

Project Coordinator



R&D and Academia



LV OEMs



Systems supplier



Communication, dissemination, and policy uptake



L-vehicles Emissions and Noise mitigation Solutions

LENS is a three-year Horizon Europe assisting enforcement authorities, cities, and regulators to decrease the contribution of L-category vehicles (LVs: mopeds, motorcycles, tricycles and quadri-mobles) to noise and air pollution. It develops and promotes interventions and best practices to address light vehicles' noise and pollutant emissions. It also makes suggestions for regulations to improve the performance of future vehicles, including the control of emissions under real-life driving conditions and the regulatory enforcement of anti-tampering measures.

The Horizon Europe project (2022-2025) is led by EMISIA and brings together 15 partners based around Europe.



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 10105677



www.lens-horizoneurope.eu

Visit our website



LENS's objectives

- Further enhance, adapt and revise **sound and emissions characterisation techniques** developed in earlier projects for combined measurements of noise, nanoparticle & gaseous pollutants of LVs.
- Characterise noise and emissions over a variety of **real-world (RW) operating conditions**, including strong accelerations, speed variations, high speeds, and cold engine start, as well as characterise pollutants in the lab, especially those which are difficult to measure in the road.

- Develop, deploy, and validate refined **beyond-state-of-the-art techniques in-field** to identify LVs with excessive noise and high particle number emissions through the use of on-road measurements for more than 150 LVs.
- Link results **from screening surveys directly to roadside inspections** of suspected tampered LVs and synthesise these results by proposing mitigation actions to prevent tampering of LVs.
- Compare **on-road and regulatory emission and noise results**, thus providing specific technical and policy recommendations, as well as **simulation models**, that can contribute to alleviating the impact of current and future LVs on noise and air pollution.
- Transfer **knowledge and results, tools, and methods** to potential users, as well as enhance and deliver a **(free) mobility app on best practices guidance** for riders.



LENS uses enhanced remote emission sensing detection that can reliably check a great number of vehicles in a relatively short time and carries out roadside noise measurements during field surveys.