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Press release

Introducing LENS, a new Horizon Europe project on noise and air pollution

LENS (L-vehicles Emissions and Noise mitigation Solutions) is a 36-months project funded by the Horizon Europe (HEU) Research and Innovation Programme with approximately 5 million EUR. It aims to assist law enforcement, cities, and regulatory authorities to reduce the contribution of L-category vehicles – LVs (mopeds, motorcycles, tricycles, and quadri-mobiles) to noise and air pollution. The project **kicked off in September 2022**.

Why is it important to tackle noise and air pollution?

Noise and air pollution affect both **health and quality of life**.

With the growth of traffic and urban development, exposure is also increasing and needs to be reduced. Increasing numbers of motorcycles, scooters, and mopeds are a specific source of complaints both **in cities and along rural routes**. Whilst hardly affecting year-averaged levels, these vehicles can cause high peak noise levels well above other vehicles, especially due to driving behaviour, non-compliant parts, or tuning.

LENS seeks to **examine emissions of greenhouse gases**, including CO₂, **and health relevant pollutants**, including very small particles, from LVs to **meet the [2030 Agenda](#)** goals and enhance the liveability of urban and rural neighbourhoods.

How will LENS contribute to tackling noise and air pollution caused by L-vehicles?

LENS works on the **development and promotion of interventions and best practices** to solve the problem of noise and emissions, also suggesting solutions to improve the performance of future vehicles and minimise the impact of existing vehicles.

LENS will apply techniques to **monitor noise and emissions of LVs**, provide recommendations on how to **control the contribution of current and future LVs**, **examine emissions and noise performance** under real driving conditions and deploy methods to **identify tampered vehicles**. LENS will also conduct detailed pollutant and noise characterisation to **more than 150 vehicles** in the lab and on the road. This new information will help improve emission factors and assessment methods and tools used in air and noise pollution assessments. The research results will provide **information on different policy options** for regulators, cities and authorities, including the **improvement of test procedures for type approval (TA)**.

[Flanders](#), [Paris](#), and [Rome](#) have been preliminarily selected as field survey and vehicle specifications locations but this does not preclude selecting other locations in the course of LENS. The project will



cooperate with and build up on the City Air Remote Emissions Sensing (CARES) project, during which remote sensing measurements were conducted in the cities of [Milan](#) and [Prague](#) in 2021 and 2022.

Who is part of the LENS project?

LENS brings together a multidisciplinary group of 15 partners from 10 different EU Member States, including 5 R&D providers, 4 academic institutes, 4 LVs original equipment manufacturers (OEMs), 1 systems supplier, and 1 partner responsible for communication (POLIS), especially with concerned cities. The Consortium consists of [EMISIA](#) (the project Coordinator), [IDIADA](#), [TU GRAZ](#), [IVL](#), [IKA RWTH AACHEN](#), [KU Leuven](#), [CZU Prague](#), [TNO](#), [IFPEN](#), [KTM](#), [BMW GROUP](#), [PIAGGIO](#), [DUCATI](#), [HORIBA](#), and [POLIS](#).

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Social Media:

[LinkedIn page](#)

[Twitter account](#)

Contact details:

Coordinator organisation: EMISIA S.A.

Project Coordinator and Manager: **Leonidas Ntziachristos**

Email: leon@auth.gr

Communication, Dissemination, and Exploitation Manager: **Antonios Tsiligiannis**

E-mail: atsiligiannis@polisnetwork.eu

