



EUROPEAN
Mobile & Mobility Industries
ALLIANCE

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Partly supported by the
Competitiveness & Innovation Programme
of the European Union (CIP)



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**Monitoring, forecasting and
communicating air quality to
citizens**

**Final Event, 16 Nov. 2015
Brussels**



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**Monitoring, forecasting and
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**Final Event, 16 Nov. 2015
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Jürgen Vogel

Coordinator International Programmes

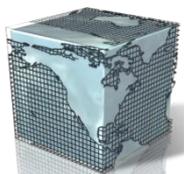
bavAIRia e.V.

Bavarian Cluster Management Aerospace
Oberpfaffenhofen/Munich

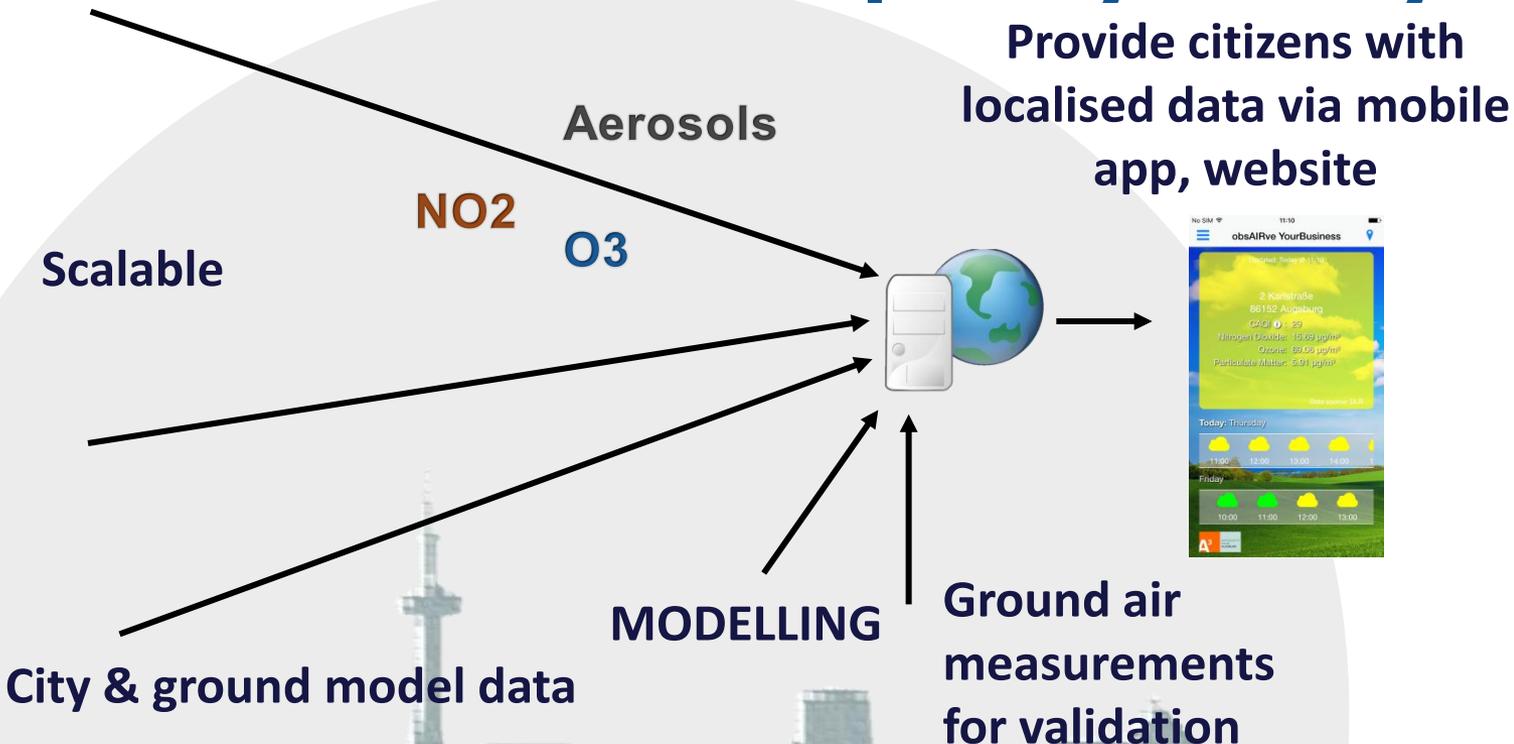


Monitor, modell, forecast & communicate air quality in city

High spatial resolution:
km x km range & less



High temporal resolution, forecasts





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Target group: Regions/cities -> citizens

- > **EU air quality directives:
strictly enforced in EU
--> infringement procedures**

- > **Cities/regions: air quality plan**



RAQP

**oyb supports dialogue with citizens:
communication & trust**

- > **Citizens & environmental interest groups**





obsAIRveYourBusiness consortium



bavAIRia: Co-ordination, aerospace cluster mngt.



DLR: Satellite data, research, modelling



Airparif: Monitor, model, Ile de France, user



GAF: Services on top of Earth Observation

A3-Augsburg: Economic development agency, user



CORILA: Research lagoon Venice, roadshows

INNOVA-EU: Consulting/EU, business development



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DLR



ANTENNEN
FÜR
AERONAUTIK



DLR-German Aerospace Center

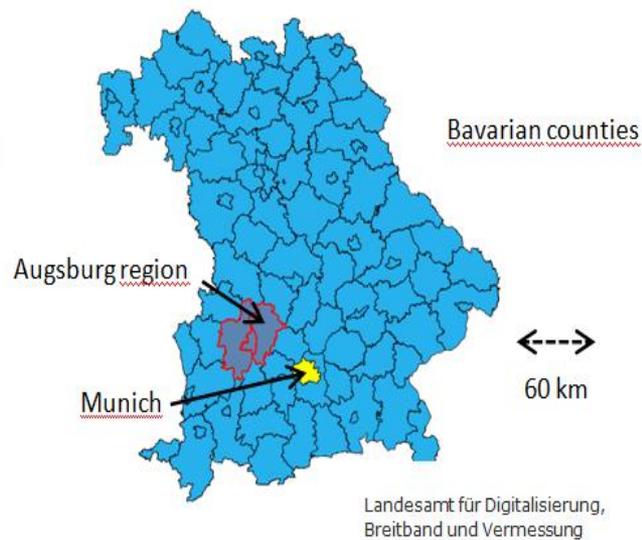
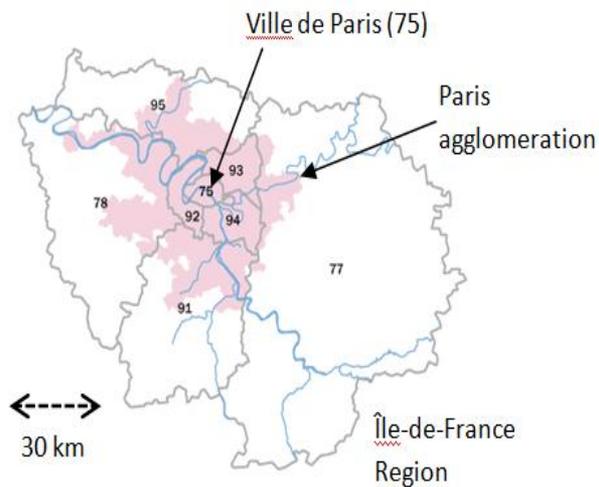


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Augsburg Air Pollution Forecast Service



Comparison Paris & Augsburg areas



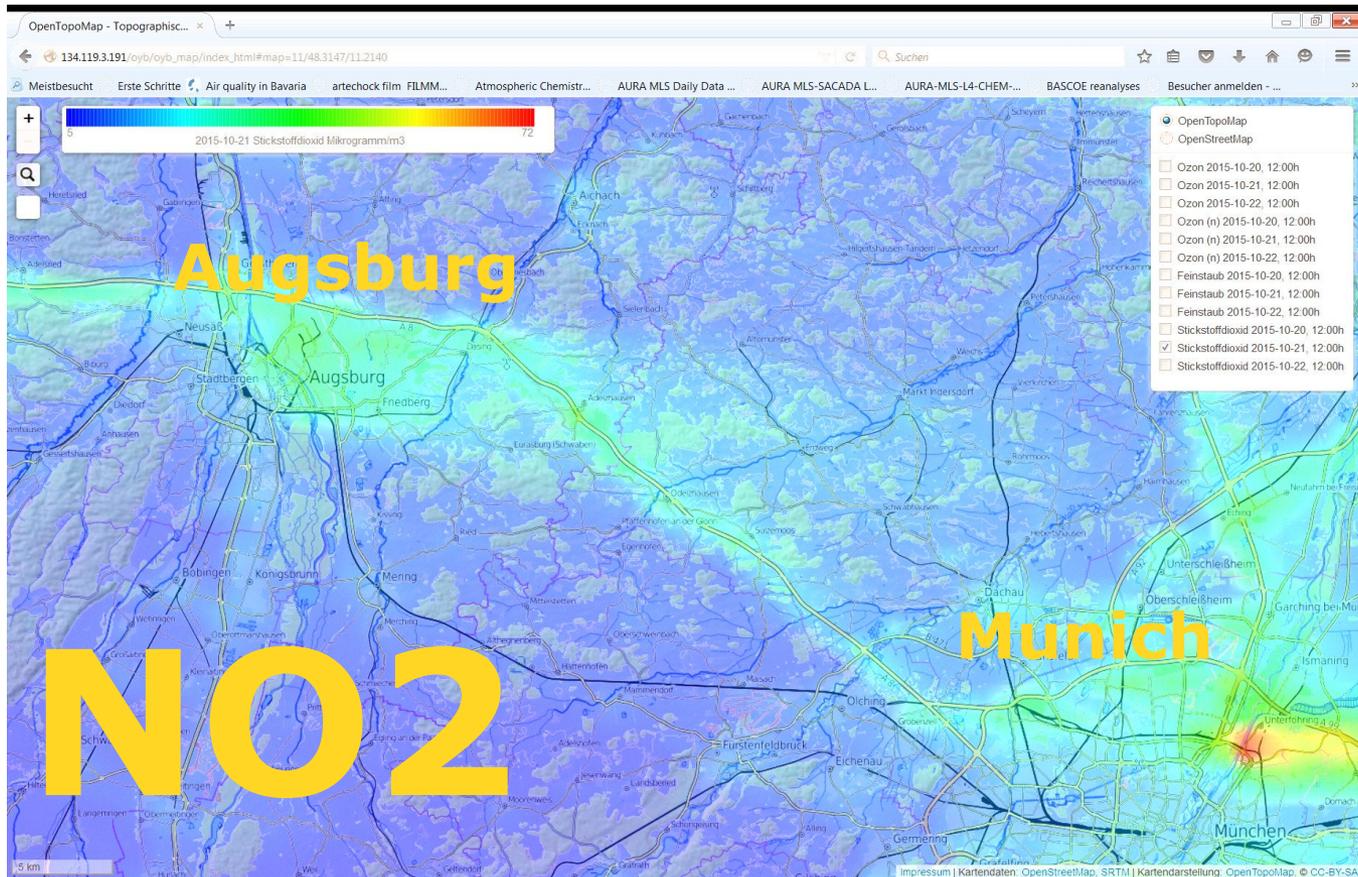


Augsburg model

- **Daily 3-day forecasts of Ozone, NO2 & PM10**
- **Output on 1km resolution grid**
- **Downscaling of emissions via satellite surface data**
- **Emission factors from traffic counts**
- **Data provision via WCS interface**
- **Future: Copernicus data as boundary conditions (CAMS)**



obsAIRveYourBusiness web-gis app





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Airparif





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HOR'AIR modelling system



Long term project, built by several studies

HEAVEN: traffic emission + data

Background level

Chain of calcul

Cartography methods

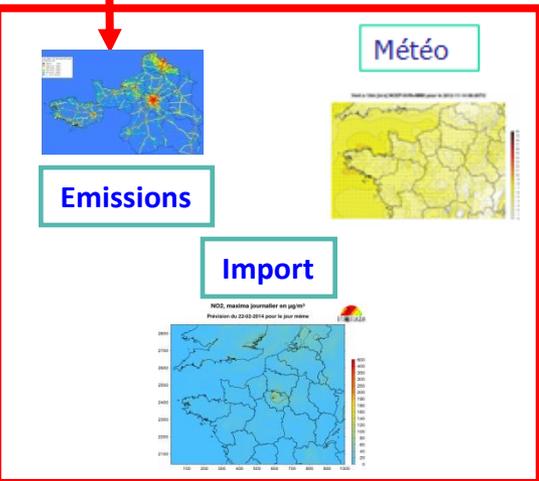
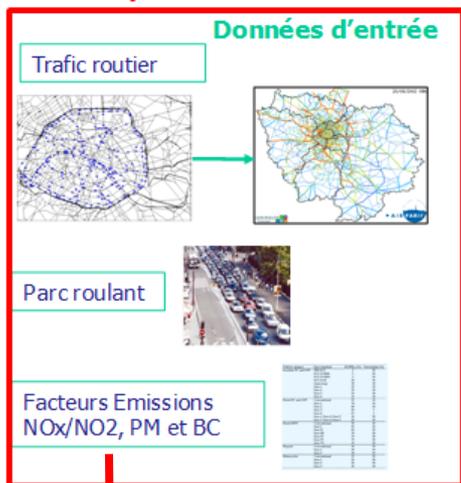


Operational ADMS-Urban

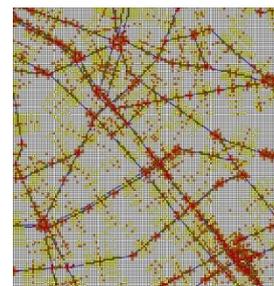


Concentration modelling

Systeme Heaven



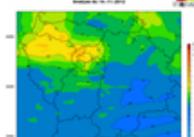
Traffic impact



Dispersion :

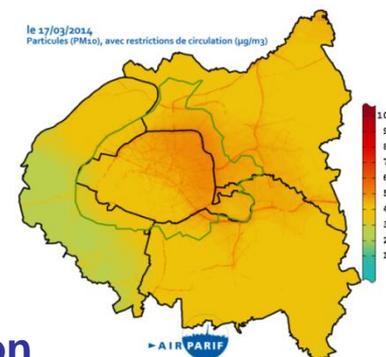
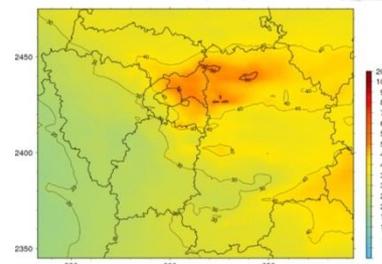
Météo

Fond



Eva

Background pollution



**Dispersion -
Chimie :
CHIMERE**

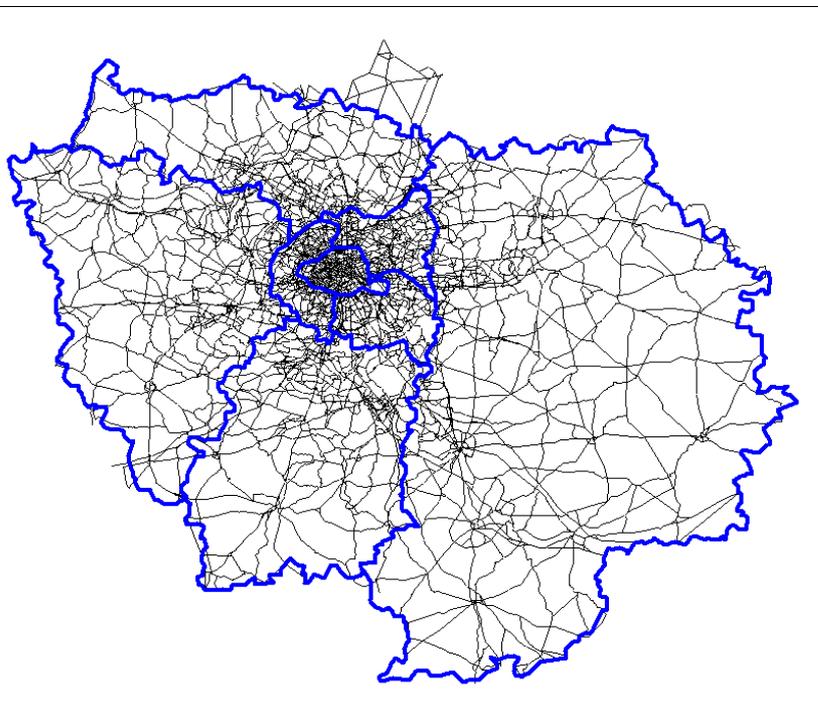
Esméralda Platform



Traffic network

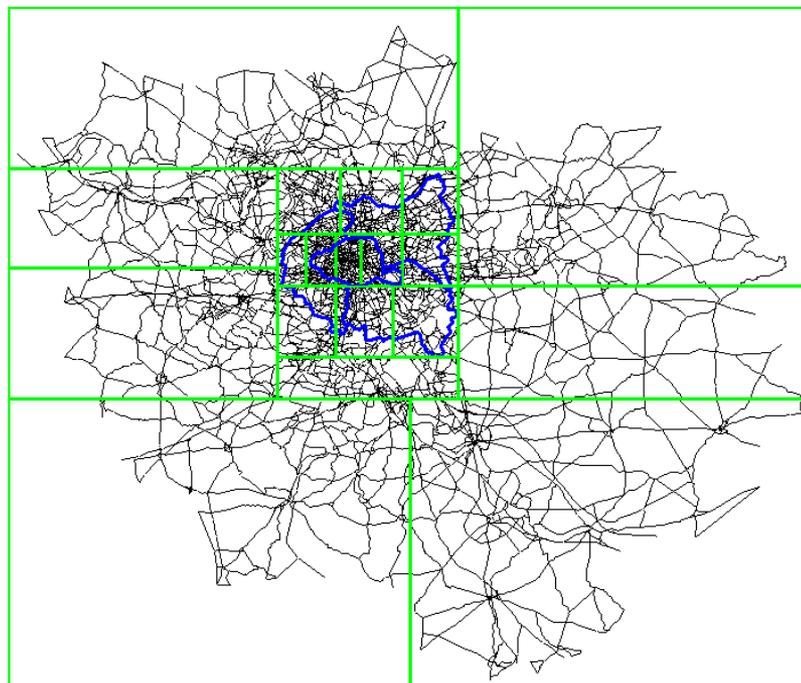
Ile-de-France traffic network

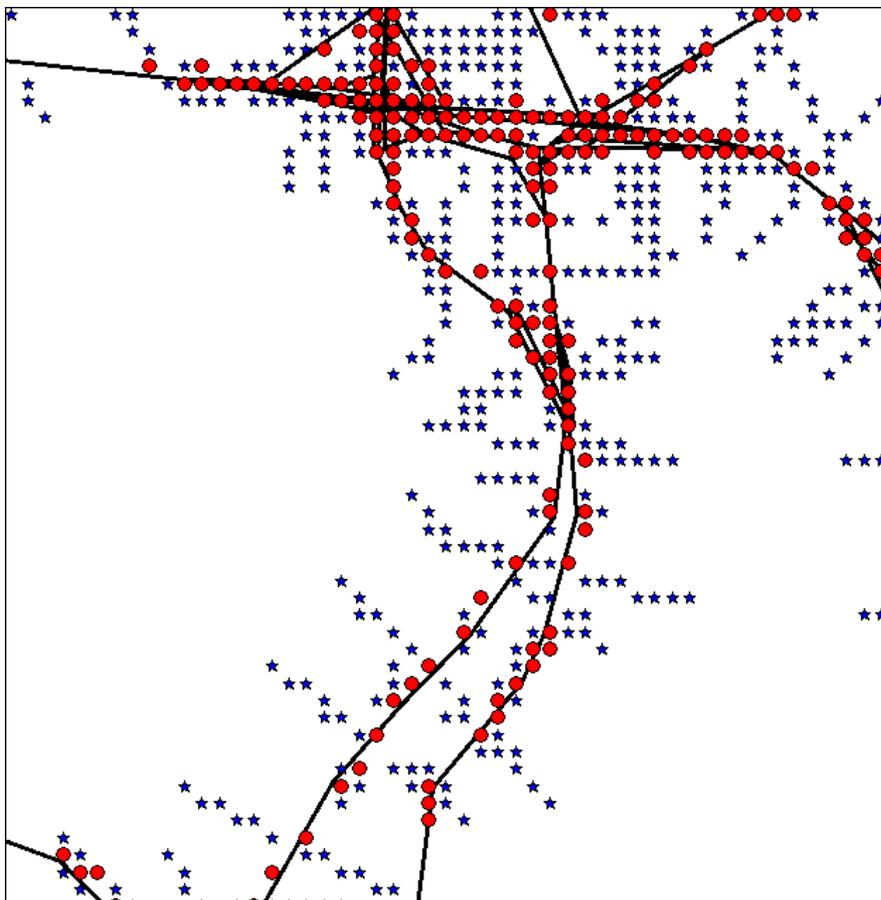
40 000 roads



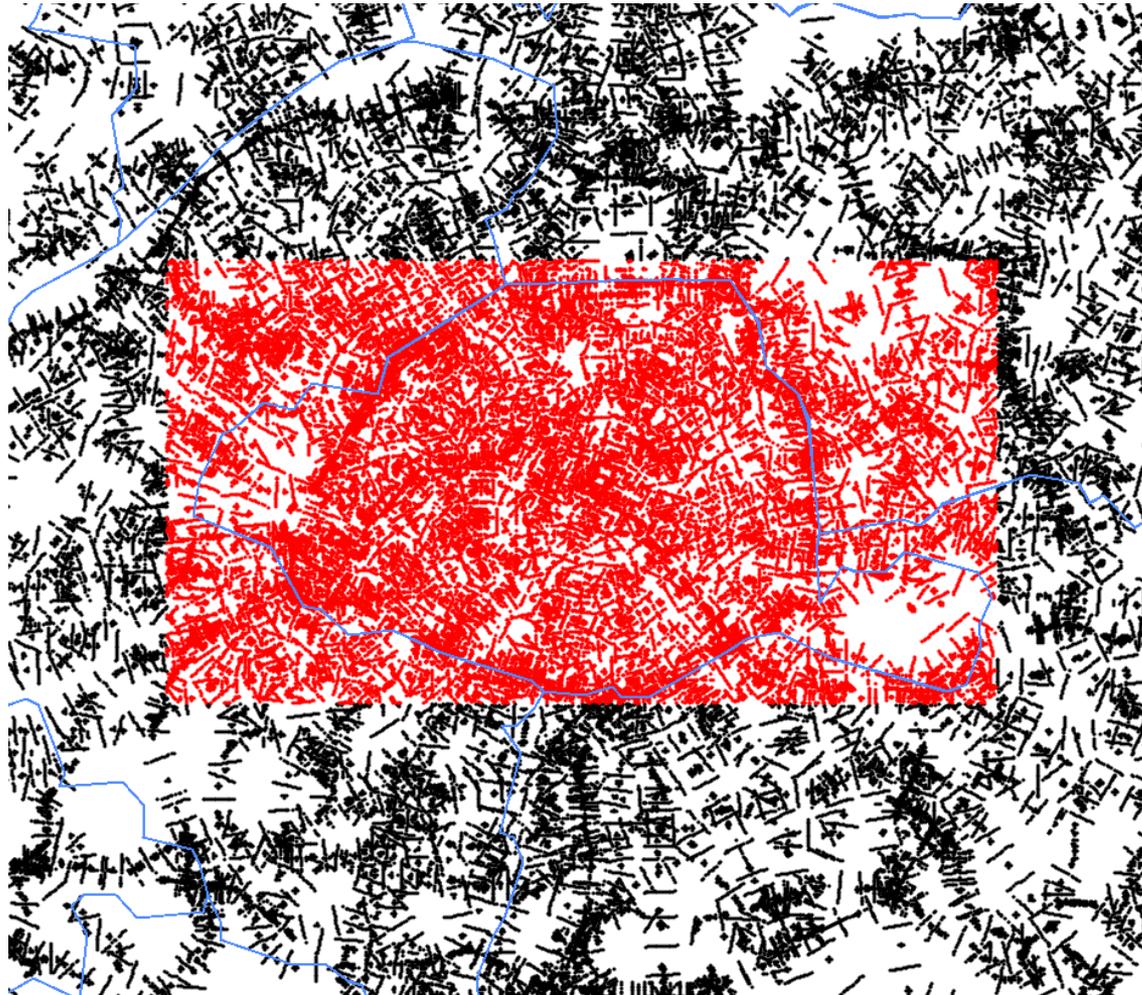
ADMS-Urban implementation

19 calculation zones for modelling pollution next to the traffic



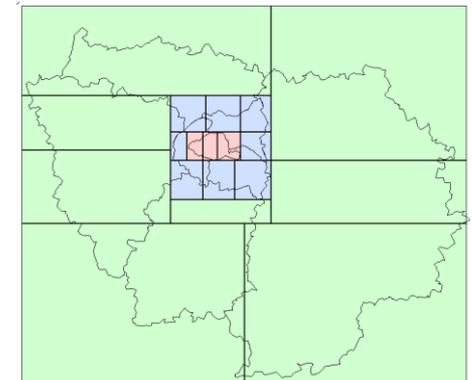


Smart grid : Calculation point on road and influenced areas



Higher resolution in Paris with more calculation point:

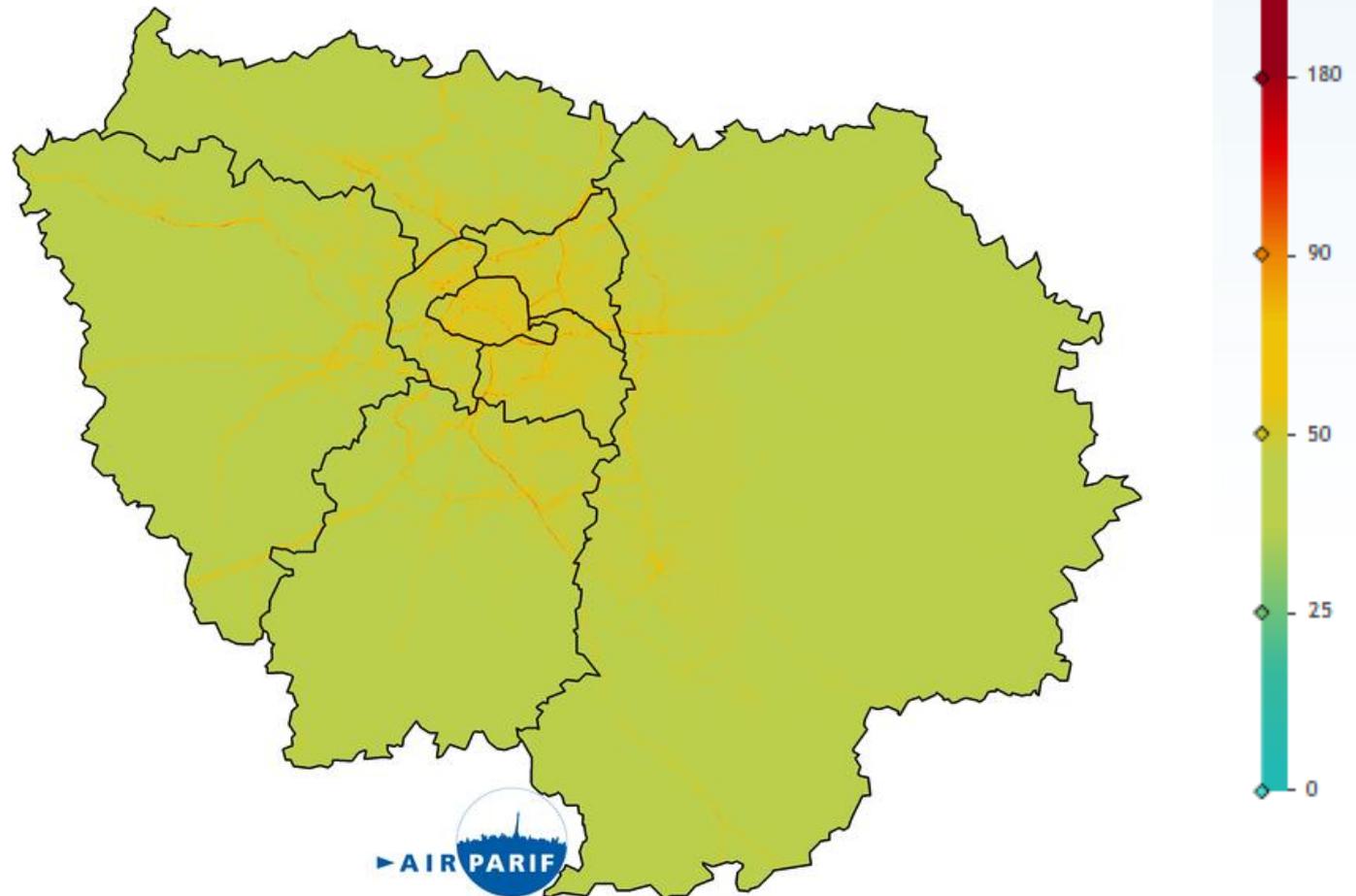
- 12,5 m grid resolution for Paris (in red)
- 25 m grid resolution for Paris inner suburbs (in black) (en noir)
- 50 m for the whole region



-  Zone GC résolution 50m
-  Zone PC résolution 25m
-  Zone Paris résolution 12.5m



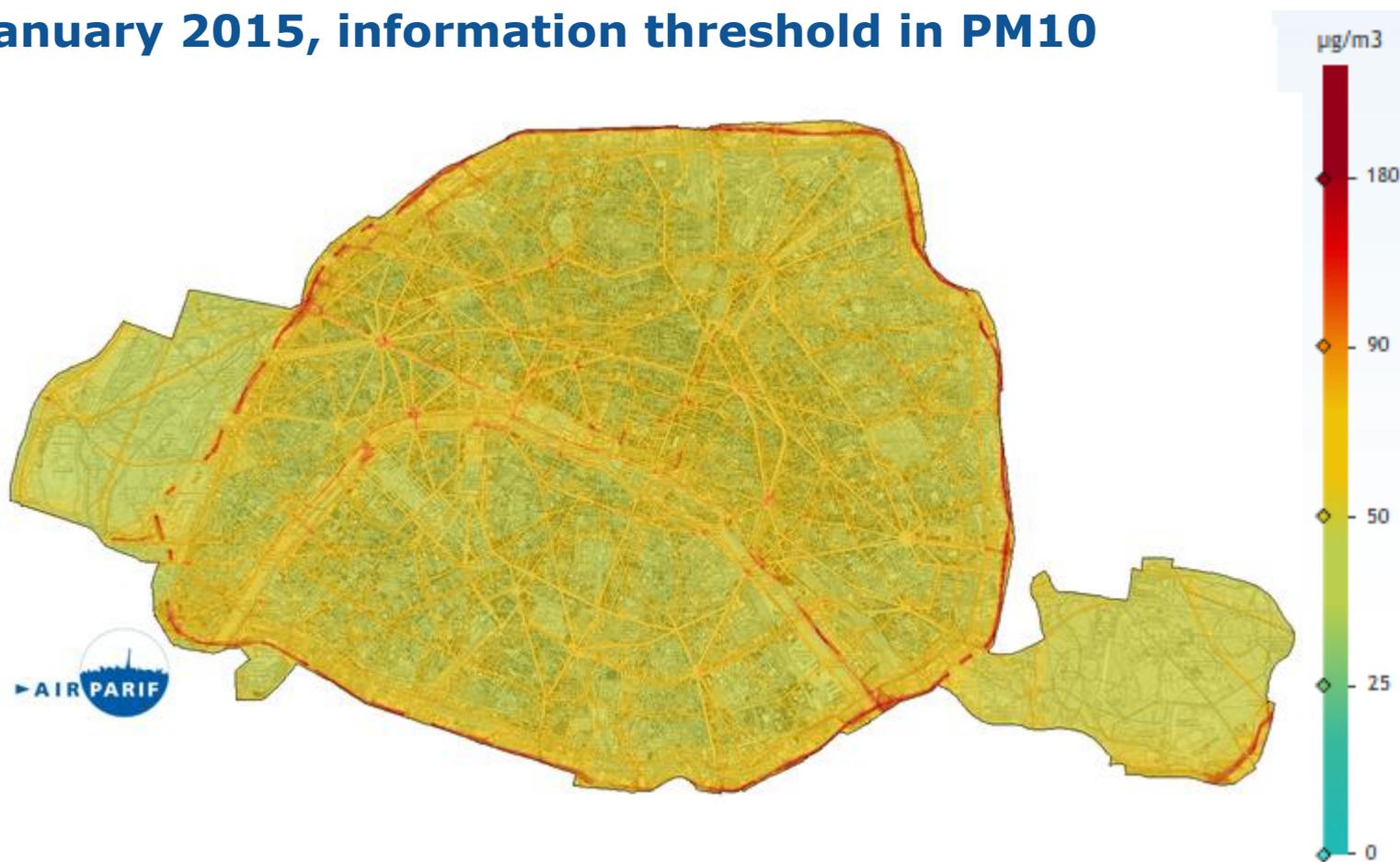
23rd January 2015, information threshold in PM10



PM10 level at 19 h (TU) in Paris IDF region



23rd January 2015, information threshold in PM10



PM10 level at 19 h (TU) in Paris city



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GAFAG



GAF



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Regio Augsburg Wirtschaft GmbH



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Our offer to cities and regions

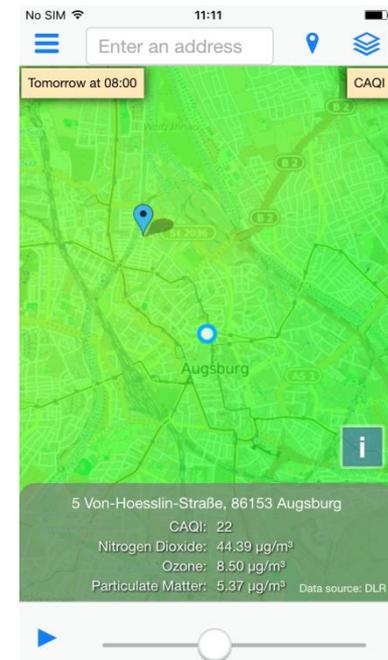




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The Roadshows

User experiences from cities



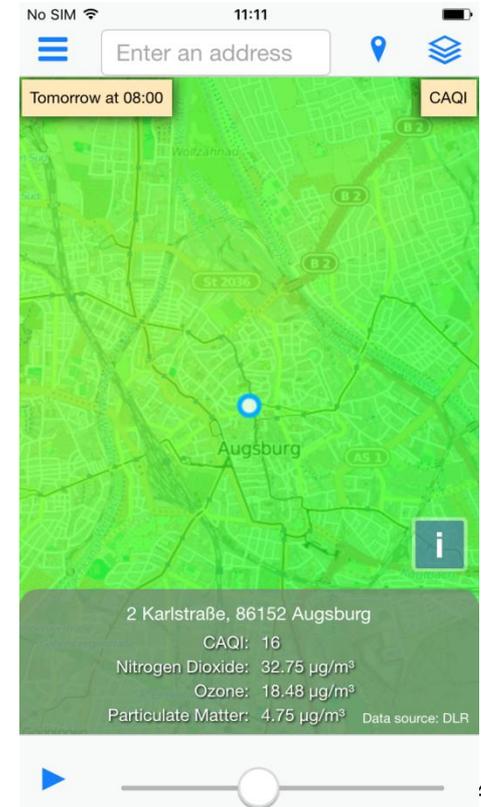


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Test the demonstrator app

Business card <-> Download link

-> obsAIRveYourBusiness app feeling





Contact

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