

CH019

ERTMS Programme Management Review

Independent Reporter (Part C)



Review of Network Rail's capability to manage a national implementation of ERTMS.

28 March 2013

EXECUTIVE SUMMARY

Halcrow Group Limited

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ERTMS Programme Review

1 Executive Summary**1.1 Review Purpose**

Halcrow is employed under the joint Office of Rail Regulation (ORR) and Network Rail (NR) Independent Reporter Part C framework to undertake reviews of Network Rail's performance.

Halcrow has been commissioned to undertake a review of ERTMS Programme according to the mandate CH019 issued on 29 November 2012. This review focuses on Network Rail's capability to deliver the ERTMS programme as set out in its Strategic Business Plan (SBP).

1.2 Review Scope

The overall objective of this review is for the Office of Rail Regulation (ORR) to be confident that Network Rail (NR) is making sufficient progress with leading the ERTMS national programme on behalf of the Great Britain (GB) rail industry (the 'Industry').

This review also builds on the Halcrow Independent Reporter report on the lessons learnt from the pilot trial of ERTMS which was issued on 4 April 2012. This report made 26 recommendations.

This review was split into 3 parts:

- **Part 1** (October - November 2012): Review of Progress: Review of the 16 critical recommendations made in the April 2012 Report. A presentation on these findings was made to ORR and NR in November 2012.
- **Part 2** (January 2013 – February 2013): Review NR's programme management capability to lead a national ERTMS programme.
- **Part 3** (January 2013 – February 2013): Review NR's SBP submission with respect to ERTMS.

This Executive Summary covers Parts 2 and 3. This review has focused only on the Network Rail team and did not include other ERTMS PCB stakeholders or their views on the delivery of the programme.

1.3 Conclusions

Network Rail has a high level approach to developing an integrated national programme team, appropriate programme governance and programme controls. These have evolved over the last few years as the programme has transitioned from the Cambrian EDS, to national development and will need to transition again for national implementation. However, the transition is not complete and will require further formalisation and optimisation over the next 6 months.

The existing workstreams, NR's ERTMS Framework suppliers and discussions with operators (ROSCOs, FOCs) have progressed well over the last 12 months. Many of the key outputs from the current work are due to complete by the end of March 2013 which will fundamentally inform the overall programme. After this there will be a need to prioritise the activity to achieve first implementation of ERTMS to the SBP commissioning dates.

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The programme team has developed and agreed a high level Campaign Plan showing programme milestones. However, these are a combination of current work, dependant programmes and target commissioning dates and there is no evidence which demonstrates the relationship between these activities and whether the timeframes are realistic. Therefore, it is not possible to conclude that the ERTMS GWML or ECML dates are realistically achievable. However, this is recognised by the programme team and this is a key piece of work which Network Rail has begun to evaluate.

Many of the key decisions for the programme will need to be made over the next 6 months based on evidence from the existing workstreams. This will require formalised governance and appropriate tools to evaluate and specify requirements, especially where stakeholder requirements conflict (for example between Routes or between infrastructure and operators).

The Strategic Business Plan uses ERTMS commissioning dates as the driver for framing the total costs required. These underlying unit cost and volume estimates are based on known assumptions (which are as developed as they could be for this stage of a programme) but these could be significantly different from actual costs and volumes. Network Rail has identified risks to SBP funding and there are maintenance and renewal impacts if ERTMS is delayed on the ECML. Therefore, the ORR should undertake high level sensitivity analysis on the ERTMS SBP submission to understand the best, worse and likely outturn funding requirements.

We believe that the programme now needs to shift from development to delivery and prioritise the critical activities which are required to deliver ERTMS within the current planned ERTMS commissioning date. We would expect that by September, there is a developed and active programme governance structure supported by appropriate tools and controls.

The success of ERTMS will also depend on the ability of the programme team to fully translate high level operational concepts into agreed requirements and then accurate technical specifications to enable the supply industry to deliver products which minimise industry and interface risks.

Overall, the ERTMS programme will require clear leadership across the industry and within each organisation, combined with enthusiasm and collaboration to deliver the challenging programme objectives within appropriate funding.

1.4 Recommendations

In our April 2012 report we made 26 recommendations and their current status is:

- **In Progress (16)** – Progress has started on closing the recommendation.
- **Intended, but Not Started (6)** – The Industry intends to undertake the recommendation but it has not yet started because it is not necessary at this stage.
- **Closed (4)** – The recommendation is closed.

Of the 22 open recommendations the majority of these are still valid in the context of this review and therefore remain active recommendations which should be monitored.

The core recommendations arising from this review are:

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- **Finalise the Programme Governance** – Network Rail should finalise the programme level governance arrangements to ensure that effective cross Industry decisions can be made.
- **Establish an ERTMS Programme (Campaign Plan)** – Network Rail should develop an ERTMS Programme (which could be the Campaign Plan) to show the key activities required to deliver ERTMS within the timeframes stated in the SBP. This should be supported by a clear scope of work for each sub-project and a realistic assessment of the time to complete.
- **Document the Programme Procurement Strategy** – Network Rail should capture the Industry decisions as to how and why the current procurement approach has been agreed. This should specifically cover the infrastructure and train procurements and demonstrate that the approach is likely to be efficient. This should be considered as a document which demonstrates to any third-party (eg OGC) that all procurement options have been evaluated and captures the reasons for the decisions taken.
- **Update Programme Sponsorship** – Network Rail should provide additional SBP evidence and clarifications to ensure there is common understanding of the ERTMS programme objectives and the scope of the ERTMS funding. This includes refreshing industry costs and the business case to inform any strategic decisions.

The table below lists all the recommendations arising from this review. The majority of these relate to activities to be undertaken by Network Rail over the next 6 months. These have been grouped under each of the core recommendations.

Ref	Recommendation	Timing
	Programme Governance	
1	Develop a Programme Management Strategy.	June 2013
2	Agree PCB ToR and RACI.	June 2013
3	Review frequency of PCB meetings in line with volume of decisions to be made.	June 2013
4	Implement a formal PCB change control process for the RACI, Campaign Plan and Remits.	June 2013
5	Achieve external sponsorship at the Rail Delivery Group (or relevant sub-group).	June 2013
6	Complete and formalise Executive / Board level engagement.	June 2013
7	Establish a set of Programme Gateways.	June 2013
8	Ensure appropriate gateways are implemented for TRLs and GRIP and ensure that these are agreed by the wider business.	June 2013
9	Review all PCB member governance arrangements in terms of timings of key meetings and decide whether these should be included in a programme wide meeting plan.	June 2013

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Ref	Recommendation	Timing
10	Complete, document and integrate the internal NR governance arrangement including the timeframes of key meetings and the co-ordination between meetings into a single plan.	June 2013
11	Establish appropriate organisation diagram(s) which demonstrate reporting lines, taking into account existing governance structures (eg IP, Route, Sponsorship reporting lines).	September 2013
	Programme (Campaign Plan)	
12	Evaluate the likely resource mix required to deliver the forecast work over the next 3 – 5 years. This should be used to inform SBP funding of the programme team.	15 April 2013
13	Provide an updated Campaign Plan and Programme Schedule to inform Draft/Final Determination to demonstrate the level of confidence in the SBP delivery milestones.	June 2013
14	Complete the Campaign Plan Remits.	June 2013
15	Develop high level bottom-up schedules for each Remit to show what activities are required and provide the time estimation basis.	June 2013
16	Provide a top-down estimate of timeframes from existing experience to validate bottom-up schedules.	June 2013
17	Update the Campaign Plan and Programme Schedule to marry with Final Determination and the NR Delivery Plan. (The Delivery Plan should be the agreed baseline).	September 2013
18	NR (and the industry) should develop sufficiently detailed sub-programmes for addressing GPRS, major station operations and other key technical risks to validate the Campaign Plan.	September 2013
	Programme Procurement Strategy	
19	Review and assess the Cambrian train fitment contract to provide a template for the basis of negotiation.	April 2013
20	Comprehensively document the train procurement strategy and ensure that this demonstrates that all potential options have been evaluated and the rationale for each decision.	June 2013
21	Consideration and agreement with ORR of whether a mechanism is needed to fund TOC train fitment, where any franchise is not funded to do this.	June 2013
22	Complete the development of a Programme Procurement Strategy.	September 2013
23	Review whether contracting infrastructure fitment under the ERTMS Framework (ie Phase 3) is likely to lead to an effective and efficient solution for the Routes.	December 2013

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Ref	Recommendation	Timing
	Programme Sponsorship	
24	The 'ERTMS SBP data and charts' spreadsheet does not provide clarity on how the costs were derived. Network Rail should ensure transparency in all cost estimations to enable third parties to understand how the costs are calculated.	15 April 2013
25	Some of the identified risks in the SBP do not have a cost attached to them. Network Rail should make available the assumptions and calculations to inform pricing for CP5.	15 April 2013
26	The structure of the SBP does not enable a quick picture of ERTMS to be established. It is recommended that all ERTMS references are extracted into a single document for the purposes of validation and consistency through CP5 Periodic Review process.	15 April 2013
27	The ORR should undertake high level sensitivities of the overall cost profile based on changes to costs and volumes, for example due to delay in train or infrastructure fitment.	June 2013
28	The ORR should review Network Rail's identified risks and consider what policy should apply to risks and whether any these should be part of the base case costs.	June 2013
29	The Business Case should be updated with the latest cost, risk and programme information.	June 2013
30	Produce a summary document setting out the delivery milestones for the ECML, GWML and MML based on the SBP (assuming this is the correct reference).	June 2013
31	Update all internal documents to support this (eg Map and Campaign Plan, Communications Plan etc).	June 2013
32	Produce a publishable summary of the ERTMS delivery milestones after Final Determination and ahead of the NR CP5 Delivery Plan. This can be used by all relevant stakeholders and in external communications (eg websites, briefing notes).	December 2013

Table 1.1: Recommendations