PROJECT

SafeTrain

Piloting and industrial validation of autonomous and sustainable animal deterring system for the rail transport

Funding: European (Horizon 2020)

Duration: Jul 2015 - Jun 2017

Status: Complete

Total project cost: €1,967,500

EU contribution: €1,377,250

Call for proposal: H2020-SMEINST-2-2014

CORDIS RCN : 197566

Objectives:

NEEL have developed UOZ-1 animal deterring system that successfully prevents the animal-train collisions. The device exploits an animal natural sensitivity to sound and just before a train approach, at the time of the danger, a series of sounds stimulates animal instinct and enforces their life defensive reflex reaction in the form of escape.

Our UOZ-1 animal deterring devise has been created in response to the particular need of preventing collisions of wild animals with trains in areas where the migration routes of animals cross the railway lines.

The primary objective of the SafeTrain Project is to pilot and test in real environment the autonomous system for the automatic train detection that will be integrated with our UOZ-2 animal deterring device. The new train location system will be based on an intelligent mechanism of listening for an approaching train commercially known as an “Indian ear”.

Our goal is to incorporate it into the animal deterring system in order to make it independent from the currently used rail signalling system. This will not only reduce the complexity of the whole system but also will reduce the investment and maintenance costs down to 60% of the todays costs.

The secondary, but no less important goal is the development of green powering system for UOZ-2 utilising renewable energy sources to make the system energetically self-sustained. This will be of particular importance in areas where the rail track has not been electrified and thus with limited access to grid power.

Our acoustic method for train-animal collisions prevention is an excellent solution that allows preservation of ecological corridors and animal migration routes and significantly reduces the safety and business risk of rail carriers. It overcomes all limitations of the state-of the-art solutions available on the market, and looking at Europe only, opens the way to the market worth of nearly 125m€.

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)

Lead Organisation:

Przedsiebiorstwo Wdrozeniowo-Produkcyjne Neel Sp. Z O.o.

Address:
ul. Białozora 3
02-817 Warszawa
Poland

EU Contribution: €1,049,125

Partner Organisations:

Wave Train Systems As

Address:
VOLLSVEIEN 9
1366 LYSAKER
Norway

EU Contribution: €328,125

Technologies:

Safety systems
Autonomous system for train detection

Development phase: Research/Invention

STRIA Roadmaps: Vehicle design and manufacturing, Infrastructure

Transport mode: Rail transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Safety/Security

Geo-spatial type: Other