New and improved SODAQ AIR leads to worldwide air quality monitoring network

SODAQ develops smaller and smarter version of mobile particulate sensor


SODAQ AIR, the portable air quality monitor

HILVERSUM, , NETHERLANDS, November 18, 2021 / EINPresswire.com/ -- Thanks to a new air quality monitor (AQM) that measures fine particulate matter, citizens in Europe, the US and other countries can now monitor air quality themselves, whilst creating a global air quality network. The SODAQ AIR is the new and improved version of the device used in the Snuffelfiets (Sniffer Bike) project, an air monitoring initiative responsible for hundreds of cyclists throughout The Netherlands, using the handlebar-mounted air quality monitor to measure the concentration of particulate matter.

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>
> *SODAQ CEO Ollie Smeenk*

The participants of the Sniffer Bike project, a collaboration with the Province of Utrecht, data specialist Civity, and the Dutch National Institute for Public Health and Environment (RIVM), covered approximately 750,000 kilometres and collected 20 gigabytes of air quality data in approximately 18 months. Through thorough examination of the collected data, the RIVM determined that the mobile sensors met its requirements and are considered to be a valuable addition to the existing network of fixed air monitoring stations.

The Dutch Ministry of Foreign Affairs has introduced the innovation in various countries. "The more measuring the better. All the users together make up a community of clean air advocates. Our ambition is to expand that community into a global network of cyclists who monitor air quality. Including in places where it is not currently being monitored," says SODAQ CEO Ollie Smeenk.

The new AIR

Merging the learnings of the past 7 years with our vision for a global air quality network, SODAQ developed the new SODAQ AIR. The device is a smaller, smarter version of the sensor that has a new mounting system, making this AIR the most user-friendly model to date. The device resembles a slightly larger bicycle bell and measures the concentration of fine particulate matter (PM2.5,1.0,10), temperature and humidity every ten seconds. The sensor transmits this data to the global map on an hourly basis via LTM/NB-IoT networks, where both the individual and collective results are displayed.

At the request of users, this SODAQ AIR can also measure air pollution from a fixed location over an extended period of time, making it the ideal solution to be used at home or in the garden. Instead of a battery, the device has a supercapacitor which can be recharged, increasing the lifespan and durability of the device. Lights on the sensor also instantly display the local conditions and notifies the user of the air quality. Using the global map, users can see air quality anywhere in the world, and by using a unique identifier code linked to their device, users can see the air quality of their own routes while maintaining complete anonymity. Because the sensor also measures temperature, it can be used to detect temperature patterns and from them discern heat islands; urban areas which accumulate heat potentially leading to heat stress.

Open Source

The price of the sensor has more than halved since the first prototypes. The AIR was created with a Creative Commons (CC) license, to further the reach and spread of the global air network. By creating the AIR with the CC license, access to the complete schematics of the device and open data are free of charge to individuals, learning institutions, and non-profits. This allows other parties to manufacture or modify the sensor themselves and use the data to create changes for the betterment of air quality.

Crowdfunding campaign

The value of the AIR and its data grow exponentially as the number of devices in circulation increases. To ensure that the AIR also reaches people on an individual level the company has launched the device on the crowdfunding platform Kickstarter.

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