

# Railway Infrastructure Alignment Acquisition System (RILA)



## CASE STUDY



### Overview of Deliverables

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 itself 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.

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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;
- Provide safety assessment to support trials of RILA
- Complete GE/RT8270 compatibility assessment
- Safety plan for future SRP(System Review Panel) for national acceptance
- Ensuring Compliance to Network Rail's Engineering Management procedures.
- Production of Application and Generic Safety Case

### Technical competencies applied in the delivery of the contract

Vertex employed the following competencies during these works:

- 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 start and completion dates

Project duration was from June 2013 – May 2015 with every milestone achieved as per the base plan.

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## Resources utilised

Vertex utilised its team of Railway Systems and Safety 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), Project Management Professionals (PMP) and professional Chartership (C.Eng.).

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