



European initiative aims to develop a global solution for the improvement of air quality and noise reduction in cities.

Cars are responsible for around 12 % of total EU emissions of carbon dioxide (CO₂), the main greenhouse gas. Which is why monitoring CO₂ emissions from passenger cars is a top priority for the EU. So is reducing the noise produced by cars and vehicles, as increasing numbers of people are being affected by traffic noise. NEMO is a new initiative to counter both types of emissions.

Funded by the European Union's Horizon 2020 research and innovation programme, the new initiative brings together research institutes, corporations, local governments and authorities from 11 of its member states, to develop a turn-key solution for the integration of new systems into existing infrastructure in order to measure and mitigate emissions and noise levels.

At the centre of the solution is a new autonomous remote-sensing system that can be fitted to tolling or access systems and protect Low-Emission Zones and other sensitive areas from high-emitters. The autonomous remote sensing system identifies noisy and polluting vehicles in existing traffic and make this information available to tolling or access systems. The system can be fully integrated into both road and rail infrastructure and will have the tools available to communicate with the existing data structure of transport operators and authorities.

-The NEMO project is key to creating healthier cities, by improving air quality and reducing noise impact. With this project, we are giving an important step towards the achievement of a European transport system that is resource-efficient, safe and climate and environmentally friendly", says Dolores Hidalgo, Director of the Circular Economy Area, Fundación CARTIF

The initiative will also counter the emissions using more holistic solutions, such as road texture optimization, green barriers, photocatalytic materials and microplastics collection in the asphalt layer pore network. The solutions will be tested in several European cities to demonstrate the advantages of its urban usage as a tool to monitor and identify noisy and high emitter vehicles.

The goal is a 30% improvement in air quality for road traffic and at least a 20% reduction in noise in the target areas. For rail traffic, NEMO will also work with noise detection of individual wagons in passing trains to improve the effectivity of tolling or banning policies for noisy cast iron block-braked wagons.

The developed solutions will be demonstrated in four cities: Madrid (road traffic), Valencia (ferry port and rail cargo), Florence (road traffic) and Susteren (railroad line).



For more information about NEMO

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FACTS ABOUT NEMO (Noise and Emissions MONitoring and Radical Mitigation)

NEMO is an initiative to monitor emissions and noise from vehicles.

Partners

Fundación CARTIF, M+P Raadgevende Ingenieurs Bv, Mueller-BBM GmbH, Mueller-BBM Rail Technologies GmbH, Agenzia Regionale per la Protezione Ambientale della Toscana, Sintef As, Gate 21, Universite Gustave Eiffel, Universidad de Cantabria, Opus RS Europe SL, Comune di Firenze, Transport & Environment (T&E), Ricardo Aea Limited, Opus Technology Solutions Ab, Kapsch Trafficcom Ag, Fundacion de la Comunidad Valenciana para la Investigación, Promoción y Estudios Comerciales de Valenciaport, JRC -Joint Research Centre- European Commission, Audiotec Ingeniería Acústica S.A

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