PROJECT

DTD SYSTEM 2

A disruptive innovation for the minimisation of railway maintenance costs (2)

Funding: European (Horizon 2020)

Duration: Nov 2017 - Oct 2019

Status: Complete

Total project cost: €1,279,338

EU contribution: €895,536

Call for proposal: H2020-SMEINST-2-2016-2017

CORDIS RCN : 212468

Objectives:

European rail infrastructure managers spend yearly over 869M€ (from public funds) in repairing railway track damages caused by the poor conditions of train wheels. The existence of wheel defects implies however other significant costs, such as those associated with delays caused by incidents (over 1M€ per year only in UK) and the important economic, material and potential human losses due to derailments (only those involving dangerous goods cost Europe over 200M€ per year). This is however not due to maintenance overlook of train operating companies, as they spend yearly around 2.293M€ in inspection, maintenance and renewal operations of wheels. This is rather because even small changes in wheel condition (not detectable by current technologies) lead to huge damages in railway infrastructure.

AMINSA has developed DTD SYSTEM, an innovative system capable of detecting with high precision wheel defects at its onset, using this information to design a predictive maintenance plan. DTD SYSTEM's added value compared to competing systems is:

1. Higher accuracy in identifying wheel defects
2. Reduction in track maintenance needs
3. Easier and personalized service attending to each user’s needs
4. Reduction in wheel inspection and maintenance and renewal costs

The successful execution of Phase 1 has led to the definition of a business model to deploy DTD SYSTEM as a service and reach EU market, establishing strategic alliances with stakeholders, users as well as commercial suppliers. Our overall objective in Phase 2 is to implement advanced demonstration units of DTD SYSTEM in the most complex and demanding conditions, as well as develop the tools needed to introduce DTD SYSTEM in the railway market.

As a result, the exploitation of DTD SYSTEM will lead by the 5th year to cumulative sales of 21.5M€ and benefits of 13.6M€, while saving railway industry over 550M€ in track maintenance costs and 148M€ in inspection and maintenance cost.

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:

Agrupacion Mediterranea De Ingenieria Sa

Address:

CALLE JUAN DE RIBERA 17
46190 RIBA ROJA DE TURIA
Spain

EU Contribution: €895,536

Technologies:

Safety systems
Wheel defect identificaiton

Development phase: Research/Invention

STRIA Roadmaps: Vehicle design and manufacturing

Transport mode: Rail transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Safety/Security

Geo-spatial type: Other