

Rail Infrastructure Alignment Acquisition System (RILA) product approval



CASE STUDY



Overview of Deliverables

The Rail Infrastructure Alignment Acquisition System (RILA) is manufactured and operated by RailData, based in the Netherlands. The RILA system offers a number of opportunities for Network Rail to enhance their track asset management, specifically in the areas of data acquisition, accuracy and overall whole life cost of operation.

RILA also offers additional opportunity for other initiatives within Network Rail, such as equipment location relative to the rail, as is being delivered by the Offering Rail Better Information Services (ORBIS) programme. A significant opportunity also presents it in the form of improved safety of asset data collection processes; the RILA system has the potential to significantly reduce the need for line-side surveying activities. RILA has been in operation on the Dutch railway network since 2009, and over 5500km of absolute track position has been delivered to the infrastructure manager, ProRail.

The system provides laser mapping of infrastructure, namely the rail, by means of affixing RILA on the rear of the train. RILA uses a sophisticated GPS measurement system, combined with inertial measurement technology to collect the position of the track, rail profile, and parameters such as track gauge and super elevation.

An important safety advantage over traditional track survey methods is that people no longer have to be on the track to collect the survey data. This significantly lowers the risks involved in gathering track data.

Network Rail approached Vertex to provide Engineering management support to infrastructure projects, with regards to gaining approval to trial the RILA system on Network Rail infrastructure.

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Deliverables Included:

- Conduct a HAZID workshop in order to assess the risks of introducing RILA to a trial site on Network Rail infrastructure;
- Consider, in the HAZID, the use of RILA mounted on a service train;
- Compile a HAZID briefing note and report; and
- Ensuring Compliance to Network Rail's Engineering Management procedures.

Technical competencies applied in the delivery of the contract

- Technical knowledge of the proposed system in question, incorporating over 20 years' experience in project development and delivery and adhering to the Network Rail Project Management (GRIP) process;
- Systems Engineering- appreciating the impact of the proposed solution in terms of its whole-life implementation;
- Project Management, Stakeholder liaison and influence, in order to drive the project forward on the agreed timescales whilst maintaining stakeholder confidence;
- Safety Engineering- both at a systems and sub-system level, risk assessment and Hazard Identification and the provision of early CSM assurance; and
- Programme Development.

Programme start and completion dates

Project duration was from June 2013 – July 2013 with every milestone achieved as per the base plan.

Resources utilised

Vertex utilised its team of Railway Systems Engineers and Project Managers for this project. Qualification held includes membership of the Institution of Railway Signalling Engineers, membership to the Association of Project Managers (MAMP), membership to the Institute of Engineering and Technology (MIET) and professional Chartership (C.Eng.). Combined railway experience of the project team exceeded 50 years.

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