Upgrade of the Rolling Stock Library (RSL) and the Rail Vehicle Record System (RAVERS) to a new web based application to be known as R2

Input to the RSL is mandatory as required by Railway Group Standard GM/RT2453 ‘Registration, Identification and Data to be displayed on Rail Vehicles’ providing an essential facility for the sharing of rolling stock information and the successful operation of key industry systems such as TOPS and TRUST.

The associated Rail Vehicle Record System (RAVERS) provides a common industry system for vehicle and component maintenance information and maintenance planning. While the data recorded in RAVERS is not mandatory, the recording of wheel profile and diameter data, which is mandatory in GM/RT2453, is in many cases, achieved through RAVERS.

RSL and RAVERS are ‘legacy systems’ originating from the British Rail era that are currently provided to the industry by Atos via individual contracts with each user organisation. Atos hold the overall Intellectual Property Rights (IPR) to both systems. Given their age, current high running costs and lack of industry ownership both of these systems are in urgent need of modernisation and upgrading.

Therefore RSSB, in partnership with Atos, are undertaking a major upgrade of these important and strategic rolling stock information systems. Known as R2, this project will deliver the following benefits to the industry:

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For details of forthcoming dates for RSSB consultations on standards and associated documents, please see:
http://www.rssb.co.uk/SiteCollectionDocuments/pdf/rgs/Forthcoming%20consultations.pdf

For details of changes to Railway Group Standards view the Latest Updates page on the RGS Online website www.rgsonline.co.uk

You can subscribe to Information Bulletin on the RSSB website.
RSSB subscriptions page

Front page photo: Image courtesy of Arriva Trains Wales
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a) Replacement of the existing ‘legacy’ mainframe based RSL and RAVERS applications with a new modern web based application.

b) The addition of new functionality and improved interfacing with other applications, data analysis and reporting. A significant reduction in cost (£4.6m in the first 6 year term) by reducing the on-going support and hosting costs and the RSL managed service costs.

c) The introduction of a rationalised and simplified structure for the payment of the annual support, hosting and RSL managed service costs through the RSSB membership levy. This will replace the existing payment arrangements for these services between the Industry and Atos. RSSB has recently written to each organisation explaining this in further detail including a summary of how the revenue for R2 will be collected in the future.

d) RSSB, on behalf of the industry, obtaining joint ownership of R2.

The contractual negotiations have now been concluded and development work has now commenced. This will take approximately 15 months before the first organisations are migrated across from RSL and RAVERS into R2.

Once the R2 application is available for use the transition from RSL/RAVERS to R2 is likely to take around 9 months for all companies to be transitioned. This programme will be agreed in advance with the industry to ensure a smooth transition takes place.

Regular updates on the progress of the R2 project and in particular, the user acceptance, training and transition phases will be issued in due course. In the meantime, if you require any further information on this project then please do not hesitate to contact the RSSB R2 Customer Representative, Jeff Brewer who can be contacted via email jeff.brewer@rssb.co.uk.

Innovation competitions and challenges update

Often innovation is held back by a circular argument that investment is needed to prove something works but there is risk aversion to investing until that something can be shown to work. Demonstration projects take innovation from a concept and out onto the railway to prove it works and make the case for further business led investment.

The Enabling Innovation Team has been set up by the rail industry to provide a way for the rail industry and innovators to break this cycle. It offers support to practical cross-industry demonstrator projects, reporting into the Technical Strategy Leadership Group, and helping industry fulfil the vision in the Rail Technical Strategy.

Initiatives currently underway include:

• Remote Condition Monitoring Accelerated Innovation Project – The Network Rail/South West Trains Wessex Alliance has supported the adjudication process to the point where there is now a shortlist of 10 challenges. These will now be taken forward to competition, and the process for this is being scoped.

• Radical Train - this yielded nearly 60 high quality entries from a diverse cross sector range of industries including automotive and renewables. Engineering consultancy Frazer-Nash assisted EIT in shortlisting the 57 entries to 11 through a process which evaluated delivery challenge, cost, export potential, contribution to raising the profile of innovation in UK Rail and technology maturity. The project now enters a development phase of up to 10 weeks with the selected bidders, to bring the offers up to the necessary standard to be contractible propositions.

• Customer Experience – There are opportunities to improve the customer experience within GB rail in areas of service culture, business process, journey planning, seamless journey experience and design of facilities. The detailed scope of the competition has been developed with industry stakeholders and will be designed to complement the Technology Strategy Board’s Digital Railway competition. Final judging and awards will take place at a live pitch event in London in the autumn. The competition is developed and managed for EIT by InnoCentive and IXC UK Limited.

There are other emerging programmes and initiatives which EIT is supporting, and which can be read about on the FutureRailway website – www.futurerailway.org/eit

Although EIT is in the business of running specific competitions and challenges, it is also always open to any new innovation ideas from industry. Innovators who believe they could have a significant impact on the industry and would benefit from a demonstration project of any sort can contact EIT via innovations@futurerailway.org or download a form to register an expression of interest.

EIT is employed by RSSB and reports into TSLG. It is supported by the Rail Delivery Group, Planning Oversight Group, and RSSB’s Board as well as the Department for Transport.
Vouchers available to SMEs to support testing

The Enabling Innovation Team is helping to boost the profile and incentives associated with testing and trialling, by establishing voucher schemes for small and medium sized enterprises (SMEs) and universities to access facilities and expertise at special rates.

Testing assists innovative technology to quickly progress to the operational environment, but research for the Technical Strategy Leadership Group suggested general awareness of facilities and the role of testing in innovation was low. The schemes are being introduced to give a boost to innovative ideas and developments for any rail environment.

For more details on the schemes, go to the FutureRailway website - http://www.futurerailway.org/eit/Pages/NRTestingVoucher.aspx, and to make an application for a voucher via the EIT-Network Rail scheme, contact RIDC.RIDC@networkrail.co.uk

Great Britain’s Rail Safety Performance and Trends in 2012-13

RSSB has published the Annual Safety Performance Report reviewing the rail industry’s safety performance over the financial year 2012/13.

In 2012/13, there were 1.50 billion passenger journeys (3% increase on 2011/12), 58.4 billion passenger kilometres (2% increase), and 47.8 million freight train kilometres (2% decrease).

Against this setting the 2012/13 headlines are:

- There were no passenger or workforce fatalities in train accidents in 2012/13. This is the sixth year in succession with no such fatalities. At 0.3 per year, the ten-year moving average for these train accidents is at its lowest ever level.

- Four passengers died in separate incidents, all at stations. When non-fatal injuries are also taken into account, the total level of passenger harm was 45.8 FWI; this is 7% higher than the 42.7 FWI (five fatalities) recorded for 2011/12; the rise is due mainly to an increase in the number of major injuries. When normalised by passenger journeys, the rate of harm shows a 4% increase compared with 2011/12.

- There were two workforce fatalities; both were infrastructure workers. Including non-fatal injuries, the total level of workforce harm was 22.6 FWI, which is a reduction of 8% compared with 24.5 FWI (one fatality) occurring in 2011/12. The rate of harm normalised by workforce hours fell by 11%.

- There were 35 potentially higher-risk train accidents (PHRTAs). This is an increase of one on the previous year’s total of 34. For the past three years, the number of PHRTAs has remained lower than levels seen prior to this period.

- There were seven passenger train derailments, four of which were due to landslips affecting the line. There were no major injuries to train occupants resulting from derailment, or any other type of train accident.

- The Precursor Indicator Model (PIM) provides a measure of trends in the underlying risk from PHRTAs. At March 2013, the overall indicator stood at 90.6, compared with 74.9 at the end of 2011/12. The passenger proportion of the PIM stood at 39.4, compared with 27.4 at the end of the previous year. The increases in the PIM are due mainly to a rise in the number of landslides that affected the running line, which occurred following periods of heavy rain during the year.

- At 250, the number of SPADs occurring during 2012/13 was a 9% reduction on the 276 occurring during 2011/12. Although the estimated risk from SPADs rose to 60% of the September baseline level, compared with the 2011/12 year-end position of 32%, the level for 2012/13 is the second lowest financial year-end level on record. SPADs remain a low contributor to overall train accident risk.

- There were 49 fatalities to members of the public, excluding those due to suicide or suspected suicide. Of the total, 39 were trespassers. Of the remaining ten, nine were level crossing users, and one, which occurred at a station, has been categorised as an assault.

- Including non-fatal injuries, the total level of public harm was 53.9 FWI, which is lower than the 63.5 FWI recorded for 2011/12. At 238, the number of suicides was the same as for 2011/12, and remains above average for the last decade as a whole.

- In total, and excluding suicides, there were 55 fatalities, 457 major injuries, 1,129 minor injuries and 1,179
cases of shock/trauma. The total level of harm was 122.3 fatalities and weighted injuries (FWI), compared with 130.7 FWI recorded in 2011/12. The main cause of the decrease was a fall in the number of fatalities to members of the public.

• Rail continues to be the safest form of land transport in Britain and the industry’s performance continues to meet the requirement in the European Safety Directive of ensuring that safety is generally maintained and, where reasonably practicable, continuously improved.

Learning from Operational Experience

One of the inputs to the management of safety in the industry is the learning that is gained from the things that happen during the operation of the railway. The Learning from Operational Experience Annual Report, which was published at the same time as the ASPR, provides an insight into the learning points from within the railway and from other industries and showcases deliverables to support identified areas of risk.

For more information see the Annual Safety Performance Report and Learning from Operational Experience Annual Report on the RSSB website www.rssb.co.uk

University of Huddersfield and rail industry forge a new strategic partnership

The University of Huddersfield and RSSB have signed a Memorandum of Understanding, sealing a deal to pool resources and talent for research into system and engineering risk modelling to support informed decision making and future risk prediction.

Each organisation is putting in funding of £0.5 million per year to fuel a £5million 5-year programme. Research will be carried out and new techniques developed to fill the gaps that are identified in system and engineering risk modelling, as well as issues around human capital, and educating the next generation of railway professionals.

Huddersfield’s pedigree in rail research is embodied in its Institute of Railway Research. It has an extensive record of delivering research and consultancy projects for RSSB on behalf of GB railway stakeholders and international partners, as well as existing partnerships with Agilent Technologies, National Physical Laboratory, Siemens and 3M.

RSSB, working closely with its members, provides safety intelligence and risk modelling capabilities to the industry as well as managing the cross-industry research programme. This includes work on system risk modelling, engineering interfaces within the railway, and interfaces with other parts of the community and society as well as informing and implementing the vision for a lower cost, lower carbon, and higher capacity future railway in the Rail Technical Strategy.

Anson Jack (RSSB) and Simon Iwnicki (University of Huddersfield) signed the MoU on 24 July 2013 at RSSB’s offices in Angel, London.

Please contact RSSB’s enquiry desk, on 020 3142 5400 or email enquirydesk@rssb.co.uk or visit the website at www.rssb.co.uk
A new way to keep up-to-date with RISAS

RISAS (Railway Industry Supplier Approval Scheme) is an important tool in helping rail companies control the risk associated with suppliers of safety critical products.

The scheme is growing to help support the industry and to raise awareness of how RISAS is developing. The RISAS Board is sponsoring a new quarterly newsletter. Issue 1 of RISAS News, can be downloaded from the RISAS website, and has been sent to all users of the scheme as well as key contacts in Network Rail, train and freight operating companies, rolling stock companies (ROSCOs), and suppliers.

Anyone can subscribe to receive the newsletter, which can be done via the RSSB subscriptions page.

For more information, contact Andy Tandy at RISAS via email: risas.admin@rssb.co.uk, telephone 020 3142 5376.

Train driver selection and training

New issue of RIS-3751-TOM Rail Industry Standard for: Preparing for implementation across the industry

A significant programme of research undertaken by RSSB identified that the psychometric tests and interview used in the train driver selection process could be improved. The work updated selection criteria for train drivers, to reflect the demands of modern train driving and to align more closely with the conventional traffic operation and management Technical Specification for Interoperability (TSI 2006/920/EC).

It also identified a new suite of assessment methods which assessed all of the new selection criteria and addressed weaknesses in the previous assessment method. These changes are now included in the new issue of RIS-3751-TOM Train Driver Selection (June 2013), which has an ‘implementation date’ of 30 September 2013.

Organisations who employ train drivers are currently familiarising themselves with the new more comprehensive selection process for train drivers. Rail assessment centres who deliver assessment services are currently training their staff and updating procedures and documentation so they can implement the new process when it comes into force. RSSB is supporting rail assessment centres to coordinate and prepare through an implementation working group. RSSB has published comprehensive information to help with preparation in the form of a FAQ document.

The tests in the new assessment process are published by various different providers and they are available to order now. RSSB is the supplier of a number of the assessment tests, namely the SJE (Situational Judgement Evaluation), MMI (Multi-Modal Interview) and the Written Communication Test (WCT). To support the industry in the use of these tests RSSB is providing training to assessment centre staff in their use. This training is being delivered between now and September 2013. For more information, see Selection Training.

After the main training delivery phase, RSSB anticipate that the training will be repeated approximately once or twice per year to allow new assessors to be trained, or as required to maintain their skills, assessors already certified as competent will be required to conduct an MMI a minimum of once a quarter and to attend a development day every two years.

RSSB continues to work with the implementation working group to ensure that the implementation process runs as smoothly as possible (including the need to update related systems accordingly eg the RACF (Rail Assessment Centre Forum) database and ATOC ACOP0006 Driver selection audit process). Moving forward, on behalf of the industry RSSB will monitor the effectiveness of the train driver selection process on an on-going basis so that it can be maintained as fit-for-purpose.

Further detailed information can be found at Psychometric Assessment Process FAQs or contact assessment@rssb.co.uk with any questions.
Fatigue Risk Management

Fatigue is a common problem which many people face for a variety of reasons in their everyday lives; however fatigue at work can impact on the performance of people that make the railway safe (e.g. drivers, signallers, depot and maintenance staff). The role of fatigue has also been noted in numerous accident inquiries, highlighting the danger that it can cause.


A Fatigue Risk Management System (FRMS) is the term used to refer to the more formal arrangements for managing fatigue risks. Rather than simply relying on specified hours of work and rest periods, FRMS’s take a risk-based approach to ensure workers and the public are protected as far as reasonably practicable. An FRMS is an evidence-based, data-driven and documented process which, through the measurement of actual risks, enables a company to develop tailored controls to offset any potential increase in fatigue levels.

Following the initial publication of this guidance RSSB held a Fatigue Forum in March 2011 bringing together companies from across the industry to learn from researchers and other industries about how to better to manage fatigue. Two years on, it was felt that it would be very timely to reflect on the industry’s activities in this area. As with the first forum the day was organised by a cross industry steering group.

The National Technical Rules for the GB Mainline Railway System in the ‘RDD Spreadsheet’

The Reference Document Database (RDD) which is operated by the European Railway Agency (ERA) will in time provide access to each Member States’ national rules relevant to the authorisation of rail vehicles, their equivalence and the National Legal Frameworks applied in the Member States of the European Union. The RDD supports the principle of mutual recognition of national rules, the checks against these rules and the associated authorisations to place into service (often referred to as ‘cross acceptance’).

The fully populated, complete RDD for the UK is expected to be available on the ERA’s website in October 2013. In the meantime, RSSB has published a spreadsheet which gives a list of Railway Group Standards (RGSs) that meet the criteria for National Technical Rules relevant to the authorisation of rail vehicles on the GB mainline railway system, and therefore which could be included in the RDD.

The spreadsheet has no formal or legal status, but is provided to assist the GB rail industry in identifying relevant RGSs. It has been developed under the supervision of the Industry Standards Coordination Committee. It contains information sorted by ‘RDD parameter’ and by TSI clause.

Spreadsheet of NTRs relevant to the authorisation of rail vehicles

Please contact Caroline du Plessis, head of standards policy on 020 3142 5594 if you require further information.