

**POLIS**

CITIES AND REGIONS FOR TRANSPORT INNOVATION

ANNUAL  
CONFERENCE

**2022**

30 November  
1 December, 2022  
Brussels, Belgium



**#POLIS2022**

# The CurieuzenAIR story: How citizen science can lead to more efficient air & mobility policies

1H: BETTER BUY-IN THROUGH CO-CREATION

*Lieselotte Gevens, BRAL, mobility & environment*

# BRAL: city movement for Brussels

BRAL is an **urban movement** striving to make Brussels more sustainable.

Along with our members and partners we want to build an **environmentally friendly, affordable and solidary city**.

BRAL organises **actions, lobbies**, supports **citizens' initiatives** and provides **advice to the authorities**.

We work in the **Brussels metropolitan region**, in all its social and cultural diversity.



# Bad air quality is a threat for EU citizens' health

## EU says one in eight deaths is linked to pollution

8 September 2020



Watch how air pollution moves across Europe

One in every eight deaths in Europe can be linked to pollution, according to a new report by the EU's environment agency (EEA).

## More than half of Europe's cities still plagued by dirty air, report finds

Data shows only 127 of 323 cities had acceptable PM 2.5 levels despite drop in emissions during lockdowns

- [Coronavirus - latest updates](#)
- [See all our coronavirus coverage](#)

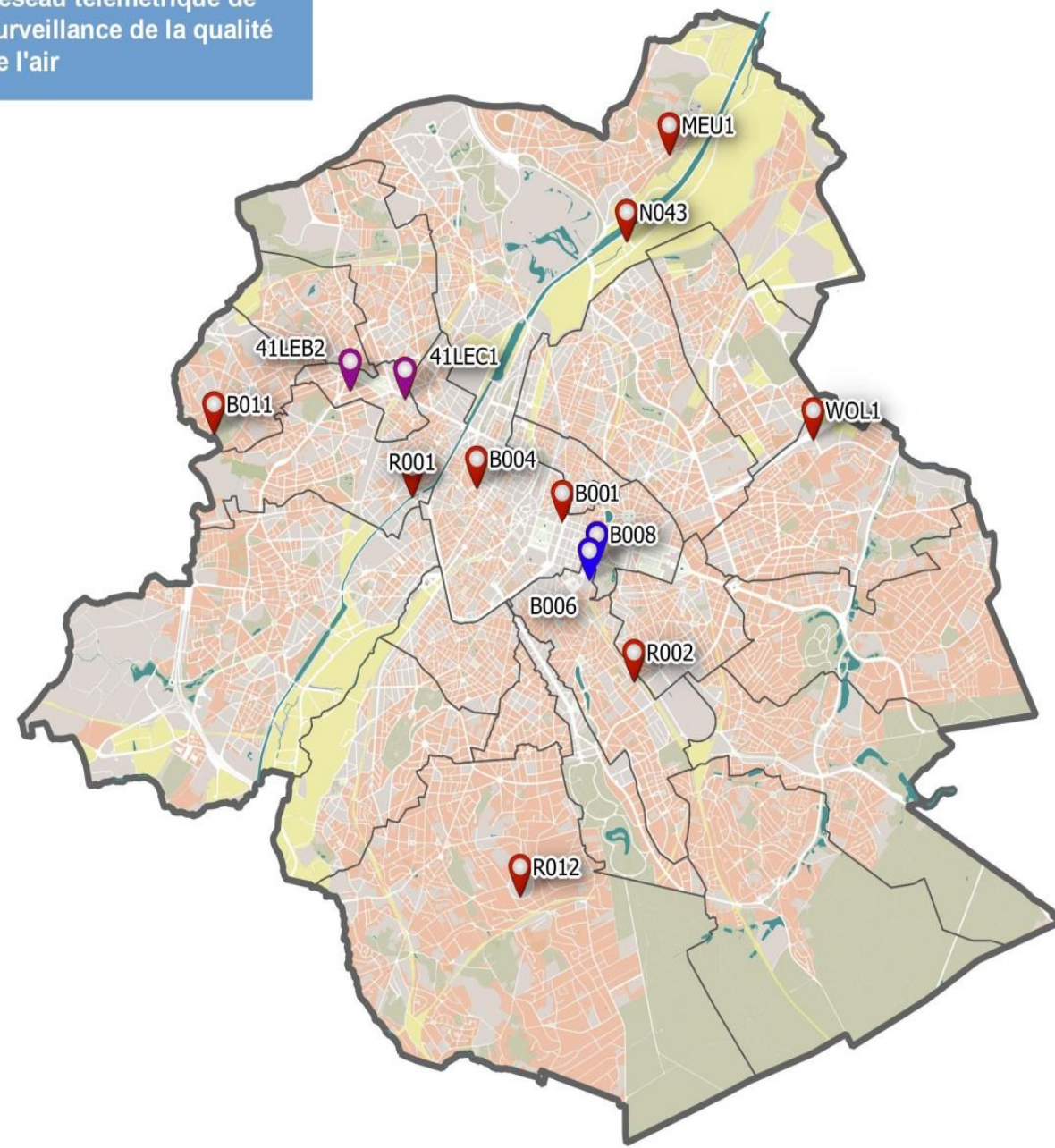


Cyclists in Cremona, Italy, during the Giro d'Italia last month. The city has been found by the EEA to have some of the most polluted air in Europe. Photograph: Tim de Waele/Getty Images



# Origin of the project

Air Réseau téléométrique de surveillance de la qualité de l'air



## The official network of air quality stations in Brussels:

- 10+ official monitoring stations measure AQ in various environments
- Recently reinforced (+3 stations in polluted areas)
- Very scientific, but expensive.
- Excellent to measure compliance with EU norms, but not accurate enough to answer the inhabitant's questions about the air they breathe.

## Raising awareness and improving knowledge on air quality:

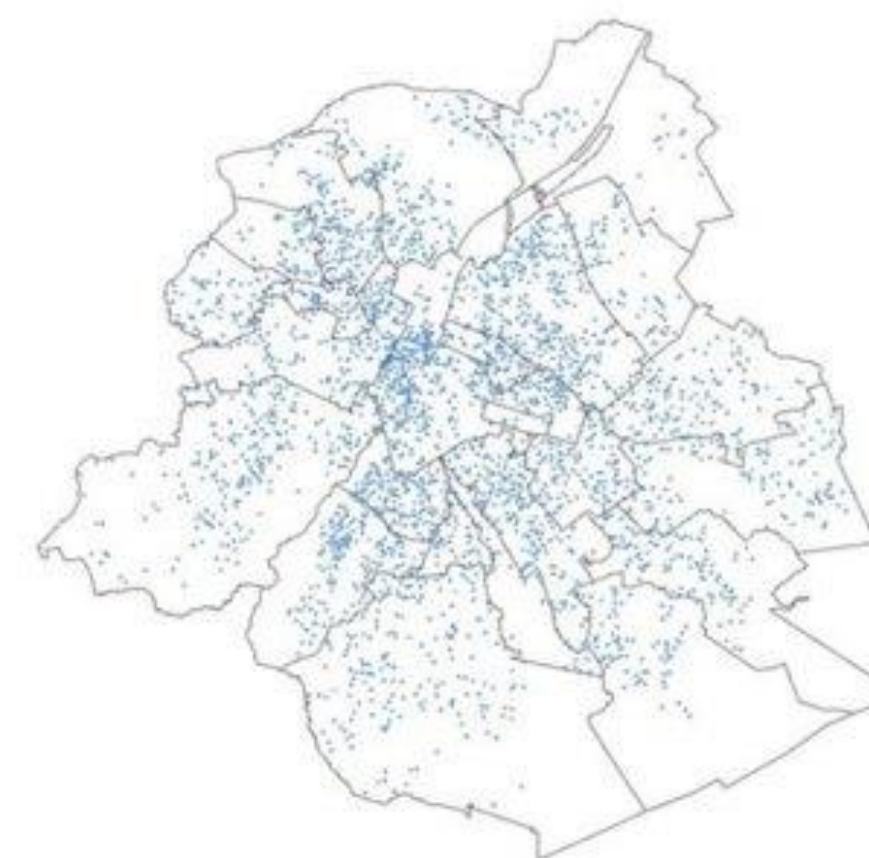
- A broad coalition of different actors therefore came together, to carry out an innovative citizen science project.
- Curieuzenair aimed to raise awareness about the sources, concentrations and health impact of air quality, and to identify potential hotspots of air pollution in the city.



# A large-scale citizen-science project



	Amount	%
Families	2570	85.67
Companies & organisations	282	9.40
Schools	83	2.77
BRAL	19	0,63
UAntwerpen	46	1,43
Total	3 000	100

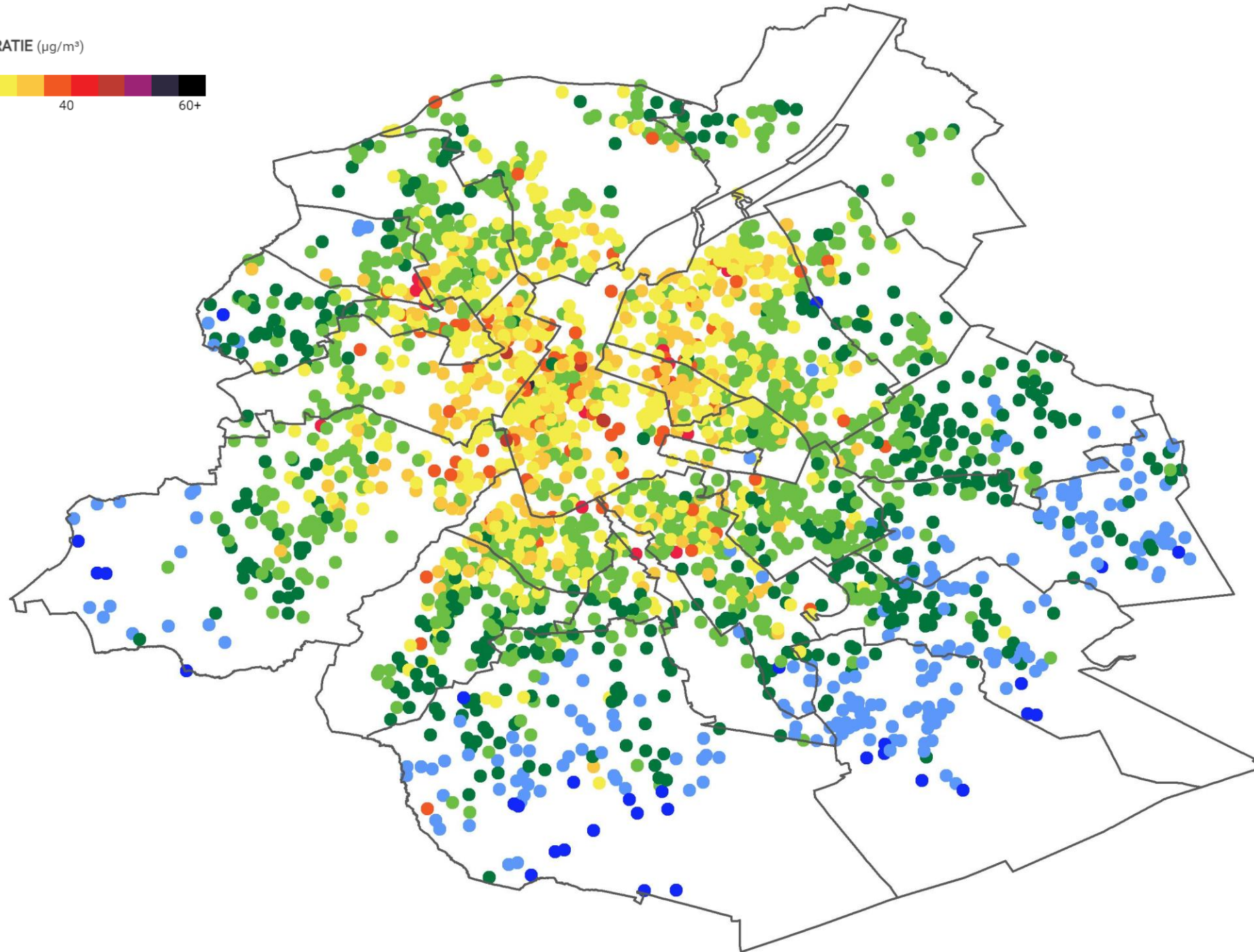


- 5.000 applications were received. Amongst them, 3000+ were selected, based on a solid scientific methodology.
- Thousands of households participated. Organizations and local figures were also involved (the Royal Palace, the Prime Minister's office, the EC, the Parliament, boxing clubs, churches, concert halls, etc).
- Significant efforts were also invested in a « participatory trajectory » to make sure that people from various neighbourhoods and backgrounds could participate.



# Results of the measurement campaign

NO<sub>2</sub> - CONCENTRATIE (µg/m<sup>3</sup>)

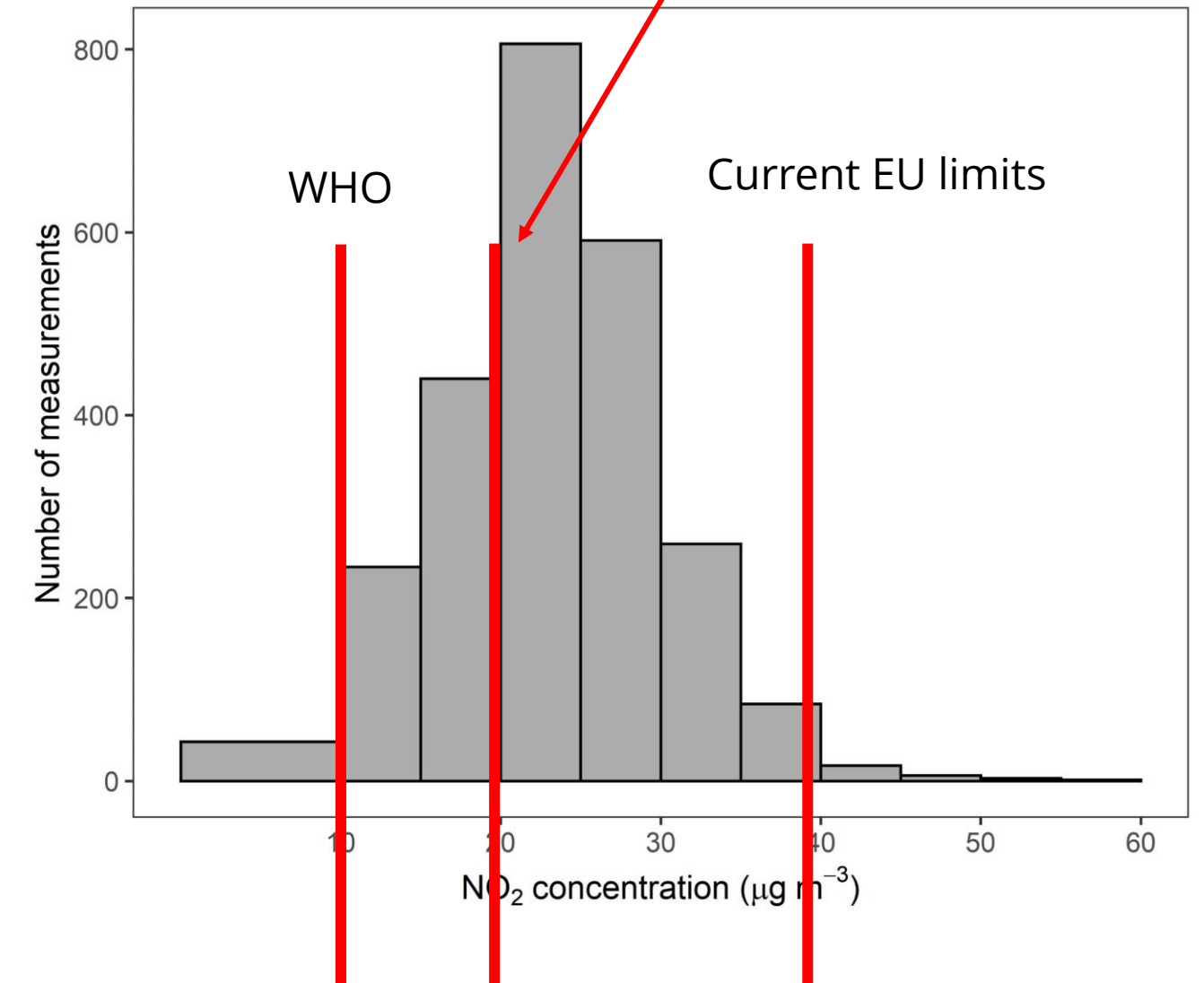


Mean : 23.5 µg m<sup>-3</sup>

Maximum : 59.1 µg m<sup>-3</sup>

Minimum : 7.5 µg m<sup>-3</sup>

Suggested new EU limits



## Examples:

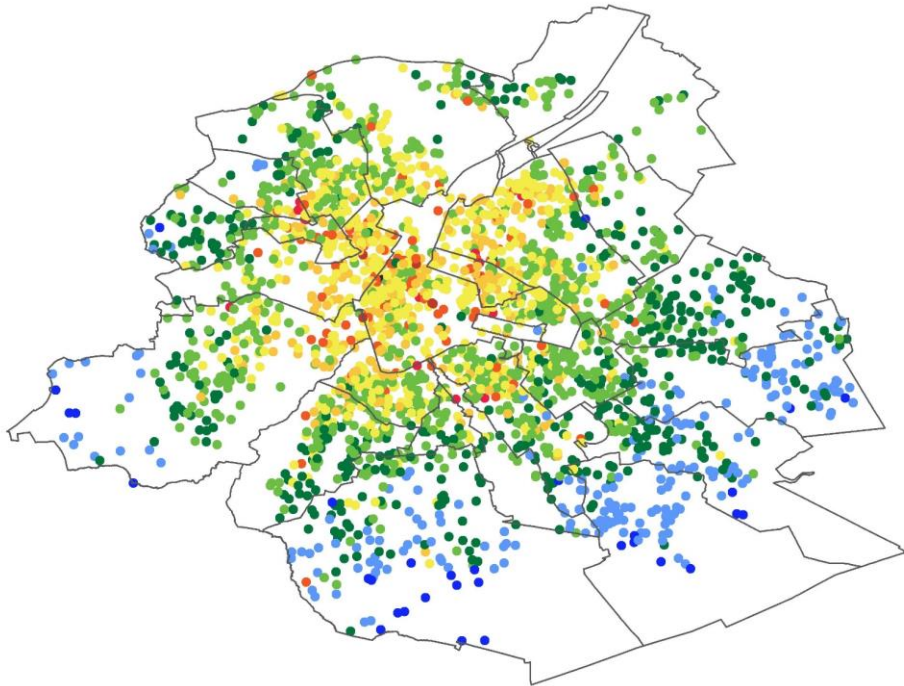
In the street of this conference center: 34 µg m<sup>-3</sup>

Rue de la Loi: 27 µg m<sup>-3</sup>

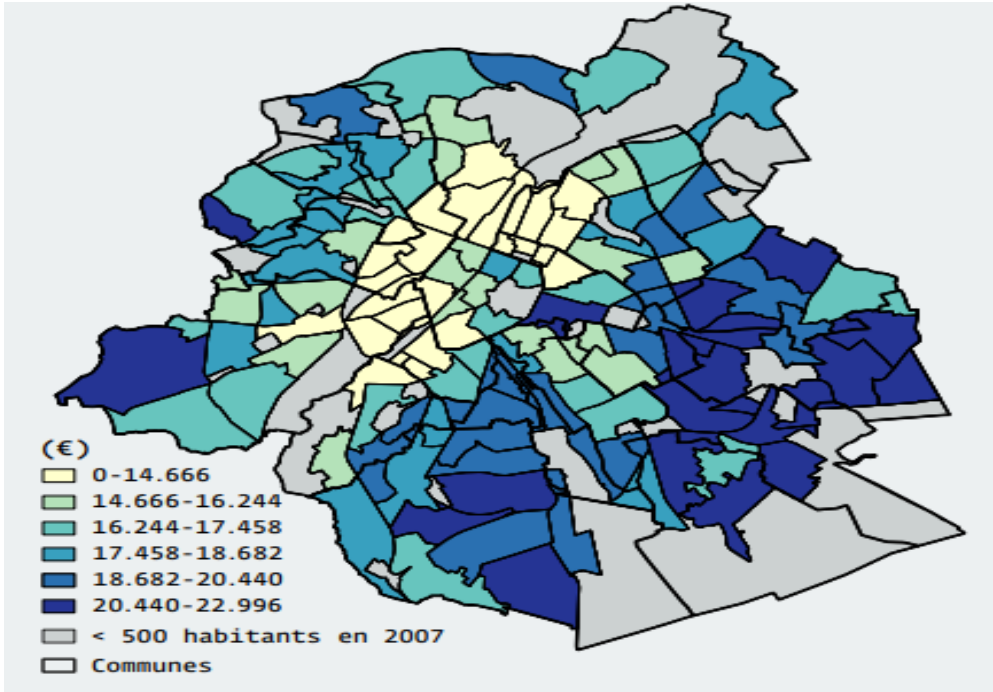
What about your home? Or at your kids' school?

# Key messages: a clear pattern of inequalities

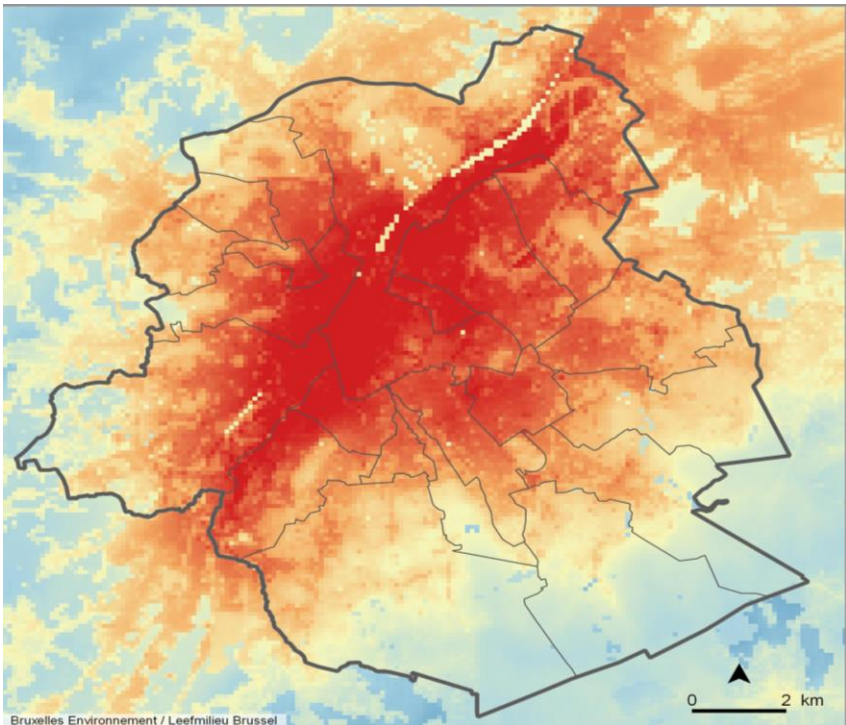
Air pollution:



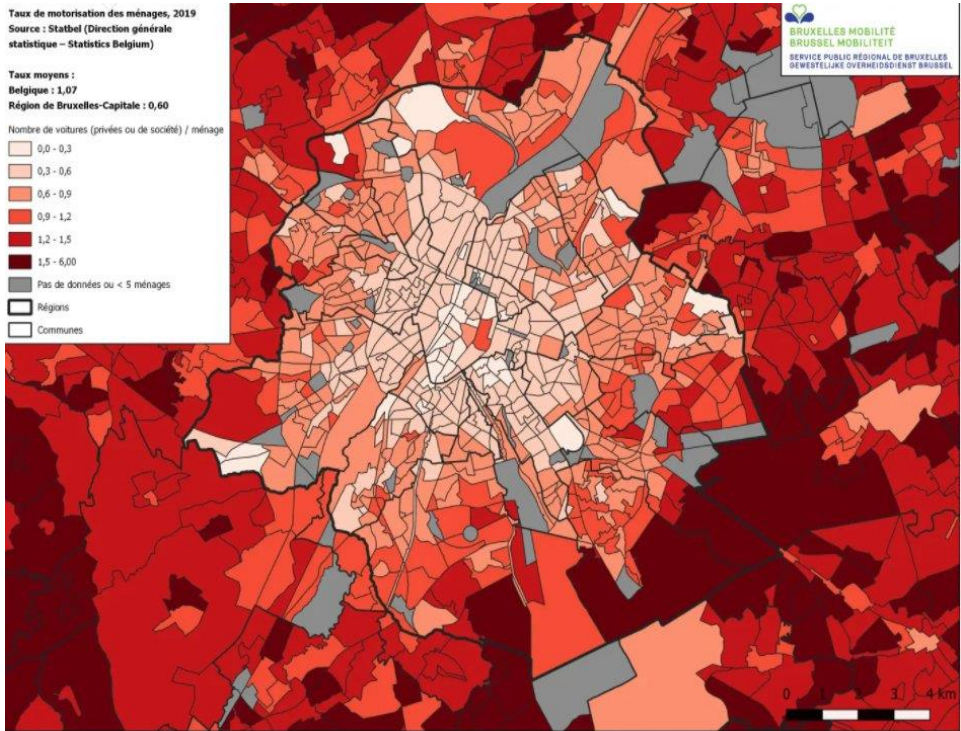
Median income/neighborhood:



Urban heat island effect:



Motorization rate:



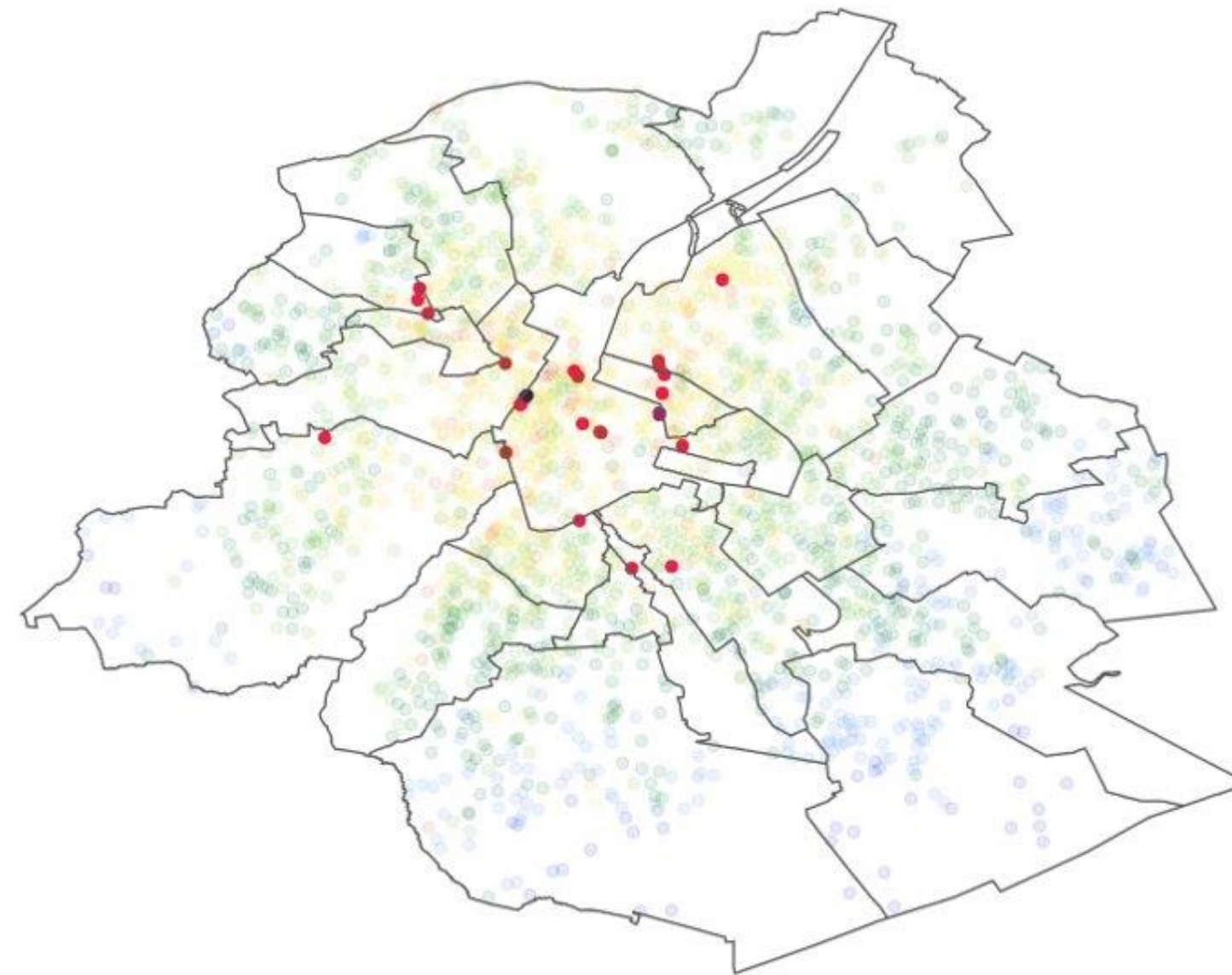
# Lessons learned

- Citizens are interested in the problem of air quality
- Citizen science is a key tool to raise awareness around air pollution in cities
- The project has provided us with a large dataset and a very intricate overview of air quality in Brussels
- This type of project can help better understand potential hotspots of air pollution
- Efforts are needed to involve all stakeholders
- Results can help highlight the importance of sustainable mobility to tackle environmental inequalities in cities
- It will form a support to implement sustainable mobility policies in Brussels.





# Continued citizen science: expair



# Thank you for your attention!

For questions:

lieselotte@bral.brussels

