

USING MOBILE PHONE DATA TO MONITOR GREENHOUSE GAS EMISSIONS AND SHORT-LIVED AIR POLLUTANTS

Successful Pilot project in 2016

"The City of Nuremberg is highly involved in environmental issues. We have great interest to better understand our air and the distribution of air pollutants, so that we can act accordingly. Therefore, we did not hesitate to make ourselves available as a pilot city."



Dr. Peter Pluschke

Nuremberg City Council and Head of the Division of Environment and Health.

Why measuring the environmental impact of transport?

Urban transport has various environmental effects, such as local air pollution (NO_x, particle matters), noise, and the contribution to global warming through the emission of greenhouse gases (e.g. CO₂).

Shortcomings of traditional measurement methods

Cities are struggling to estimate the environmental impact from transport because of the imprecise results and high costs of traditional measurement methods, such as surveys and physical traffic counting. Another problem is that no continuous data is available.

Benefits of using mobile phone data

- Continuous data
- Greater coverage (area and sample)
- City-wide modeling of air pollution based on mobility behavior of the citizens
- Validation with in-situ measurements for verification and accuracy purposes.
- Hot-spot identification and decision- making tool for city officials
- Assisting tool for GHG reporting and verification

Project Partners

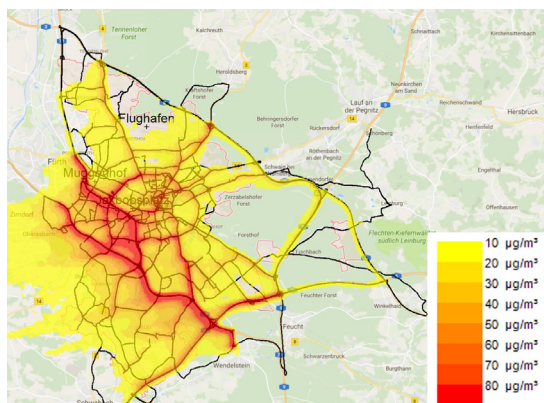
South Pole Group: Low-carbon and sustainability expert (lead partner, responsible for CO₂ and short lived air pollutant assessment).

Telefónica NEXT: Subsidiary of telecommunications company Telefónica Deutschland providing anonymized mobile phone data.

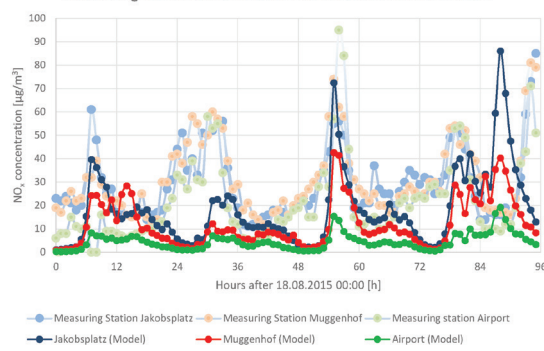
Teralytics: Company with modeling experience in the field of translating mobile phone data in to mobility flows.

Climate-KIC: Co-funder of the project.

Example output for NO_x-monitoring



Measuring station concentration vs. modelled concentration



INTERESTED? GET IN TOUCH WITH US TO LEARN MORE.

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1443EN, 04.2017