

WHO WE ARE

- **Ineco** is a Spanish transport consultancy and engineering firm leaders in specialised ERTMS technical consultancy .
- **CEDEX** is the research body of the Spanish Public Works and Transportation Office and holds the laboratory of Railway Interoperability.
- **MULTITEL** is a Belgian research centre highly specialised in railway activities.
- **RFI** is the infrastructure manager and owner of the Italian rail network.
- **ADIF** is the Spanish railway infrastructure manager.
- **RENFE** is the main Spanish railway operator for freight and passenger services.
- **Cetren** is the Spanish Notified Body, focused on promoting and protecting railway as a means of transport.
- **RINA** is the Italian Notified Body, in charge of certification, inspection and testing services
- **Belgorail** is a Certification Entity and Notified Body, established in order to cover the need for regulatory and voluntary certification in the railway field.
- **Oltis Group** is a Czech private group of specialized software companies mainly focused to supply services in the field of information technologies for transport and logistics.
- **DICEA** is the civil, construction and environmental department of the Sapienza University of Rome.



IT Virtualisation of the Testing Environment

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TOWARDS A NEW TEST ENVIRONMENT

Funded by the EU Framework Programme for Research and Innovation Horizon 2020 and with the supervision of the Shift2Rail JU, the VITE project was launched 1st Nov 2016.



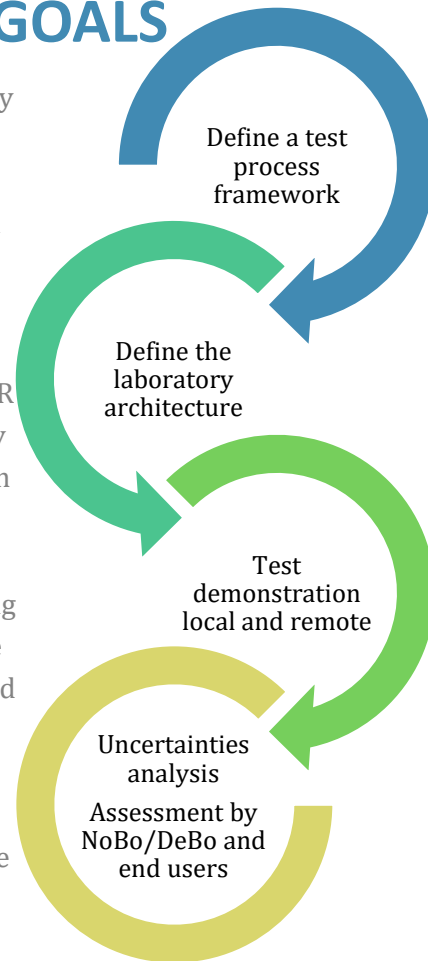
The main objective of VITE is to reduce the onsite testing by proving the cost-effectiveness of a baseline-independent testing strategy that will speed up the placing in service of ERTMS subsystems by means of performing virtual lab tests to check the interoperability, offering improved functionalities and reducing costs.

MAIN GOALS

To achieve the main objective of reducing on-site testing the work will be organized in two main streams:

First, to propose a testing framework by carefully analysing user's needs and current situation and from there building a process that can be accepted by all railway stakeholders who will be able to perform as many tests as possible in the lab. An analysis of uncertainties and a simulation of GSM-R QoS as well as a proposed methodology for test protocols optimisation has been also addressed.

Secondly, to propose a standard architecture for the lab testing including the interface specifications for both the connection between real equipment and the lab tools as for the connection between different labs for remote testing. This architecture will be developed together with some software tools that will help to automate lab testing.



WHAT HAVE WE ACHIEVED?

VITE has contributed to the development of a Zero on-site testing environment.

The research has been mainly focused on demonstrating the feasibility of executing the ETCS tests in a lab as well as the validity of these tests to speed up the process of placing in service a new train/line.

Within VITE, it has been performed an uncertainty analysis that will support the shift from on-site to lab testing for certain ERTMS/ETCS functionalities, developing a way of reporting that will set the basis for increasing confidence in lab testing.

A test architecture and some software tools (to manage project data, to create scenarios and to analyse some functionalities) have been developed as a first step to automate lab testing as well as the specification for the connection between the real equipment and the lab tools.

One demo has been also performed

See more at <https://www.vite-project.com/>

