# LIFE SNEAK PROJECT NEWSLETTER

# NUMBER #4 – OCT.2023

# http://www.lifesneak.eu

## THE PROJECT

The Municipality of Florence coordinates, in partnership with ASSTRA, ECOPNEUS, MOPI, UNIFI, UNIRC and VIENROSE, the European project LIFE SNEAK (optimized Surfaces against NoisE and vibrations produced by tramway track and road traffic).

The main challenge of the LIFE SNEAK project is the reduction of noise from road traffic that mainly affects densely populated urban areas, such as that of Florence, where the noise and vibrations produced by the tram overlap with the noises produced by road traffic. This will be achieved by means of low-noise/vibration surfaces and retrofitting solutions with life cycle costs comparable to those of traditional surfaces, obtaining a substantial reduction in noise.

**The main objectives are:**

- reduction of noise deriving from the superposition of air-borne noise produced by the wheel-rail and pavement-tire interaction and ground/structure-borne noise deriving from the same interactions that propagate through the ground and the road superstructure;
- use of “quiet pavements” to mitigate air-born noise by rail-wheel and pavement-tyre, also by minimising pavement-tyre interaction effects and their propagation;
- reduction of squeal noise due to contact between the rail and the wheel through a system of sound-absorbing panels (made of recycled material) to be applied on the tram (bogie skirts) and evaluation of the

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effectiveness of a prototype of watering system to be installed on trams;
- reduction of annoyance due to noise and vibrations generated by roads and tramways;
- promotion at European level of the proposed solutions for noise pollution;
- integrate the vehicle noise emission databases defined by Directive (EU) 2015/996 with the emission data of the straight and curved tram collected in the pilot study with particular reference to the screeching conditions currently not considered by the Directive.

## REGULATIONS OF REFERENCE

The project is in line with the provisions of Directive 2002/49/EC " on the assessment and management of environmental noise - Statement by the Commission in the Conciliation Committee on the Directive on the assessment and management of environmental noise" and the European Green Deal (COM/2019/640 final).

## PROJECT KEY DATA

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|---|---|
| **Project Location** | Italy: Toscana, Calabria, Lombardia, Lazio |
| **Project Duration** | 1 September 2021 – 31 August 2025 |
| **Total Budget** | 1,988,982 Euro |
| **Eu Contribution** | 1,036,188 Euro |
| **Eligible Budget** | 1,883,982 Euro |
| **Project Website:** | http://www.lifesneak.eu |

## ACTIONS

**For the realization of the project, the following actions have been defined:**

**A. Preparatory actions**

A1 Theoretical General Framework

A2 Ante Operam Specific Project Framework

**B. Implementation actions**

B1 Technical Solutions Optimization

B2 Pilot Case Implementation

B3 Post Operam Performance Tests And Measurements

B4 Citizen Perception

**C Monitoring of the impact of the project actions**

C1 KPI and Impacts Assessment

C2 Life Cycle Assessment & Life Cycle Cost

**D Public awareness and dissemination of results**

D1 Dissemination and Public Awareness

D2 Sustainability: Replication, Continuation, Transfer

**E Project management**

E1 Coordination, Project Management and Monitoring

E2 After Life

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## Beautiful Sounds 2023 – Suoni positivi per luoghi felici

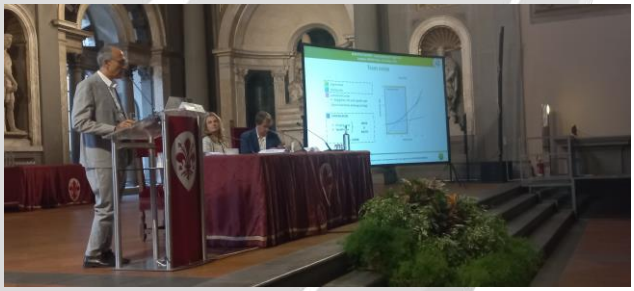
Soundscapes, both natural and man-made, characterize the identity of living and working places. Sounds are an essential component of communication, in the form of speech and listening, warnings, music, and creative sounds. Unwanted and disturbing sounds, perceived as noise, must be controlled to ensure quality living and working environments.

Since 1998, the Municipality of Florence has organized the Study Days on Acoustics, in collaboration with the Italian Acoustics Association and the Order of Engineers of Florence. The themes addressed in previous "days" have covered all aspects of noise assessment and mitigation in urban areas and the acoustic quality of places, highlighting the correlation between noise exposure and the health of exposed people, presenting the results of national and international research within the European projects Horizon HUSH and NEMO, LIFE QUADMAP, LIFE E-VIA, coordinated and partnered by the Municipality of Florence.

In the tradition of the "Days" at Palazzo Vecchio, this year's scientific seminar also gathered contributions from experts from many sectors who deal with sound and well-being in living environments at different levels. The day featured talks dedicated to the sounds of the world and cities, the identity components of sound as a source of memory, health, and pleasure, and the compatibility of sounds and noises with the territory.

Additionally, there was a structured session on the themes of the important European project Life SNEAK, coordinated by the Municipality of Florence, which addresses the issues of acoustics and vibrations related to urban mobility where multiple sources overlap, and special solutions are needed to mitigate impacts.

Within the Beautiful Sounds 2023 event, a session was held on the themes of the important European Life SNEAK project, coordinated by the Municipality of Florence, which deals with the problems of acoustics and vibrations linked to urban mobility where multiple sources overlap and are necessary solutions for impact mitigation. The session, moderated by Raffaella Bellomini for Vie enro.se. Engineering, saw four speeches: an introduction and review of the objectives, expected results and impacts by Arnaldo Melloni of the municipality of Florence (coordinator), a speech on tram noise reduction measures by Francesco Borchi of the University of Florence, a discussion on the design of low-noise asphalt by Filippo Praticò of the Mediterranean University of Reggio Calabria and a review of the methods of communication and dissemination of project activities, with examples of output produced up to this moment, by Elisa Meko of ASSTRA.
**For more information visit the website: www.lifesneak.eu**



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