PROJECT

LEDVAR-Z

A New Paradigm for Efficient and Modern Rail Signalling

Funding: European (Horizon 2020)

Duration: Feb 2018 - Jun 2018

Status: Complete

Total project cost: €71,429

EU contribution: €50,000

[CORDIS RCN : 213664](#)

Objectives:

Electrans' aim is to improve the current rail signalling system and to take a step forward towards the full implementation of the European Rail Traffic Management System (ERTMS).

The current rail signalling system remains shockingly antiquated throughout the world:

1. The electronic signal's messages are fixed during production. This means that customised signals must be designed, ordered and manufactured every time change is needed.
2. There is a huge amount of cables and interlocking stations that require installation and maintenance and increase operational expenditures.
3. The current railway monitoring system is rudimentary and requires unnecessary energy consumption.

The solution we propose, LEDVAR-Z, is an innovative ITC system that will standardise and modernise railway signalling, making it more efficient. It is composed of high-quality LED signals able to display any type of light or message and software that intelligently monitors and controls what is displayed. Fewer interlocking stations will be needed and they can communicate with signals through fibre optic cables or radio networks. As a result, LEDVAR-Z will drastically reduce costs for railway companies, streamline rail projects and improve rail traffic control management.

The project will have a great impact on our company: we will increase international market share up to 58%, enjoy cumulative profits up to €25M and be able to hire 55 employees by 2024.

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:

Electrosistemas Bach Sa

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08130 SANTA PERPETUA DE MOGODA
Spain

EU Contribution: €50,000

Technologies:

Satellite navigation
EGNSS application on railway to assist ERTMS and ETCS
systems

Development phase: Research/Invention

STRIA Roadmaps: Network and traffic management systems

Transport mode: Rail transport

Transport sectors: Passenger transport, Freight transport

Geo-spatial type: Other