

PROJECT

SILVARSTAR

SoIL Vibration and AuRalisation Software Tools for Application in Railways

Funding: European (Horizon 2020)

Duration: Nov 2020 - Oct 2022

Status: Ongoing

Total project cost: €950,000

EU contribution: €950,000



Call for proposal: H2020-S2RJU-OC-2020

[CORDIS RCN : 232532](#)

Objectives:

SILVARSTAR brings together a unique consortium of six leading industrial and academic partners who contribute excellence in noise and vibration modelling (ISVR, KU Leuven), engineering consulting (Vibratec, Wölfel), software development for environmental impact studies (Wölfel) and for auralisation and visualisation (EMPA), as well as dissemination of collaborative project results to the European rail manufacturing industry (UNIFE).

The overall goal of SILVARSTAR is to provide the railway community with proven software tools and methodologies to assess the noise and vibration environmental impact of railway traffic on a system level.

The first overall objective of SILVARSTAR is to provide the railway community with a commonly accepted, practical and validated methodology and a user-friendly prediction tool for ground vibration impact studies. This tool will be used for environmental impact assessment of new or upgraded railways on a system level. It will provide access to ground vibration predictions to a wider range of suitably qualified engineers and will facilitate project planning and implementation by improved simulation processes.

The second overall objective of SILVARSTAR is to develop a fully functional system for auralisation and visualisation based on physically correct synthesised (exterior and interior) railway noise, providing interfaces with Virtual Reality visualisation software. This system will facilitate communication with the public, decision-makers and designers through virtual experience before delivery of projects.

Parent Programmes:

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Other programmes: S2R-OC-CCA-01-2020 Noise and Vibration (WA5)

Lead Organisation:

Vibratec

Address:

28 Chemin Du Petit Bois
69131 Ecully
France

EU Contribution: €205,788

Partner Organisations:

Union Des Industries Ferroviaires Europeennes - Unife

Address:

AVENUE LOUISE 221
1050 BRUXELLES
Belgium

Organisation Website:

<http://www.unife.org>

EU Contribution: €55,750

University Of Southampton

Address:

Highfield
Southampton
SO17 1BJ
United Kingdom

Organisation Website:

<http://www.soton.ac.uk>

EU Contribution: €152,500

Wölfel Engineering GmbH + Co. Kg

Address:

MAX PLANCK STRASSE 15
97204 HOCHBERG
Germany

Organisation Website:

<http://www.woelfel.de>

EU Contribution: €158,087

Katholieke Universiteit Leuven

Address:

Oude Markt
3000 Leuven
Belgium

Organisation Website:

<http://www.kuleuven.be>

EU Contribution: €165,375

Eidgenoessische Materialpruefungs- Und Forschungsanstalt

Address:

Ueberlandstrasse 129
8600 DUEBENDORF
Switzerland

Organisation Website:

<http://www.empa.ch>

EU Contribution: €212,500

Technologies:

Infrastructure management
Rail technology, noise simulation and mitigation for reduced vibration

Development phase: Validation

STRIA Roadmaps: Other specified

Transport mode: Rail transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Environmental/Emissions aspects

Geo-spatial type: Other