INFRALERT

DEMONSTRATION SITES

The project results are demonstrated in two real pilots: a railway corredor in Sweden and a road network in Portugal.

Road Demonstration at Portugal

Road network, Coimbra region in the centre of Portugal, managed by Infraestruturas de Portugal.

Rail Demonstration at Sweden

Railway corridor, Iron Ore Line in Malmbannan in northern Sweden, managed by Trafikverket.

THE INFRALERT CONSORTIUM

Project Coordinator

Fraunhofer IVI

Project Partners

cemosa Ingeniería y Control

Universidad de Sevilla

DMA Accurate & Reliable

Infraestruturas de Portugal

RÉGENS

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INFRALERT

Linear infrastructure efficiency improvement by automated learning and optimized predictive maintenance techniques

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 636496

INFRALERT

Linear infrastructure efficiency improvement by automated learning and optimized predictive maintenance techniques

INFRALERT is a research project supported by the EU within the Horizon 2020 Programme, started on 1 May 2015 for a 3-years duration.

The project develops and deploys **solutions that enhance the land transport network infrastructure performance and adapt its capacity to meet growing needs.**

This includes the collection, storage and analysis of inspection data, the determination of maintenance tasks necessary to keep the performance of the infrastructure system in optimal condition, and the optimal planning of interventions.

CONCEPT AND APPROACH

The condition of the land transport infrastructure has a big societal and economic relevance, since constraints result in disruptions of service. The demand for surface transport will significantly increase in the next years. Given budget restrictions, a substantial enlargement of the road/rail network in the next decades is doubtful. Besides, the aging infrastructure will require more maintenance interventions to ensure normal traffic operation.

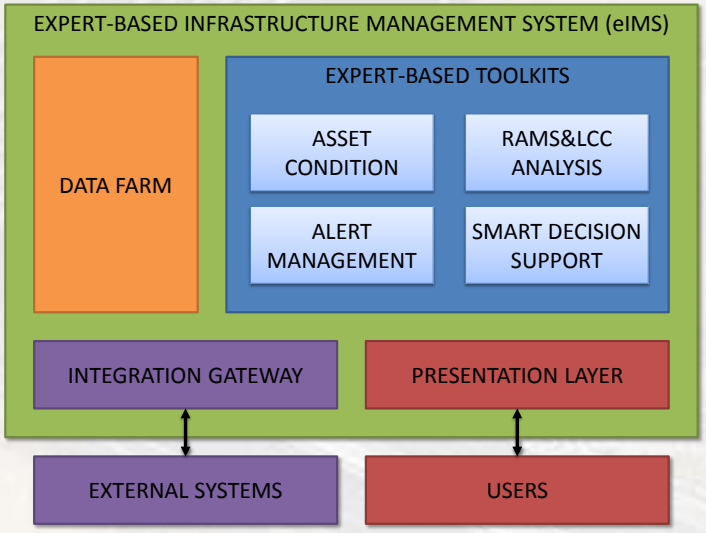
Therefore, the only way to increase infrastructure capacity for the increased transportation demand is to optimise the performance of the existing infrastructure. This is precisely the goal tackled by INFRALERT.

INFRALERT aims to develop an expert-based information system to support and automate infrastructure management from measurement to maintenance.

The system developments is based in a **modular architecture**, consisting of several plug-in modules within a common framework: the eIMS.

SPECIFIC TECHNOLOGY DEVELOPMENTS

The INFRALERT project is focused in six specific technology developments:



The Data Farm

A tool for the collection and organisation of condition monitoring data stored in external databases.

The eIMS

A cloud-based system which hosts the expert-based toolkits and includes all the necessary integration and communication layers.

The Asset Condition toolkit

An automated Health Assessment and Prediction tool to perform accurate nowcasting and forecasting.

The RAMS&LCC Analysis toolkit

Methods and tools to evaluate and forecast RAMS parameteres and LCC dynamically.

The Alert Generation toolkit

An Alert management system which analyses present and future asset condition data, as well as historical maintenance actions, in order to extract and manage maintenance alerts.

The Smart Decision Support toolkit

Decision support tools for interventions planning on the tactical and operational level, as well as the generation and analysis of new infrastructure construction long-term scenarios.

EXPERT-BASED TOOLKITS