

Linking space to user needs

Urban park irrigation monitoring

Smart City Expo World Congress · Barcelona, 3–5 November 2026



The urban challenge

What problem does the city face?

- Cartagena, Almada and Porto must **keep parks green with less water**
- Park health is still checked through **manual, visual field audits**
- Watering by fixed schedule **wastes water in some parks** and stresses others
- Drought-stressed trees **lose their cooling effect** when cities need it most

Up to 70%

Southern Europeans living with seasonal summer water stress (EEA, 2025)

32%

EU population affected by water scarcity in 2023 (EEA, 2025)

The solution at a glance



What it does

Uses Copernicus satellites to **track the health and water stress of every park**, to help prioritise irrigation



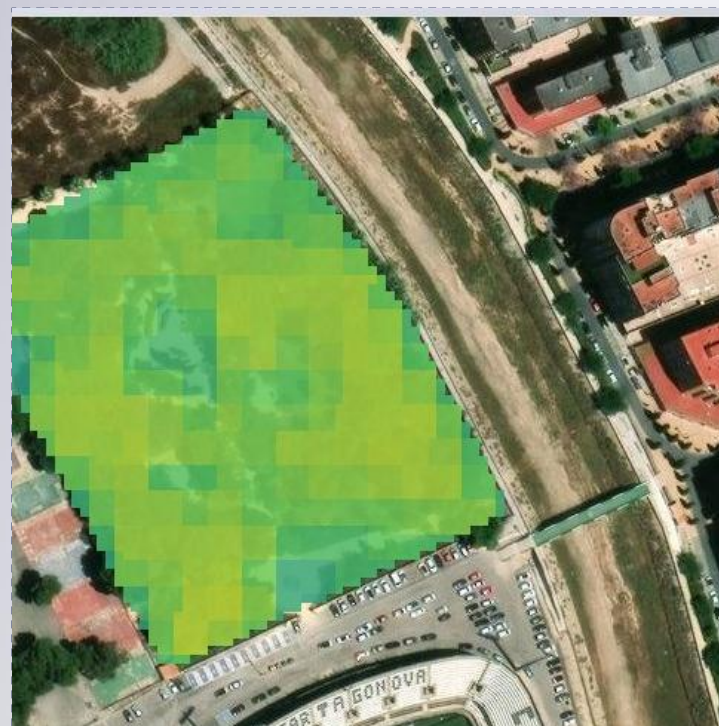
Who it is for

Parks and gardens departments, environmental technicians and municipal managers



What users get

Park maps, a **0–100 irrigation score**, email alerts, an outlook and watering estimates where a tree census exists



EU Space inside



Copernicus

Data / services used

Sentinel-2 (10 m vegetation);
Sentinel-3 (daily temperature);
AgERA5 weather

Added value

Free, objective view of every park, with three years of history.



Galileo / EGNOS

Data / services used

Not required for this use case

Added value

Parks and trees are mapped from municipal GIS and census data, so no positioning data is needed.



In-situ / other data

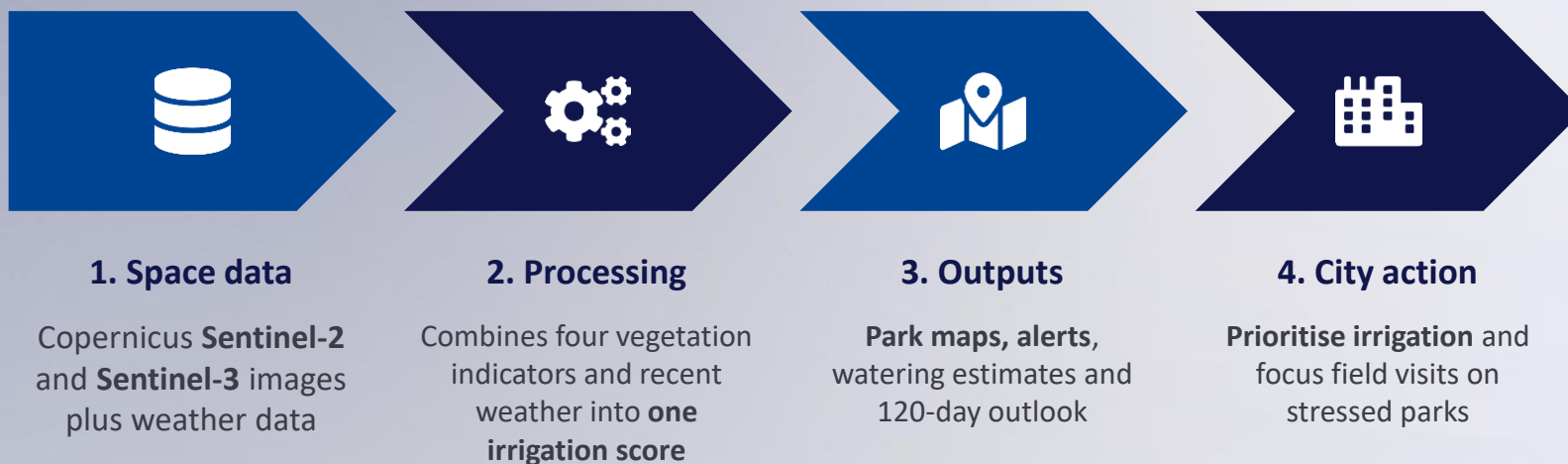
Data / services used

Municipal tree censuses, where available

Added value

Where available, estimates weekly watering volumes per tree.

How it works



Curious how it works? Watch the platform in action, from satellite view to stressed park: [here](#)

Results and benefits

6 cities

With 4 to 6 monitored parks each, from Cartagena to Essen

Daily

Irrigation score and alerts refreshed every day for every park

120 days

Seasonal outlook built on three years of satellite history

EU space data helps cities water the right parks at the right time, saving water and protecting urban trees.

Who can benefit and what's next



Who can use it

- Municipal **parks and green-space departments**
- **Water utilities** and irrigation managers
- Urban planners and **climate-adaptation teams**



Lessons learned & next steps

- **Best used in the growing season**; trees show drought stress with a delay
- **Masking buildings and paved areas** inside parks gives cleaner scores
- **Next**: add soil-moisture sensors and connect to city GIS

Interested in testing it in your city? Talk to us at the EUSPA booth.

Find out more



Download all PoC material

Presentations, factsheets and the brochure 'EU Space for smart cities' are available via the QR code.

Contacts

Valeria Catalano, Valeria.CATALANO@euspa.europa.eu

Alberto Hernandez, a.hernandez@libelium.com

Paola Testa, paola.testa1@ey.com

Patricia Lopes, Patricia.Lopes.Bautista@be.ey.com

Web: www.euspa.europa.eu

#EUSpace



Linking space to user needs

Get in touch with us

www.euspa.europa.eu

