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The purpose of the AIRMAP project is to develop a digital decision-making support tool for urban planning and road traffic management, to help improve air quality.

The objective is to build a dynamic map of pollutant emission levels from real usage data reported by users of the Geco air application*.

The aim of the pilot trial, conducted in and around Lyon, is to provide the Greater Lyon region with a better

understanding of traffic emission phenomena in real time and the impact of infrastructures on vehicle pollution.

The AIRMAP project, conducted by IFP Energies nouvelles (IFPEN) in partnership with VINCI Autoroutes (French highways operator) and the Direction interdépartementale des Routes Centre-Est (Center-East regional roads and highways department), has just been selected by the Métropole de Lyon within the framework of the [R] Challenge, the objective of which is to accelerate the development of innovative digital tools to support air quality.

A participative approach

Based on a crowdsensing approach, AIRMAP encourages drivers in the Lyon region to take part in the collection of data associated with road traffic pollutant emissions, using the <u>Geco air app</u>*. The anonymous, compiled data (vehicle type, speed, acceleration, etc.) are used to draw up a real-time pollutant emission map.

The Airmap experiment is being conducted over a 12-month period in zones crossed by the A7 Highway and in various districts in Lyon.

A first decision-making tool

Thanks to this map, planning players will be able to identify the impact of the various existing road infrastructures on pollutant emissions. It will provide them with a new tool to guide their urban development, roads and traffic management (speed bumps, traffic circles, on-ramps/off-ramps, green waves, etc.) decisions to promote improved air quality.

Research and mobility players

IFPEN, developer of the <u>Geco air app</u>, is responsible for monitoring urban pollution in real time and drawing up the maps.

VINCI Autoroutes and the Direction interdépartementale des Routes Centre-Est provide field information (road-traffic data and expertise) and facilitate the roll-out of the app to users driving in the test zone.

The ADDVC (Association for the sustainable development of Chemistry Valley) is supporting the project and encouraging employees of member companies to use the <u>Geco air app</u>.

(*) The Geco air app is used to calculate:

- nitrogen oxide,
- fine particle,
- carbon monoxide,
- and CO₂ emissions for each journey.

It also incorporates fine particle emissions associated with worn tires and brake pads.

Current figures for Geco air:

- 16,000 downloads in total
- 27,000,000 kilometers traveled in total
- 1,500,000 kilometers traveled per month
- 3,500 downloads during the 2018 French National Challenge

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Link to the web page: