OFFICE OF RAIL REGULATION

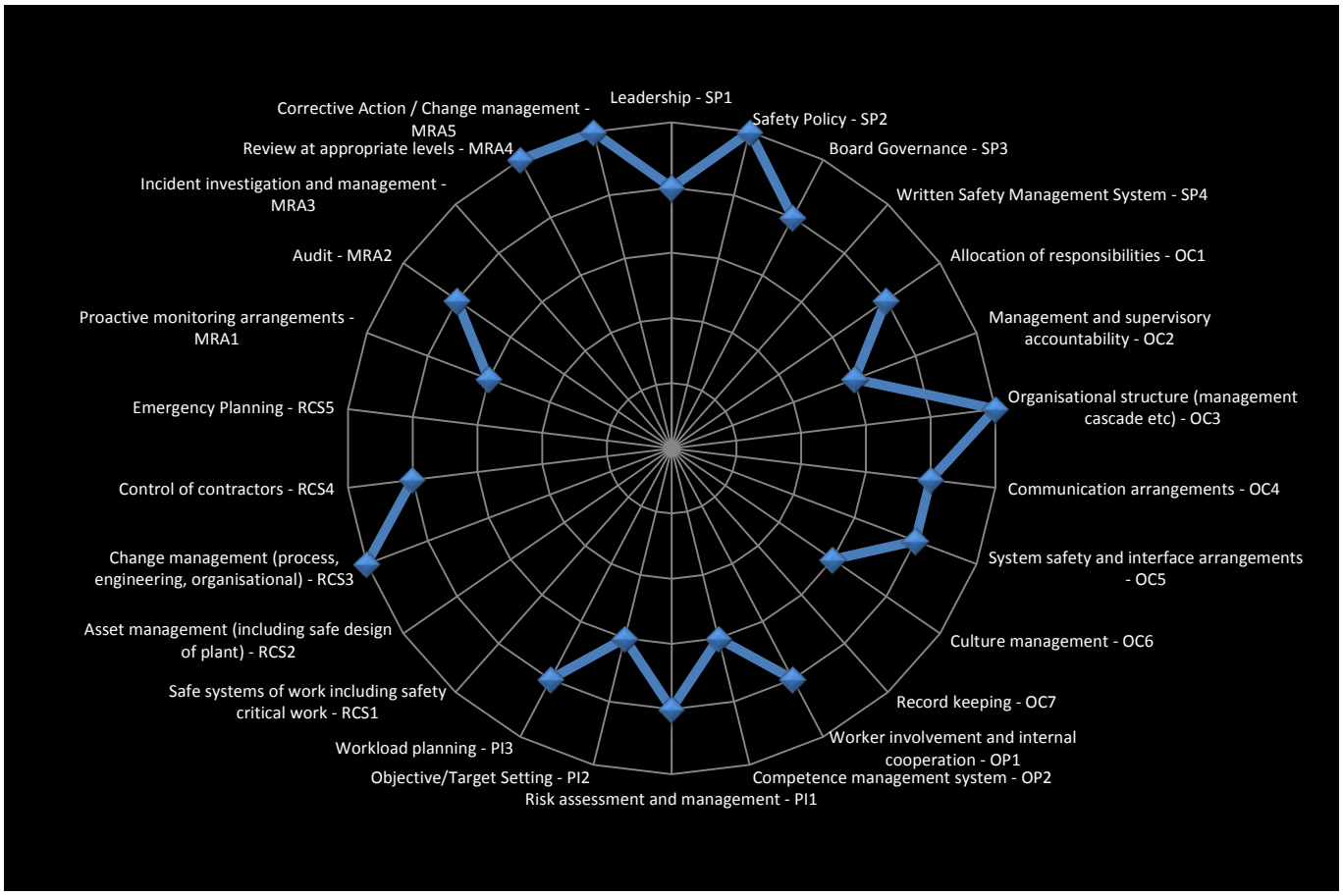
Operating Strategy Programme - Management Case Review

RM3 Evaluation of the capability of Network Rail to deliver its Operating Strategy Programme

September 2012

Contents

Executive Summary



This review used the ORR's Railway Management Maturity Model (RM3) to investigate Network Rail's capability to manage the delivery of the Operating Strategy programme effectively and efficiently as part of ORR's PR13 deliberations.

We interviewed members of the project team and reviewed supporting documentation.

A summary of our findings is shown in the radar chart above. We found areas where we considered there was the potential to deliver excellence, in particular, governance, monitoring and review. Other areas were considered to be predictable or standardised with scope for improvement. We consider that if performance in the excellent areas is maintained and improvements made in the other areas then the systems are capable of allowing successful delivery of the operating strategy programme. We also consider that the way the programme has been planned and the systems developed offers Network Rail examples of excellence which should be shared through the organisation.

1. Introduction

1.1 Aim of this evaluation

The purpose of this work is to support PR13 deliberations by providing assurance that the management case put forward by Network Rail is realistic and that the organisation has the capability to manage the delivery of the Operating Strategy programme effectively and efficiently.

1.2 Overview of the Operating Strategy Programme.

The purpose of this programme is to deliver increased efficiency and effectiveness of its operations control function. The key highlight of the programme is the creation of 14 operating centres that manage all railway operations activity. This will result in c£1,587m (NPV) of efficiency improvement from:

- Enhanced operating efficiency (i.e. more SEU's per signaller);
- Enhanced recovery following disruption;
- Reduction in duplication;
- Greater interworking between Network Rail and Operators.
- Reduced operating staffing levels;
- Reduced maintenance requirements;
- Greater operational resilience; and
- Reduced impact of industrial action.

The Operating Strategy programme (OS) was constructed taking into account signalling renewals and upgrades. It should be noted that the overall programme is not dependent on delivery of the signalling work. The separate implementation of the Route Operating Centres and the associated improvement in traffic management will yield benefits. Delivery of the signalling upgrades/renewals will impact on the size and timing of the expected benefits. The business case provided to ORR represents the expected benefits based on the current upgrade/renewals plan.

The revised OS was developed at the request of the Managing Director, Operations. The remit was to revolutionise the way signalling operations are delivered and take advantage of the improvements to functionality that ETCS offers.

The programme has an anticipated completion date of 2029.

1.3 Overview of RM3

According to the EFQM Excellence Model 2009, excellence relating to management systems can be achieved by:

“providing visionary and inspirational leadership, coupled with constancy and consistency of purpose, delivered through the operation of interdependent and interrelated organisational management systems which maximise the contribution of employees through their development and involvement to deliver results that exceed stakeholder expectation and create sustainable customer value.”

These core values are consistent with a number of internationally recognised management standards and are features of high reliability organisations.

We recognise that theories on management systems cannot cover all of the uncertainties and interactions presented by the operation of a business. However, we can gain a good understanding of an organisation by assessing certain commonly recognised aspects based on these sound management systems. These elements are as follows:

- Governance, policy and leadership;
- Organising for delivery of control and communication;
- Co-operation, competence and development of employees at all levels;
- Planning and implementing risk based controls through co-ordinated management arrangements; and
- Monitoring, review and audit to ensure effective governance, management and supervision.

These main elements are then subdivided into smaller directed focus areas. The relationship of these 26 elements can be seen in figure 1.

Figure 1 – Overview of the Railway Management Maturity elements.

We cannot efficiently identify, inspect and evaluate all of these aspects of a management system through interviews alone. Therefore, we also used information supplied by Network Rail to build up a picture of the project's governance and management system.

The model helps to guide our decision on whether an organisation's safety management system (SMS) can deliver excellence in risk control. The TEMS User Manual provides guidance on how we should plan inspections (both general inspections and specific SMS inspections) to gather evidence.

It is for the inspection team to form an opinion on whether the criteria and sub–criteria are being met. The criteria are relatively general and are used as a framework, taking account of the degree to which the criteria are established as normal in the organisation.

Many models include a definition of the process needed to meet the criteria. We believe that the duty holder is the best person to decide the process by which a goal is met. However, this model does allow us to judge whether the organisation is progressing towards excellence, using a five-point maturity scale.

The levels of maturity within the subcriteria are based on our experience with a range of duty holders. We will review the subcriteria as our experience increases.

The level an organisation reaches on the 5 point scale was judged by the account holder based on the evidence collected.

If there are mixed levels of achievement across objectives, the assessment should be based on what the majority of the evidence suggests, but with a comment which identifies areas for improvement.

Further detail on the elements and evaluation criteria are provided in the RM3 manual, available on the ORR website. (Electronic link is: Railway Management Maturity Model (RM3) (PDF 413 Kb).)

1.4 Scope, methodology and limitations of the evaluation

The purpose of the evaluation is to assess Network Rail's capability to deliver the OS as put forward to ORR. In seeking funding from ORR, NR provided a business case. These included consideration of the following areas:

- Strategic;
- Economic;
- Commercial; and
- Management.

The remit of the work is to evaluate the assertions put forward in the management case. The original work put forward was reviewed within ORR and concluded that:

"there are no documented roles and responsibilities; governance arrangements are not spelled out; there is no single programme plan setting out delivery milestones; and the approach to risk management is not set out"

The RM3 evaluation was intended to provide ORR with greater transparency on the work of the programme team and the capability of the programme to deliver the improvements envisaged by the business case.

In conducting this review we interviewed the senior project management team responsible for delivering the programme. These were:

- Ian Chapman
- Ian Barnes
- Shona Elkin
- Terry Thatcher

The programme is at a key stage of its development in that it is transferring from feasibility/scoping and planning to implementation. Therefore it was only possible to evaluate the capability of the arrangements without full verification. Further reviews should be undertaken by ORR in twelve to eighteen months to establish the degree to which the arrangements have been implemented. For further assurance, ORR should also request copies of any review undertaken post completion of the Three Bridge's Route Operating Centre.

We established early in the interview process that the programme had significantly "derisked" its activities by separating out the signalling renewals programme from the delivery of the operating strategy and in particular the traffic management programme. The signalling renewals programme is

being reviewed as part of ORR's reporter programme. Therefore this aspect did not form part of the review.

2. RM3 Evaluation

The appended table presents an evaluation of Network Rail's management capability to deliver the traffic management aspects of the OS. It covers 20 elements of the 26 elements of RM3. Those areas not included in the assessment were considered either not relevant (for example emergency planning) or not appropriate at this stage of the programme (for example asset management). Appendix 1 details the distribution of scores for each element.

The following paragraphs summarise key observations from our inspection, presented against the five main elements:

2.1 Policy Leadership and Governance

We considered this area to be strong. There were clear governance arrangements in place and these were kept under regular review.

The OS was developed by the core team in consultation with a wide range of stakeholders, including those who will be responsible for delivering it. The strategy is communicated using a wide range of media, developed with the intended audience in mind. Given the devolution of the routes the policy has an even greater significance for the success of the project. It needs to form the focal point for the programme and will heavily influence how each of the routes interface with the programme. This will especially be the case for those routes that are not represented on the steering group. All of these issues were well recognised by the management team and captured within the planning objectives for each role, together with a clear demonstration of how these objectives influenced other roles. It demonstrated that the policy was well embedded and provided the vision that all understood and were working towards. The policy was based on sound evidence of what could be achieved and was considered to be credible, if stretching.

The programme has recently reviewed its governance arrangements. Details of the structure and remit were provided. There are a number of governance functions within the programme structure:

- NR Board;
- Strategic Oversight Group;
- Programme Board;
- Executive Steering Group;
- GRIP process; and
- Specific project reporting arrangements.

Figure 2 provides an overview of the key governance functions.

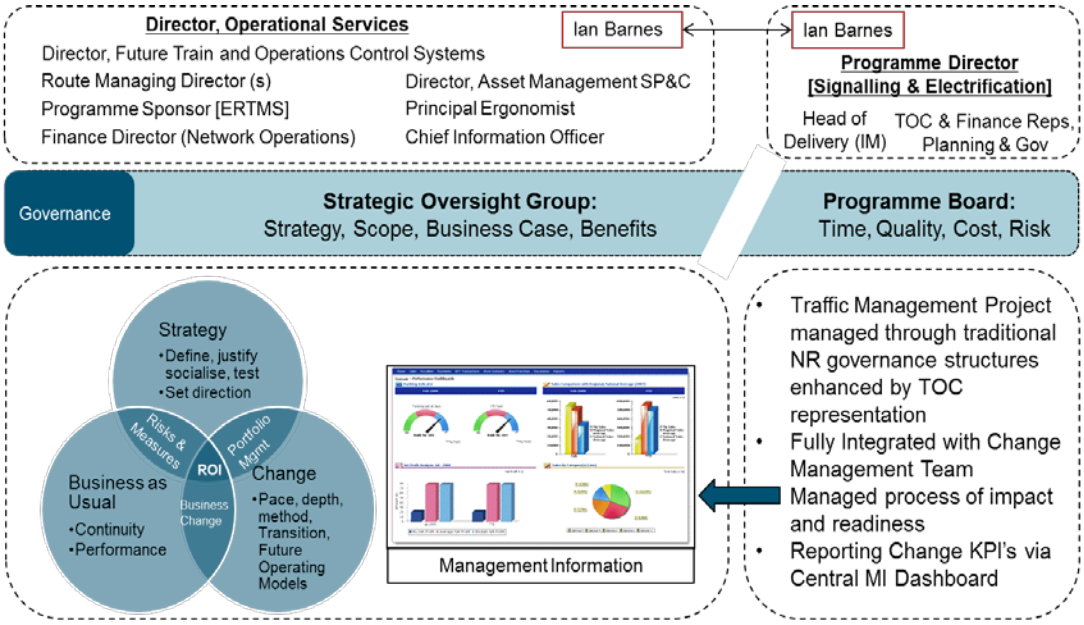


Figure 2 – Overview of the draft governance structure and function provided to ORR pre-validation.

NR Board

This was not specifically reviewed in this project. The Network Rail board have overall responsibility for delivery of efficiency improvement. The operating strategy programme provides a key deliverable and should be subject to scrutiny at this level. The Managing Director of Railway Operations and the Director of Investment Projects are board members and also chair the next layer of the governance structure.

Programme Board

This group is chaired by the Programme Director of Investment Projects, a separate business unit within Network Rail. The board consists of a number of Network Rail senior managers representing a broad portfolio of the business. It also includes representatives from the suppliers and train operators. NR accepted that a representative from the freight industry should be invited onto the board.

The focus of this forum is on project quality, deadlines and costs. This forum is also responsible for the programme risk register (discussed later in the report).

Executive Steering Group /Strategic Oversight Group

This group is chaired by the Managing Director of Railway Operations. The focus of the group is on strategy, scope, benefits and the overall business case. The group was in the process of agreeing revised terms of reference to reflect the change of programme emphasis.

This group was originally known as the National Operating Strategy Steering Group (NOSSG). This group provided access to a wide range of expertise and offered the opportunity for the programme to receive effective scrutiny and guidance.

As with NOSSG the new group includes representatives from: senior level route directors (the principal customer and maintainer), asset management (as the asset sponsor), programme implementation and specialist strategic level insight on ergonomics, engineering and operational standards. The committee is currently chaired by Robin Gisby, a Network Rail Board member and MD of Network Operations. There is no representation from train or freight operators on this group. Their involvement in the project is discussed later in this report.

The committee has agreed Terms of Reference that detail the role of the members. It will meet periodically. Sufficient authority is granted to the members to enable the project team to facilitate implementation of the operating programme and strategy. Due to timescales we have been unable to have sight of these terms of reference so are unable to comment on the adequacy of the proposed oversight.

The steering group is informed by a number of specific reports. These are:

- Project/programme plans for each route operating centre with indications of key milestones and route utilisation;
- Progressive assurance documents; and
- Risk Register.

GRIP (Governance for Rail Investment Projects) Process

The GRIP process is an eight stage/gated project management tool which guides projects from output definition through to design, implementation and operation.

The overall approach is product rather than process driven, and within each stage an agreed set of products are delivered. The stages are:

- Output definition;
- Feasibility;
- Option selection;
- Single option development;
- Detailed design;
- Construction test and commission;
- Scheme hand back;
- Project close out; and
- Formal stage gate reviews are held at varying points within the GRIP lifecycle.

The approach is based on best practice within industries that undertake major infrastructure projects and practice recommended by the major professional bodies. These include the Office of Government Commerce (OGC), the Association of Project Management (APM) and the Chartered Institute of Building (CIOB).

The GRIP process itself has a defined policy and standard. These were not subject to this review as they have been previously evaluated.

2.2 Securing co-operation, competence and development of employees

The OS will involve considerable changes to the way in which signalling staff in Network rail work and also to where they are located. This has the potential to create significant industrial relations problems if the aims, purpose and execution of the project are not communicated clearly, at the right time and at the right level.

Considerable effort was put into early consultation with RMT and ASLEF and union buy-in was achieved. When the strategy was announced on Connect the message was clear as was the need for consultation and that employee views would be considered throughout the project. The aim was to receive and act upon employee feedback and there was evidence that this was occurring.

We were also informed of the proposed procedures for developing the HMI which will closely involve the staff who will be using the interface.

It was recognised that there needs to be a clear demarcation between steering and driving the project forward and carrying out the work to deliver the works associated with the ROC developments themselves. This has led to clear boundaries between Network Ops and IP who will be carrying out the construction activities. Going forward the communication between Network Ops and IP will need to be good to ensure that progress is understood and monitored by both parties.

The experience and qualifications of the interviewees appeared to be a good mix to facilitate successful delivery of the strategy. There was however no evidence that this was the result of a formal selection process.

There are plans for a competence management system to be brought in to ensure that competence of signallers is managed, we were not able to have sight of the detailed proposals so were not able to comment on the potential effectiveness of this system. We recommend that the competence management system for signal staff is the subject of an ORR inspection at an early stage of operation.

2.3 Planning and Implementation

As mentioned previously, the programme is in the process of transforming from conception to mobilisation. The following elements were

Risk Management

This area represents a key aspect of the programme. It is an ambitious programme that provides the opportunity to transform the way real time operations are managed and provide a base on which future improvements can be built. The programme has a large number of dependencies and consequent uncertainties. It was clear that a rigorous approach had been adopted to the identification of uncertainty. Application of “Hazard and Operability” studies (HAZOPs) provided assurance to us that a systematic approach was undertaken. The risk register, created as an output of this work forms a key management tool and the risks are cascaded from programme to project level. These are reviewed as part of the periodic review sessions at each level. Given the high range of uncertainty and the amount of data available, it would be considered good practice to undertake some form of sensitivity analysis or Monte Carlo simulation to ensure that the risks are being managed as efficiently and effectively as possible.

Target/Objective Setting

Team, Function and Project targets cascade from the overall programme plan. Each ROC project has defined timescales and targets. These are kept under review and developed in detail for each phase.

The organisation uses a matrix to coordinate the objectives for the key members of the team and identify cross function dependencies. Each objective has two attainment levels, good and outstanding. We considered this to be an effective way of creating both SMART and stretch objectives. Further improvement to the matrix could be made by mapping the objectives through to specific project areas at different levels.

The approach ensured that the organisation was focussed on delivery of the strategy in a way that was consistent with the overall policy and ethos.

Contractor Management

At present the project is in an early stage of implementation and contractor control has been limited to selection and management of three contractors involved in the supply and delivery of demonstrations of operability on Thameslink. The process for selection of these contractors included demonstration of a past record of delivery and examples of collaborative working were required as part of the process. We saw evidence of the scoring system used for contractor selection which took into account safety and economic indicators.

Delivery of the initial Thameslink product is not scheduled until September 2012, however the project team are managing delivery through deployment of project managers and regular reporting to the steering group. Contractor management will be a key part of successful delivery of the programme long-term and should be kept under review to ensure it is operating correctly.

2.4 Monitoring, audit and review

An essential part of ensuring successful delivery of the operating strategy is measuring progress and effectiveness and having a feedback loop in place to identify and act if parts of the delivery of the strategy are falling behind or not being delivered to plan. Monitoring, audit and review form this feedback loop within the management system and are an essential part of ensuring delivery of the operating strategy.

There is a weekly internal monitoring meeting and Network Operations ERM monitors on a periodic (4-weekly) basis. Some of the metrics for monitoring have been developed in conjunction with ORR and include monitoring the delivery of benefits from the operating strategy as well as monitoring progress with implementation. Weekly meetings are also held with contractors with project managers cycling round the current 3 supplier's sites. The ROC plans include deadlines for completion of stages of implementation and these will be monitored to ensure they are met or deviations are identified.

Audit is carried out at a number of levels within the operating strategy. Suppliers have been subject to audit prior to engagement. Implementation of GRIP for change within the operating strategy project was audited by NR business change organisation in 2011and the buildings section was audited by insurance and Patrick Butcher's audit team. These audits included emergency response and operational resilience assessment. Learning the lessons from within and outwith the current project is another essential part of delivering successfully and considerable effort has been put into making sure lessons are identified and mitigated against. Previous projects have been reviewed and lessons learned have been documented and included in the QRA for this project. The project team and steering group have actively sought to identify lessons learnt from outside the UK and outside the rail industry where these can assist in successful delivery e.g. similar schemes in Switzerland and Portugal.

The project team have looked at the ‘bigger picture by identifying common failures in business change management and used these to develop governance arrangements and have actively sought out documentation on lessons learned (e.g. from IDAS and NMC) and have developed detailed mitigation to cover the issues which led to the failures in these reports.

Contractors are actively encouraged to share lessons learnt on this and elsewhere within their operations. Lessons learnt from elsewhere in NR include lessons on savings made in other schemes e.g. Salisbury/Exeter.

Findings from audits and monitoring are reviewed by the steering group as part of the governance arrangement and acted upon as appropriate. A good example of this is the steering group TOR review which led to changes to the structure of the steering group giving greater clarity and stronger links to ETCS.

3. Conclusion

The purpose of this work is to support PR13 deliberations by providing assurance that the management case put forward by Network Rail is realistic and that the organisation has the capability to manage the delivery of the Operating Strategy programme effectively and efficiently.

The programme is currently at the stage of moving from planning to first implementation and as such there was little opportunity for us to evaluate delivery by the systems in place so our conclusions relate to the potential for the management systems as seen and described to enable the project team to deliver the programme.

The RM3 assessment of the systems highlighted several areas where we believe there is the potential for excellence, particularly in the areas of governance, monitoring and review. Other areas were considered to be predictable and some standardised. There is scope to improve in the standardised and predictable areas. Overall our review suggests that if performance in the excellent areas is maintained and improvements made in the other areas then the systems are capable of allowing successful delivery of the Operating Strategy programme. We also consider that the way the programme has been planned and the systems developed offers Network Rail examples of excellence which should be shared through the organisation.

Appendix 1 – RM3 evaluation summary table

Element	Sub-element	Summary of evidence	Assessment Level
Policy, governance and leadership	Leadership SP1	• Leaders were at all levels including route level leaders (sponsors). • Leaders interviewed were credible and were proactive in developing ideas for improvement. • Overall leadership is from strategic team steering group which has now become the strategic oversight group. • The overall vision is of what railway will look like in 15-20 years and how they strategy can influence this. The evidence suggests that leaders are found at all levels of the organisation, they are credible and open to ideas for change. Leadership messages are consistent with improving health and safety. This meets the evidence for predictable.	Predictable - 4
	Safety policy SP2	• Project based on how to operate trains, not initially about cost savings. • Recognised that project has potential to improve other business areas. The policy underpinning the operational strategy is in itself a challenge to achieve better business performance and is clear that managing health and safety risks is not a separate function to managing business risks. This meets the descriptor for excellence.	Excellent - 5

	Board Governance SP3	• Detailed governance arrangements for project, include recognition of health and safety risks as well as business risks. Governance has been designed to offer a strong, independent challenge and review role recognising the overall business risk to Network Rail hence meeting the descriptor for predictable.	Predictable - 4
Securing cooperation, competence and development of employees at all levels	Worker involvement and internal co-operation OP1	• Project has made a point of getting unions involved. • HMI consultation takes account of users views. • Route teams involved in planning changes. • Clear demarkation between developing and driving programme forward (Network Ops steering group) and construction (IP). • Exploiting synergies with ETCS. There is a clear policy to include employees and contractors at all levels. Considerable effort has been made to ensure that employees understand the reasons for the business change. Employees have been involved in deciding on the implementation of changes through consultation and there is evidence that employee contributions are listened to and acted upon. The evidence meets the predictable level.	Predictable - 4

	Competence management system OP2	• The staff chosen to run the project hold the relevant qualifications and experience to manage delivery of the objectives but it was not clear if this was part of a competence management system. • Plans are in place to instigate a competence management system for signalling staff. There was evidence that a competence management system is being designed to ensure competence of staff however as this is not yet in place it is not possible to comment on mentoring, recruitment, selection etc hence the available evidence falls into the standardised descriptor.	Standardised -3
Organising for control and communication	Allocation of responsibilities OC1	• Responsibilities within the Network Ops team were clear between the interviewees. These included safety responsibilities and all interviewed were clear as to how their activities affect the organisation. The evidence was that responsibilities were clear, allocated, accepted and clearly related to delivery of the operations strategy. Individuals interviewed demonstrated understanding of how their objectives affected delivery. This meets the evidence criteria for predictable.	Predictable - 4
	Management and supervisory accountability OC2	• Some staff are managed on a day to day basis by people other than their direct line manager, this allows collaborative working between organisations and is encouraged but we were not clear of the systems in place to ensure accountability of	Standardised -3

		these staff, this has not been seen but has the potential to improve the maturity level when implemented. Evidence was that appraisal systems were in place to identify failings and make corrections. Currently we consider the evidence to support a standardised approach.	
	Organisational structure OC3	• Organisation recognises business as well as safety objectives. • Responsibilities from top to bottom are in line with one another and a review of the organisational structure against business objectives has been carried out. The evidence that reviews of the structure against business objectives have already taken place meets the descriptor for excellence in this area.	Excellent - 5
	Internal communication arrangements OC4	• Ethos of programme is one of partnership working. • Clear communication of purpose of programme from start (e.g. Connect). • Consultation with unions included actively seeking engagement and acting on feedback. • A number of fora set up to communicate with contractors and plans to encourage staff involvement in developing interfaces. There are effective methods in place to gather feedback from employees and others e.g. contractors and evidence that this feedback is acted upon. Meeting structures and frequencies ensure that individuals have the right information to allow them to make decisions. This meets	Predictable - 4

		the descriptor for predictable.	
	System safety and interface issues OC5	• Intention to sever link between project and signal renewals at route levels so control layers operate independently of signalling hardware and changes to hardware are independent of how they are controlled. • Taken advice from Swiss and Portuguese experiences. • Team member checking on changes to timings of new works needed because of asset/route priority changes. • Still to formalise links with FOCs. The evidence indicated that interfaces are systematically identified, procedures are in place to control shared risks, objectives are written, regular discussions are held with other organisations, information is shared at working levels (HMI design) and that communication arrangements are adequate. There are also arrangements for internal information sharing to promote effective reviews and continual improvement. This meets the descriptor for predictable however there is also evidence of excellence in looking abroad for system safety information but as there is still a sector to be included (freight) we decided that predictable was more appropriate at this stage.	Predictable - 4
	Organisational culture OC6	• Have identified difference in culture between different routes. Currently planning baseline survey of culture but not yet sure of how to do this.	Standardised - 3

		At present development of organisational culture is at an early stage. The recognition of cultural differences and the decision to involve employees in assessing culture places the current position as standardised.	
Planning and implementing risk controls	Risk assessment and management PI1	• Systematic approach to risk assessment, HAZOP approach to QRA built into GRIP process for change management. • Risk register regularly reviewed Evidence showed a systematic approach to risk control with the aim of removing risk at source. Reviews clearly formed part of the risk assessment process. The evidence is clearly within the descriptor for predictable.	Predictable - 4
	Objective/target setting PI2	• Objectives and targets for programme completion and health and safety are set. We did not explore in detail individual or project level target setting and achievement which are managed by the GRIP process. We have some assurance that achievement will receive scrutiny but until this is evidenced the level is considered standardised.	Standardised - 3
	Workload planning PI3	• Work was planned and broken down into ROC plans to assist planning and completion. • Completion regularly reviewed by core team which informs NOERM informs benefits tracking and covers progression. This criterion was applied to the approach to delivering the work	Predictable - 4

		planned under the operations strategy. Work has been planned in advance and reviews are carried out at route, project and steering group levels. We considered this evidence met the descriptor for predictable.	
	Change management RCS3	• Developing change blueprints for routes, involved route staff and employees in development. • RACID is detailed and includes clear responsibilities for consultation and decision making to ensure that all aspects of the changes are managed. • GRIP process used to structure change. Obtained information from NATS on good practice for HMI. • Ergonomists involved at all stages of development and shared principles developed. The evidence is that there is an understanding that change affects other areas of business and demonstrates that business risk is linked with health and safety risk which meets the descriptor for excellence.	Excellent - 5
	Control of contractors RCS4	• Contractor control process as explained was systematic and included use of previous performance in UK and elsewhere as part of selection process. The evidence met the descriptor for predictable.	Predictable - 4

Monitoring, audit and review	Proactive monitoring arrangements MRA1	• Some developed in conjunction with ORR. • Weekly internal monitoring meeting. • Monitoring includes benefits. Monitors are identified in the risk assessment process and monitoring is consistent across the project. We have no evidence of whether monitoring arrangements are specifically targeted at essential and vulnerable systems so the evidence meets the descriptor for standardised.	Standardised - 3
	Audit MRA2	• Audit plan in place, includes business change audit, business risk audit, operational resilience audit and specific topic audit of e.g. emergency response, operational resilience. Audit activities are planned and prioritised and carried out by competent auditors meeting the descriptor for predictable.	Predictable - 4
	Management review MRA4	• Findings from audits and monitoring reviewed by steering group and acted upon. • Have learnt from experience in other countries, visits accompanied by steering group members. • Good example of steering group TOR review leading to greater clarity of structure and licks to ETCS. The structure of the project team and steering group have been designed to ensure that performance is reviewed and that these reviews include lessons from other organisations and industries (see also below). The evidence meets the evidence for	Excellent - 5

		excellence.	
	Corrective action MRA5	• Previous projects reviewed and lessons learned documented and included in QRA for this project. Also learned from other areas of business change and travelled to other European countries to learn lessons from similar projects. • Contractors encouraged to share lessons learnt. Lessons learnt from elsewhere in NR include lessons on savings made in other schemes. • Actively sought out documentation on lessons learned (e.g. from IDAS and NMC) and have developed detailed mitigation to cover the issues which led to the failures in these reports. • Have considered bigger picture by looking at common failures in business change which have been included in governance and review structure. There is evidence of actively seeking to learn from lessons both within the rail industry, outside the rail industry and outside of theUK. This meets the descriptor for excellence.	Excellent - 5

Appendix 2 Information received from Network Rail

	Document	Ref	Ver	Date	Comments
1	Initial Industry Plan			Sep-11	Ref pages 56 (3.32) and 105 (8.2)
2	PR13 Progressive Assurance Supporting documents:-				
i	Operating Strategy business case			Oct-11	
ii	Operating Strategy Rail Operating Centres & Operational Resilience			Dec-11	
iii	Operating Strategy Electrical Control, Early Traffic Management and acceleration of Three Bridges			Dec-11	
iv	Operating Strategy Signalling Policy modification and operating expenditure calculations			Nov-11	
v	Operating strategy management of communication, business change and industrial relations risk			Jan-12	
vii	Operating strategy traffic management and future roles			Nov-11	
3	Programme Risk register			Nov-11	
4	Programme Risk register			15/03/2012	
5	14 X ROC/location/tracker vol 3			Dec-11	
6	Operating strategy governance arrangements		1.0	?	
7	Governance - Operations Development ppt presentation			11/05/2012	
8	Steering group terms of reference		1.1	?	
9	Progressive Assurance - Traffic Managemnet & future roles ppt presentation			30/11/2011	
10	PR13 Progressive Assurance - Network Operating strategy v3 Overview - Steve Knight ppt presentation		3.0	12/09/2011	
11	Operating strategy governance v 1.2 ppt presentation		1.2	11/05/2012	

12	Progressive Assurance - Operating strategy business case - Steve Knight ppt presentation			13/10/2011	
13	NR Business operating model - Richard Harvey ppt presentation			13/09/2011	
14	TM to be BOM and process v1.0		1.0	10/11/2011	
15	TM as is process definition v1.0		1.0	18/05/2011	
16	Operating strategy Business change RACI v0.3		0.3	17/04/2011	
17	Selection criteria for suppliers email IC to NA 21/06/12			21/06/2012	
18	Summary pre post reviews v 1.0		1.0	09/05/2011	
19	Improving business change deliveryph 3 project risk reviews summary report - ppt presentation			09/06/2011	
20	RM3 audit support info - deliverability reviews email IC to DB 04/07/12			04/07/2012	
	<u>Information referenced but not received</u>				
21	Deliverability review			Jun-12	Competed by NR(IP) Jun 12 - RAG status Amber - not shared with ORR
22	Business operating model (BOM)				diagram only?
23	Traffic Management (BOM)				diagram only?
24	Output from meetings:-				
i	Steering Group				
ii	Programme review				
iii	Workstream review				
iv	Route level reviews				
v	Programme on a page				
vi	programme directors remit				
	<u>Related information/documents</u>				

25	Client requirements - NR to supply chain				
26	procurement & contracting arrangements				
27	Project level risk register				
28	Resourced programme plan				
29	Systems integration plan				