the S4C website.

Climate adaptation and resilience

26 Sept -24

**[Matchmaking Form](#) to facilitate
Supplier partnerships!**

Sustainable mobility

25 Oct -24

**Prepare your submission!
CfT published in January -25**

SPACE4Cities Mentimeter time!

<https://www.menti.com/alg2nzy8jgru>

**Passcode:
8896 6126**



We are looking to solve **needs and problems** of European cities related to the **dynamic use of public spaces** and use of **European satellite data!**

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