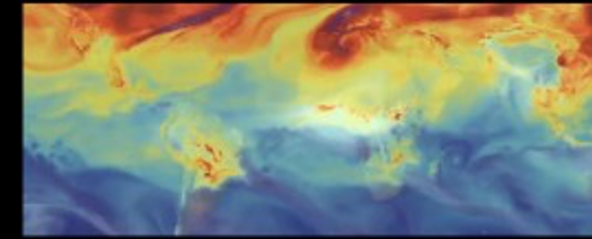


Lobelia.

Enhancing Urban Air Quality Monitoring: A Go-To-Market Journey



Lobelia Air

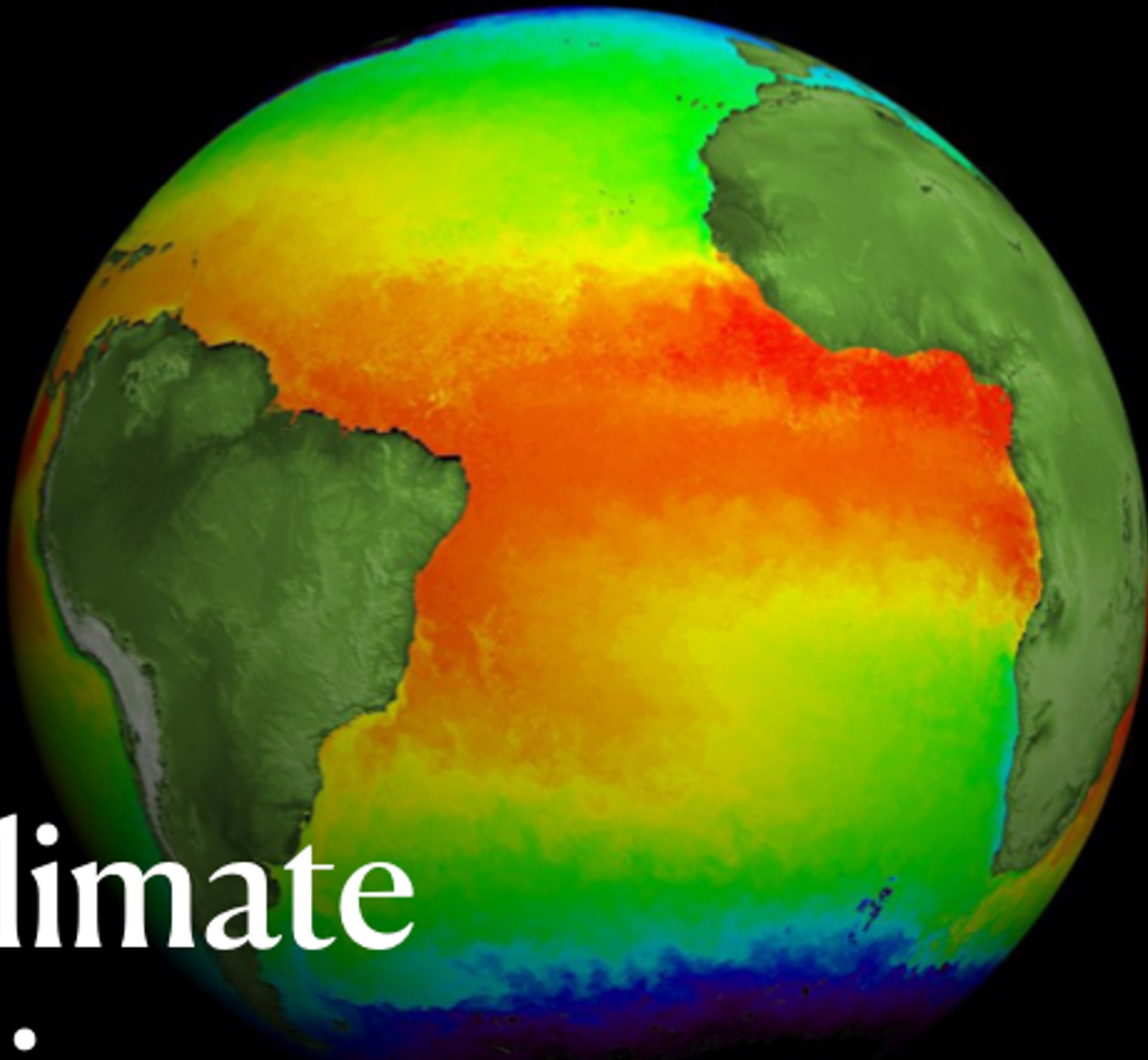
Thaís Fontenelle
SEEDS Workshop
November 2023



We are experts in

**Satellite big data
processing
technologies**

**Climate
science**

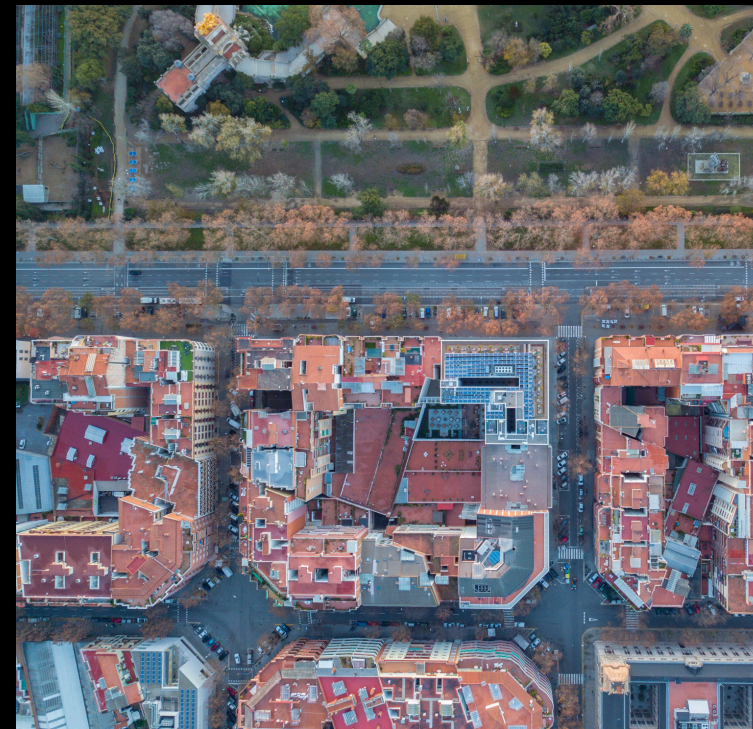


Pathway to enable new products that help solving end-users problems

Agriculture



Urban Planning



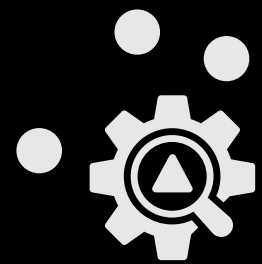
Industry



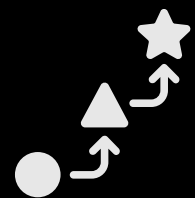
Ports



SEEDS Results



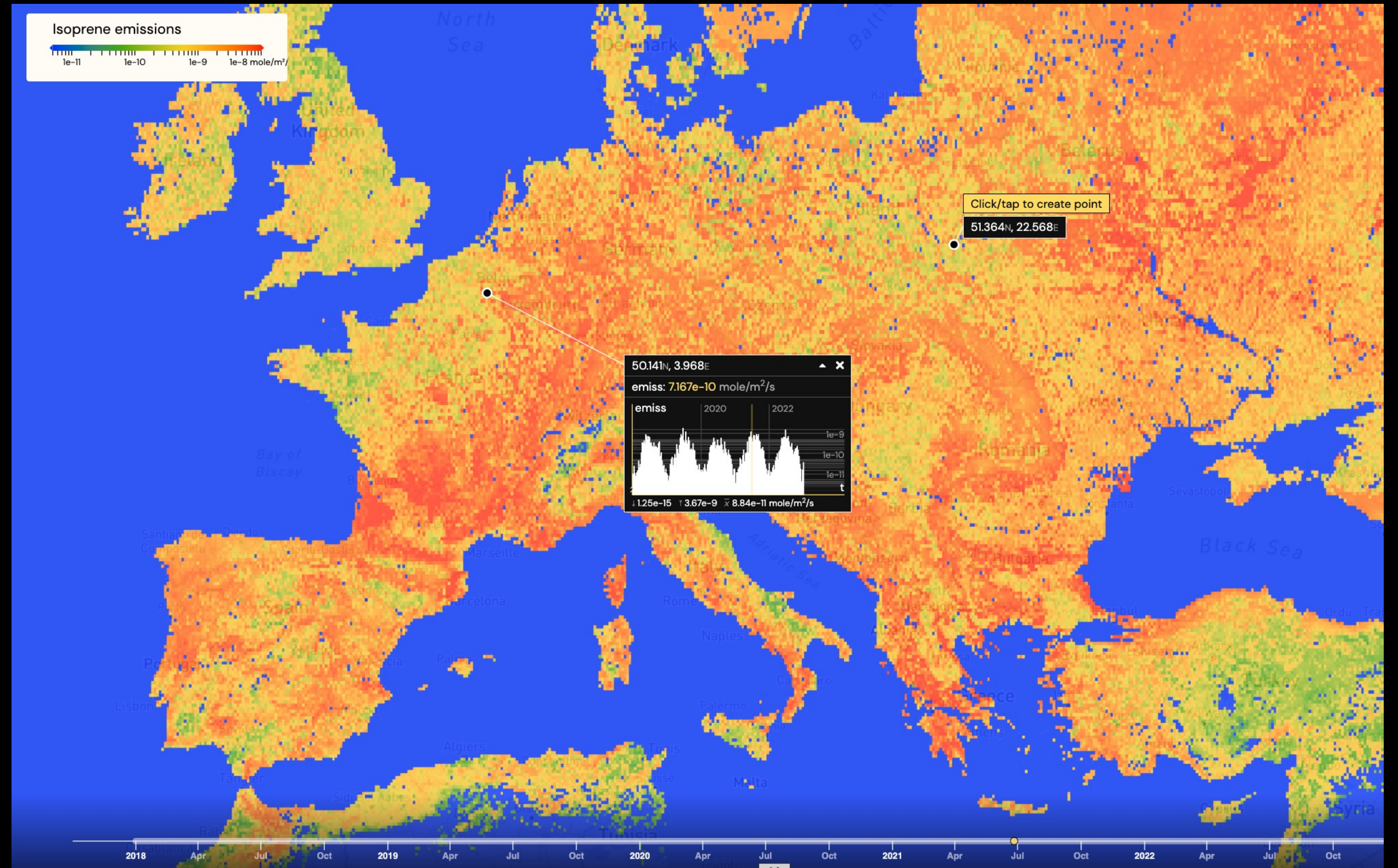
Significant advances in remote sensing data **post-processing**



Limitations: Evolution of Datasets to solve end users problems in the Near-Future



Examples in other areas illustrating this evolution



Lobelia.

Example of Go-To-Market Journey

Lobelia Air: Air Quality at Street Level



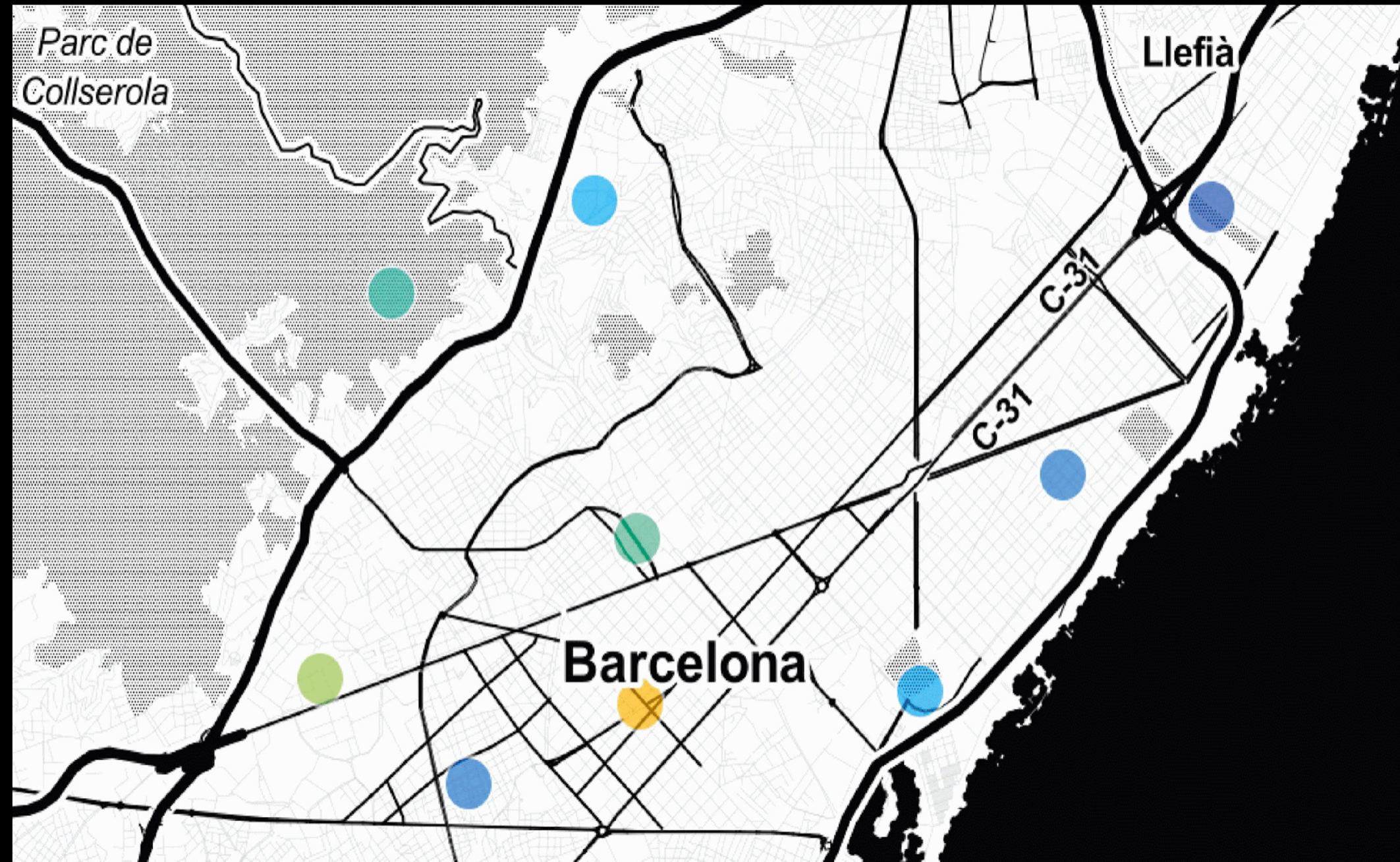
The problem of air pollution in our cities



Policies to reduce air pollution offer a win-win strategy for both **climate** and **health**.

To address it, cities need to understand the problem at Street-Level

Limitations of in-situ observations



Local data, not scalable



Precise data, but only for a specific point

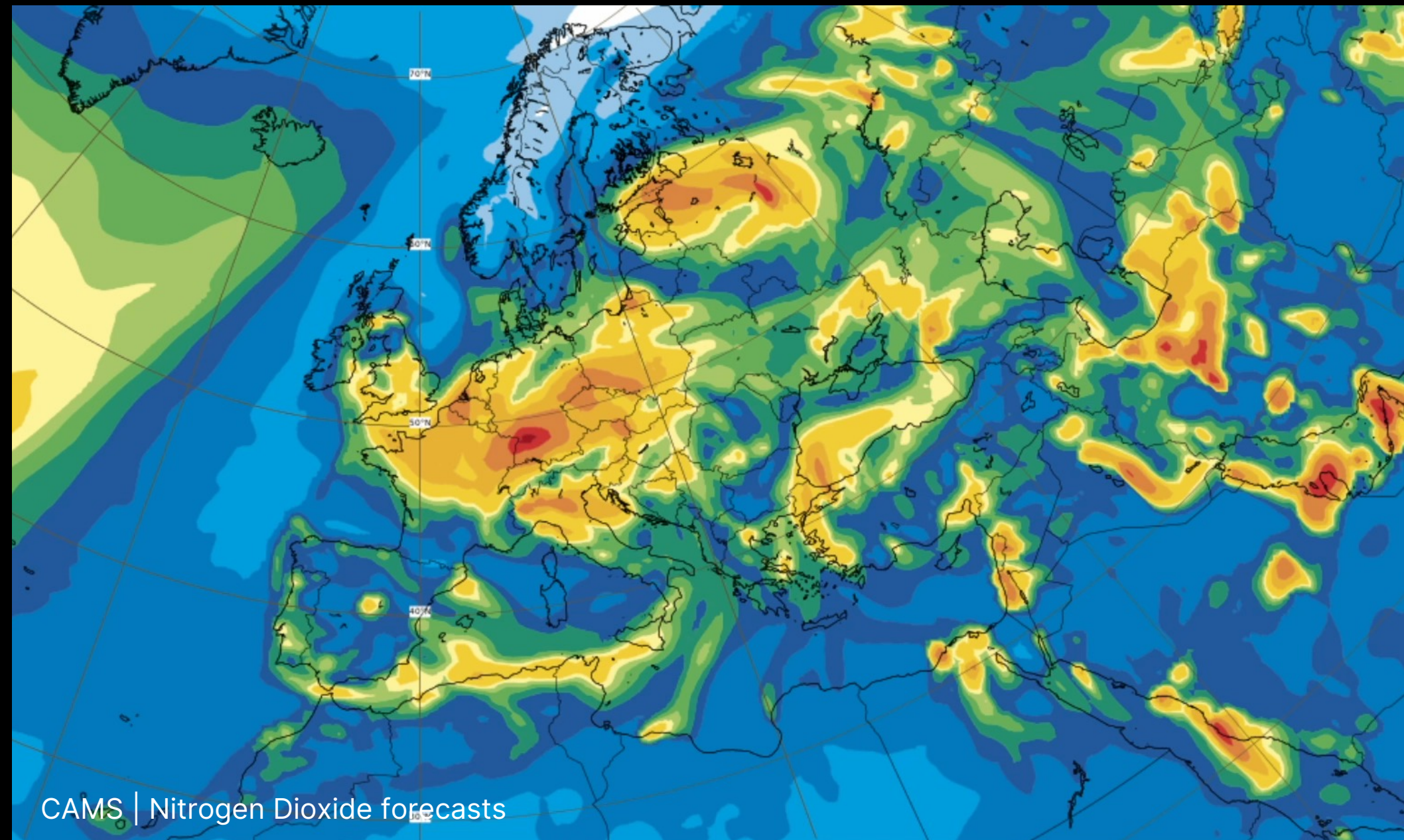


High costs + maintenance costs

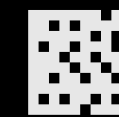


Not for monitoring the entire city continuously

Could global satellite-based data help with these limitations?



Monitoring large areas



Low resolution for city-scale problems

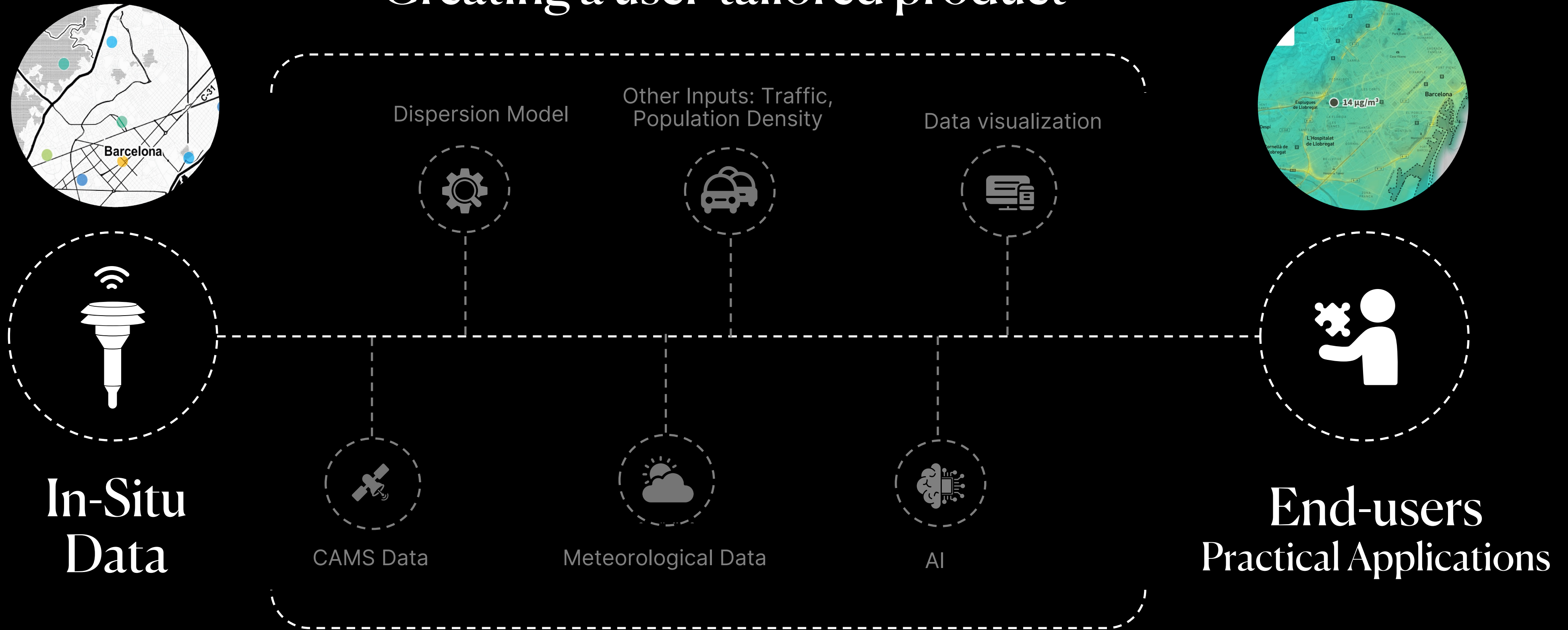


Data directly collected is not practical for these end-users

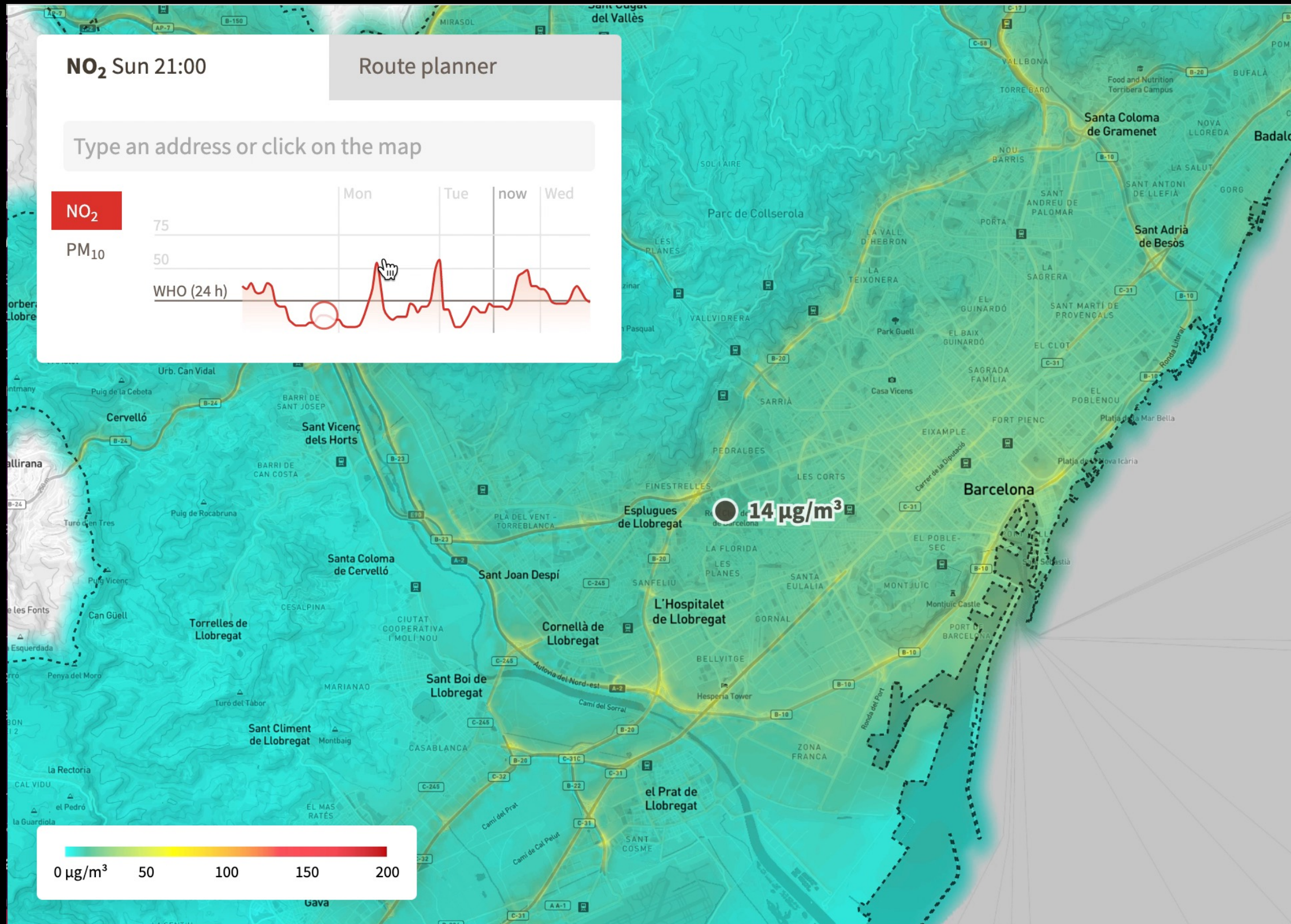


Can we improve this data for
practical and commercially
viable applications?

Creating a user-tailored product



Lobelia Air



Bridging the data gap from point measurement to street-level resolution

Inputs to Lobelia.Air

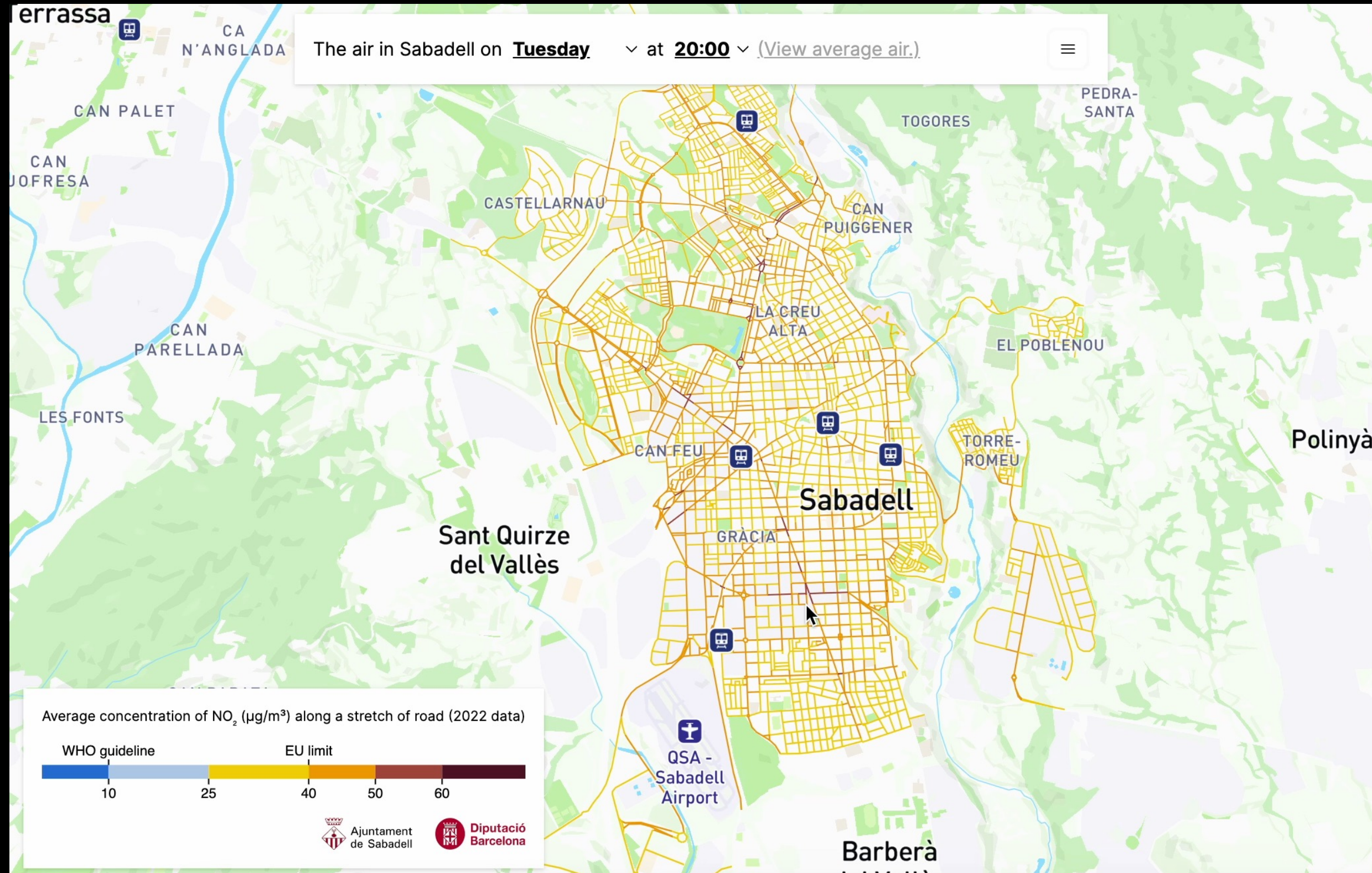
- Traffic intensity
- AQ reference stations
- Meteorology
- Population density
- Low-mid cost sensors
- CAMS Data

Features:

- Hourly updates of PM and NO₂ and soon O₃
- Automated configuration in any city
- Historical data and 72-hour forecast
- Gamification features
- Lobelia Air is based on a peer-reviewed methodology
- Validated in Madrid, Barcelona and Amsterdam, among others

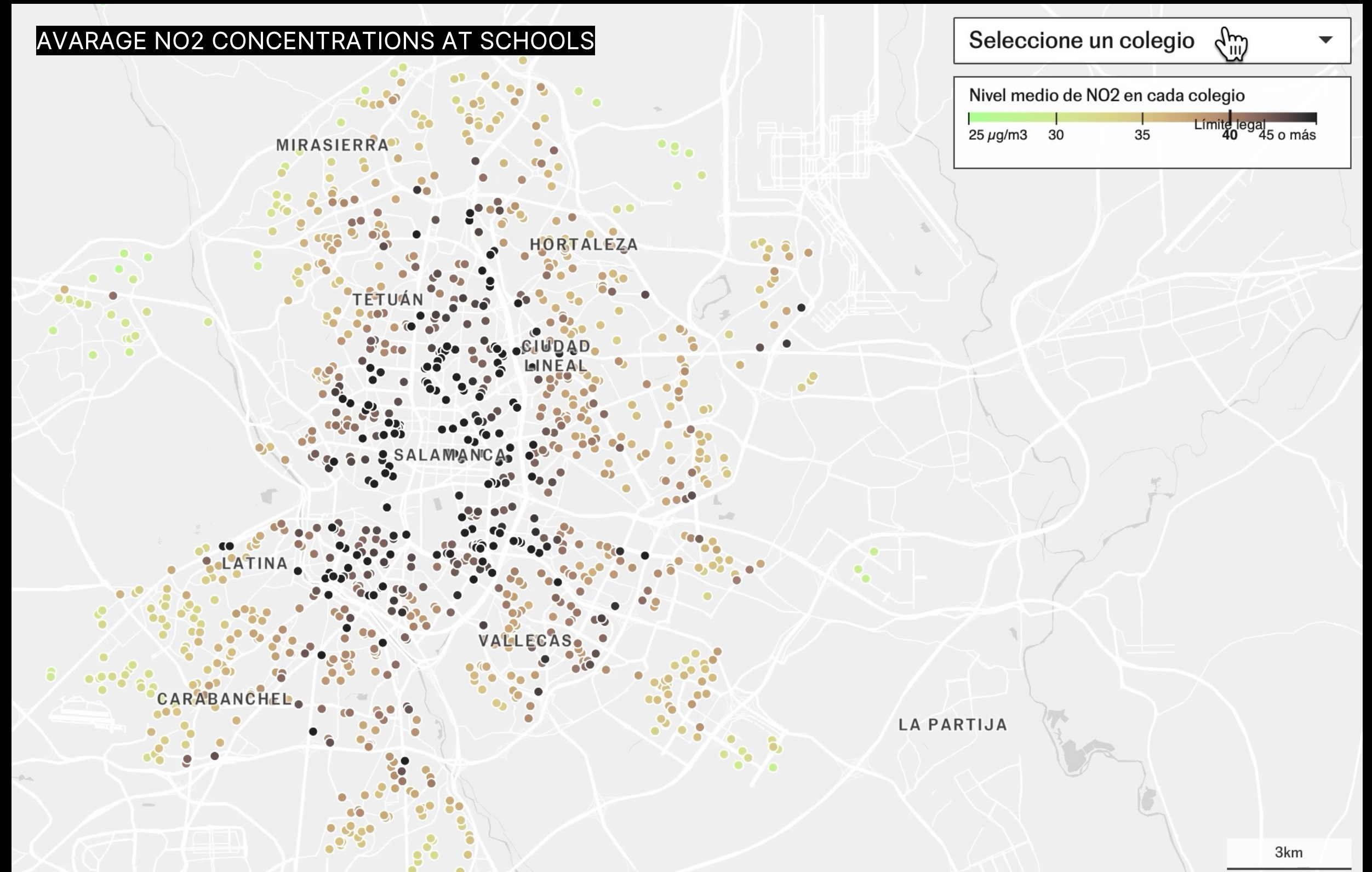
Example of application

Informing urban planning decisions



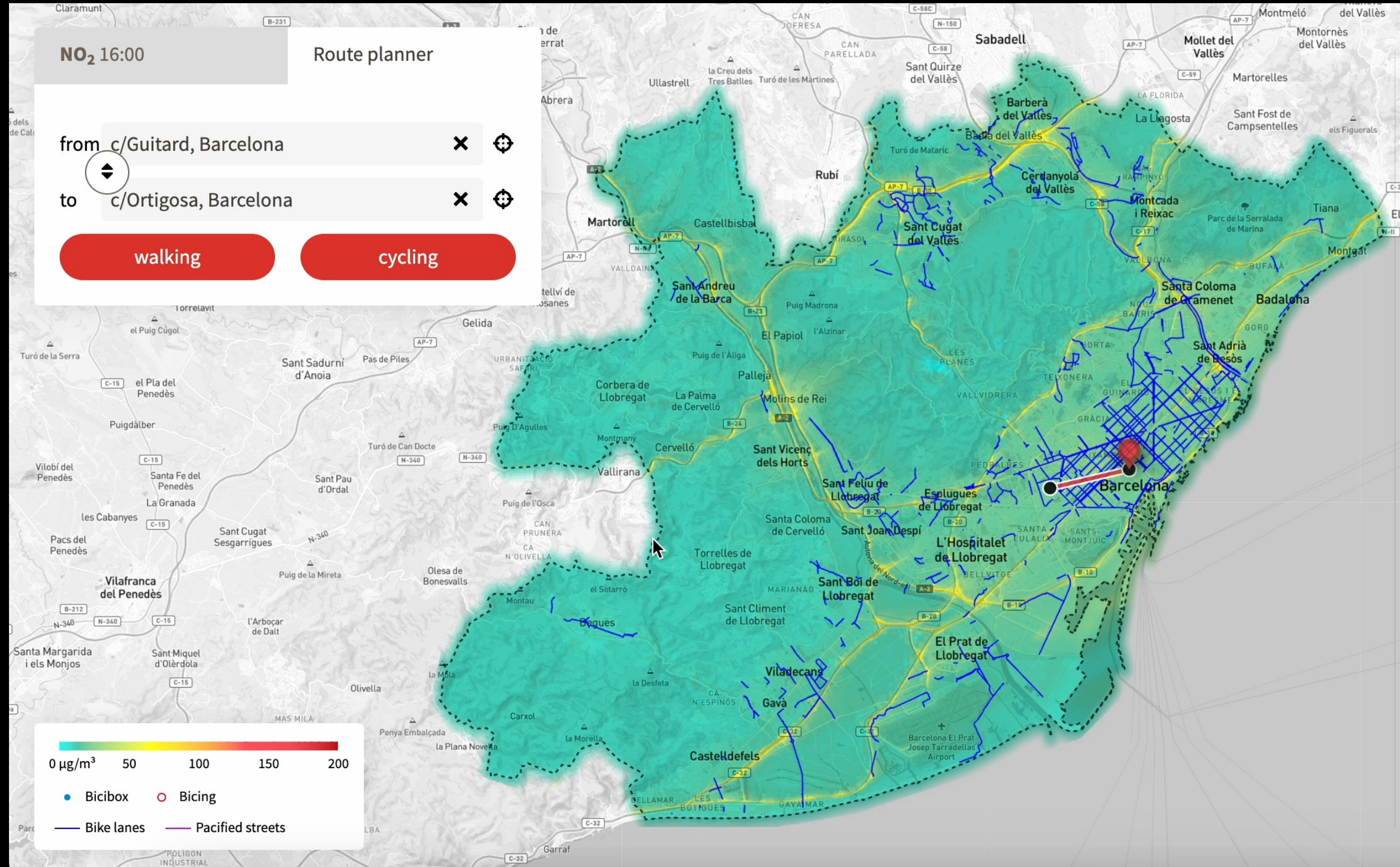
Example of application

Social and Health Impact



Example of application

Healthier Routes

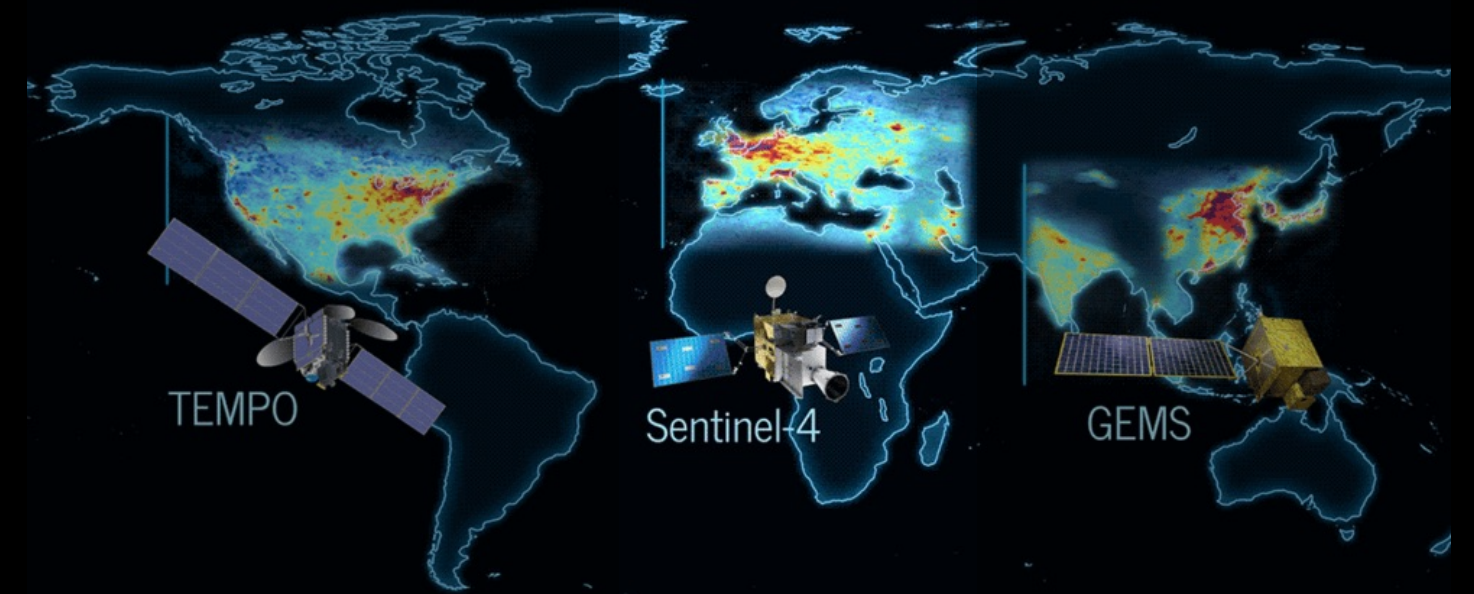




How can we develop tailored solutions for other needs to monitor emissions from space?



Upcoming satellites could bring new insights



Sentinel-5P
Polar-Orbiting
Once per day

2017



Sentinel-4
Geostationary
Hourly

2024

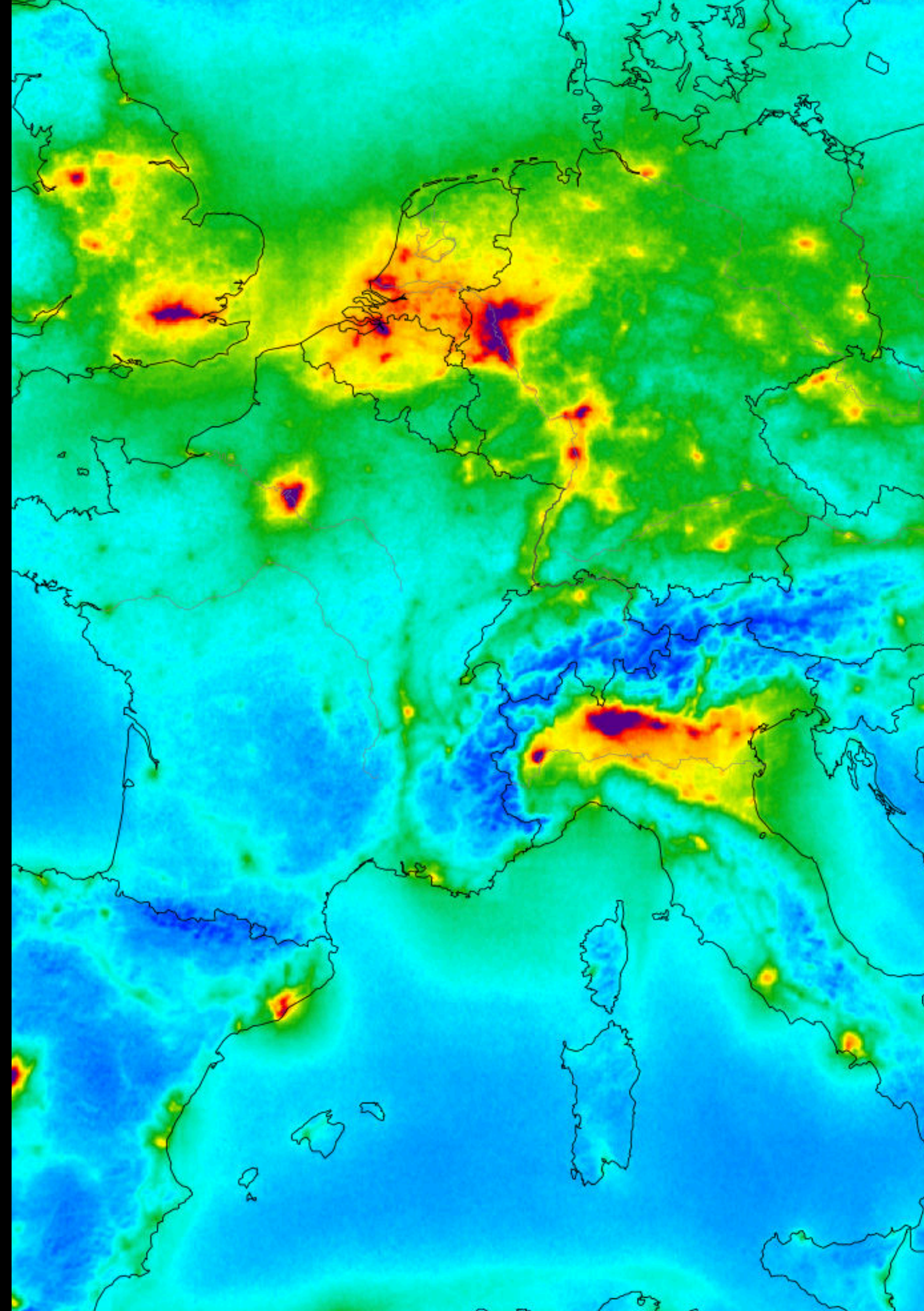


CO2M
NO2 Observations

2025



We want to learn
about your needs
to envision the air quality
products of the future



Lobelia.

Thank you.

Thaís Fontenelle
thais@lobelia.earth

