FOR IMMEDIATE RELEASE

Using smart data to protect the climate

Partners South Pole Group, Telefónica and Teralytics spearhead mobile-led calculations to help reduce CO_2 and air pollution in cities

Zurich, Switzerland, and Nuremberg, Germany, 24 May 2016 - South Pole Group partners with mobile communications provider Telefónica Germany, data analysis expert Teralytics and the city of Nuremberg, within the framework of the EU-funded Low Carbon City Lab (LoCaL), a Climate-KIC flagship programme.

Combatting a toxic atmosphere

Solutions to improve air quality are in high demand for cities such as Nuremberg, who struggle with**higher levels of particulate matter, large CO_2 and nitrogen oxide footprints**. Making informed decisions and taking focused action to tackle air quality issues require however, accurate data on the prevailing pollution intensity. The need for **smarter data analysis** is one of the driving forces behind a recently launched pilot project in Nuremberg that aims to pave the way for granular calculations on air quality with the help of mobile data. The research project, led by **South Pole Group**, is carried out under the **LoCaL programme**, one of the flagship programmes funded by **Climate-KIC**. LoCaL's objective is to reduce one Gigaton of CO_2 per year until 2050 and to raise 25 billion euros in climate financing for cities. If successful, the project will create a series of new opportunities for cities fighting against air pollution.

Measuring air quality in cities still remains very laborious, expensive and largely inaccurate: at present, one sole situational snapshot of traffic occurrence - with elements such as traffic counting often compiled manually - is commonly used to support long-term policy decisions. In Nuremberg, the LoCaL project partners are looking for a better solution: working in line with stringent German data privacy laws, the consortium is using mobile data to carry out continuous calculations that cover the entire metropolitan area of Nuremberg, ensuring larger sample size and higher granularity of data.

Leveraging mobile data to make informed decisions on climate action

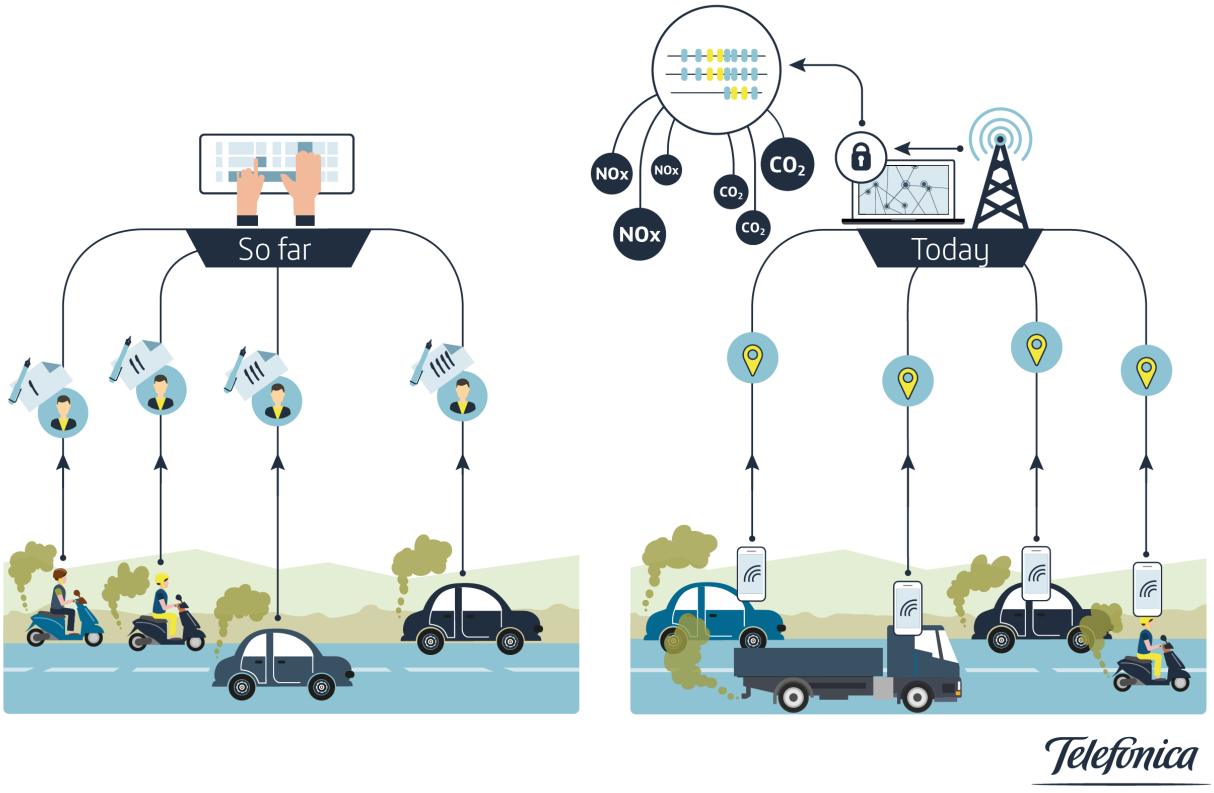
The use of mobile data makes it possible to capture different traffic flows and calculate the corresponding footprint of the pollutants that are generated. The data is generated automatically when mobile phones connect to cell towers during phone calls, web surfing, or sending text messages. Thanks to the ongoing data generation, the final sample is larger and more comprehensive than the commonly used manual measurements, in addition to offering significant time savings. The received data goes through a stringent protection process: **Telefónica Germany anonymises data** using a three-stage procedure and removes any personal references, in line with data privacy laws. This means that any conclusions from the data can only be made on larger groups rather than individuals.

Helping to spearhead better climate solutions

The city of Nuremberg, currently working on a new clean air programme, plays host to LoCaL's smart data transport project and will be able to make use of findings to improve its own sustainability goals. The structure of the pilot project is straightforward: Nuremberg's transport-related emissions for 2015 and 2016 are meticulously compared to each other. Telefónica Germany, as the largest mobile provider of Germany in terms of customer base, provides the anonymised mobile data. Using their specially developed algorithms, **Teralytics** converts this data into motion and traffic flows before it is passed on to South Pole Group who derives from these results the amount of different pollutants. The results of the pilot project are compared to the already existing data on Nuremberg's air quality that consists of weather data as well as traffic data from traffic counts submitted by monitoring stations.

The city of Nuremberg wants to use the results of the pilot project, to initiate targeted measurements in regions with the poorest air quality. The pilot project helps to inform decision-makers and create tailor-made solutions to best counter hotspots by, for example, having means of transport with high emissions replaced with low-carbon alternatives. Being able to compare current data to data from 2015 will allow project partners to evaluate the effectiveness of measures taken to combat poor air quality. Having comprehensive data on impacts will help cities such as Nuremberg make justified claims to investors and authorities, and engage in more transparent dialogue with citizens.

Calculating air pollution based on mobile data



Stakeholder quotes

Renat Heuberger, CEO South Pole Group: *"The accurate measurement of CO_2 and short-lived air pollutants in cities is a complex task. Through our pilot project, we can develop an entirely new approach to assist in this task not only cities like Nuremberg, but also cities in emerging countries, who are faced with rapidly increasing emissions. This new method could significantly contribute to ensuring to better climate protection in the urban space."*

Markus Haas, COO Telefónica Germany: *"A large amount of data is available due to our normal business processes, including exclusive data due to our position as a network operator, for example, mobility data. With the pilot project, we show that we can make a contribution to climate protection through the analysis of this data. We want to enable more projects in the future, where our anonymised mobility analyses can provide an added value for society."*

Dr. Peter Pluschke, Nuremberg City Council and Head of the Division of Environment and Health:*"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."*
Georg Polzer, CEO and **founder of Teralytics**: *"Anonymised mobile data provides us with until now unknown insights into the movement flows of the population. With the pilot project we want to demonstrate that using the analysis of this large amount of data we may accomplish both an economic as well as a social added value."*

Victor Gancel, programme manager of the Low Carbon City Labs (LoCaL) Climate-KIC: *"We are convinced that this research project will improve the measurement of the quality of urban air. The precise and cost-effective measurement is an important prerequisite for the future financing of climate protection measures".*

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Media resources
More information on LoCaL: http://local.climate-KIC.org/

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About the project partners

South Pole Group began as a project-driven company focused on developing and selling high-quality carbon credits. Today, it is the world's leading provider of climate solutions, helping public and private sector organisations develop climate proven policies and strategies. Areas of expertise cover every key sustainability-related area of climate change, including but not limited to: forests & land use, water, sustainable cities & buildings, as well as renewable energy and energy efficiency. For more information, visit www.thesouthpolegroup.com or follow the company @southpolegroup.

Telefónica Deutschland Holding AG, with its operating subsidiaries Telefónica Germany GmbH & Co. OHG and E-Plus Mobilfunk GmbH, is listed in the Prime Standard at the Frankfurt Stock Exchange. The company offers its German private and business customers post-paid and prepaid mobile communications products as well as innovative mobile data services based on GPRS, UMTS and LTE technologies with its product brand O2 as well as several secondary and partner brands. In addition, the integrated communications provider also offers fixed line products such as DSL telephony for private customers and innovative IP telephony and networking solutions for business customers. The offer is topped off with modern high-speed internet products. With a total of 48.3 million customer lines (as of 31 March 2016), the company is one of the three leading integrated telecommunications providers in Germany. In the mobile segment alone, Telefónica Deutschland is responsible for 43.0 million lines – making it the German market leader. In the 2015 financial year, the company generated revenue of 7.89 billion euros. Telefónica Deutschland is part of the Spanish telecommunications group Telefónica S.A. with its headquarters in Madrid. With a presence in 21 countries and a customer base of 322 million lines, the Telefónica Group is one of the largest telecommunications companies in the world.

Teralytics is a specialist in the data analysis for the telecommunications industry. Our technology analyzes large amounts of Telecom data, one of the most valuable sources of data about human behavior. Teralytics acquires therefrom value-creating information about motions flows, demographics and interests of the population. We help companies in the financial, retail and transportation branches to develop better products and services. Teralytics together with its telecom partners closely follows the respective regulatory and legal frameworks. Teralytics is a strong partner of leading telecom companies in the monetization of their data in North America, Europe and Asia.

Climate-KIC is the largest European innovation initiative for climate-friendly technologies. Launched as EU programme 2010, Climate-KIC supports with offices in 15 European countries innovation projects, startups and young innovators. Numerous partners from industry and commerce, science, public sector and civil society work in Climate-KIC on groundbreaking, scalable innovations to fight climate change.