Network Rail Business Critical Rules Programme

CASE STUDY

Overview of Deliverables

The purpose of Network Rail's Business Critical Rules Programme (BCRP) is to provide a set of 'core' rules that will enable the key railway system risks to be managed with also clarifying the accountabilities and responsibilities within the organisation. The aim is to significantly reduce the number of standards, complexity between them and known conflicts that tend to develop in complex systems such as rail. The BCRP will allow Network Rail to deploy resources focusing on the management of key risks and controls, reduce confusion within the supply base with regards to compliance to standards, cost of works and enable a more flexible approach to managing change. It will also enable the business to tailor the way local risks are controlled verses a set national control, i.e. control in the most appropriate manner.

The Programme utilised the Bowtie risk management methodology to identify those risks which are critical to the achievement of its business objectives and for each risk area identify all pre-event and post-event controls. These risks are mapped to the current Network Rail standards and other relevant documents to these controls which will then be developed into a complete control effectiveness assessment report. The Business Critical Rules (BCR) are then developed to provide its staff, contractors and suppliers with clear articulation on what is expected from them.

Network Rail requested Vertex to provide professional rail engineering and safety engineering services, in particular Track, Signalling and Level Crossing expertise to assist in developing the new rules.

Deliverables Included:

- Identifying risks which are critical to the achievement of business objectives;
- Development of BowTies for relevant Plain Line Track, Signalling and Level Crossings work streams risk areas to identify all pre-event threats and post-event controls;
- Advise with regards to application of the Common Safety Method;
- Mapping of the current Network Rail standards and other relevant documents to the controls, some 1,509 standards, approximately 166 current controls;
- Develop the BCRs to provide a clear understanding of expectations on staff, contractors and suppliers;

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- Assisted in Developing Means of Control (MoCs) for controls to manage risk;
- Support technical workshops and reviews by the peer review groups;
- Assessed failure data (205,386 failures) to apportion to the pre-event threats, this is used to assess the likelihood of post-event control effectiveness;
- Provision of Standards Disposition process (1,406 standards) for the control document process and
- Provided input in reviewing the BCRs, MoCs and Role Manuals to evaluate their effectiveness in controlling risk.

Technical competencies applied in the delivery of the contract

Vertex employed the following competencies during these works:

- Underpinning technical knowledge of the disciplines in question incorporating many years' experience in design, maintenance, renewal and management of failure.
- Systems Engineering- appreciating the impact of the proposed solutions 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.
- Data analysis of standards and failures.

Programme start and completion dates

Project duration was from June 2014 to date.

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