2011 AMEM Assessment

A report for the Office of Rail Regulation and Network Rail
from Asset Management Consulting Limited (AMCL)

Version: 1.1
Date: 06/12/2011
Approval:
Compiled by: Andrew Sharp
Reviewed by: Martin Pilling
Authorised by: Richard Edwards
Version History:
03/10/2011 - Draft A: Draft issue for review
21/11/2011 - Draft B: Draft issue for review
30/11/2011 - Version 1.0: Initial issue
06/12/2011 - Version 1.1: Minor update to initial issue

Executive Summary

This report documents the findings of an independent assessment of Network Rail's Asset Management capability maturity. It evaluates the deliverables from Network Rail's Asset Management Improvement Programme (AMIP) and examines the extent to which the AMIP deliverables are aligned with the requirements defined in the AMCL Asset Management Improvement Roadmap, produced in May 2010. It also compares Network Rail's current Asset Management capability maturity with previous assessments undertaken in 2006 and 2009.

The assessment was undertaken by Asset Management Consulting Limited (AMCL), the Independent Reporter for Asset Management, on behalf of the Office of Rail Regulation (ORR) and Network Rail.

In the last assessment undertaken in 2009, we reported that awareness of the importance of Asset Management to the business had increased and that Network Rail had identified Asset Management as a key enabler to delivering and sustaining Control Period 4 (CP4) outputs for the funds available. We reported that Network Rail's Transformation Programme appeared to reflect this increased recognition and that it would address many of the opportunities identified in the 2006 and 2009 reports, in particular relating to the development of more risk-based and justified Asset Policies and the management of asset information that supports these policies.

After the CP4 determination, the Transformation Programme was refocused on delivering the CP4 commitments and some of the initiatives that were addressing the longer-term Asset Management opportunities were given a lower priority than those looking primarily at CP4. Recognising this, Network Rail and the ORR commissioned AMCL to develop an Asset Management Roadmap with the intention of setting challenging but realistic capability maturity targets for Network Rail's longer-term Asset Management aspirations. Published in May 2010, this Roadmap defined a set of Asset Management capability statements that prioritised activities for Network Rail to deliver for each of the key regulatory milestones as follows:

- June 2011 as the publication date for the ISBP for CP5, which was later renamed the IIP and the date changed to September 2011;

- January 2013 as the publication date for the SBP for CP5; and

- April 2014 as the start of CP5.

The challenges set out in the Roadmap were discussed in a series of workshops and were then accepted by Network Rail who put in place the AMIP to deliver the required capabilities. In developing the AMIP, Network Rail considered the emerging priorities, primarily with regard to the

periodic review process and its plans for devolution, which did not change the overall commitment with regard to achieving the capability maturity targets by the end of CP4, but did result in a plan that differed in scope from the AMCL Roadmap in certain areas. The deliverables from the AMIP and capability maturity targets were then agreed between the Boards of Network Rail and the ORR.

However, it should be emphasised that AMIP was not designed to address all of the 23 capabilities required to achieve asset management best practice. Those not dealt with in AMIP were to be addressed by continuous improvement in Network Rail's asset management 'business as usual'. It is for this reason that we have reported, below, the different levels of progress in completing the 33 AMIP improvement deliverables and achieving the 23 required AMEM best practice capabilities.

The AMIP represents a significant commitment from Network Rail to improve its Asset Management capabilities that sought to meet the challenges set out in the Roadmap and significant resources have been allocated to the programme over the last 18 months.

Of the 33 AMIP deliverables that were planned for the IIP, 28 were delivered broadly within the agreed timescales and five were delivered more than a month behind schedule. The five that were delivered behind schedule are:

- The draft Asset Policies that were scheduled for April 2011 and delivered in June 2011;

- The inspection and maintenance forecasts and RCM strategy that were scheduled for April 2011 and delivered in June 2011 as part of the Asset Policy deliverables;

- The decision support tools that were scheduled for May 2011 and completed in September 2011;

- The Asset Information Strategy that was scheduled for July 2011 and delivered in September 2011; and

- The Data Confidence Assessment Report that was scheduled for April 2011 and delivered in September 2011.

All the AMIP deliverables were assessed as evidence in this AMEM assessment with the exception of the six deliverables that were completed at the end of September 2011 as part of the IIP submission. These will be assessed as part of the planned update to this assessment.

This assessment has utilised AMCL's Asset Management Excellence Model™ (AMEM) to determine Network Rail's current capabilities and the diagram overleaf shows the level of Asset Management maturity demonstrated by Network Rail in both the 2009 assessment and this 2011 assessment and compares this to the target maturity levels defined in the AMCL Roadmap for the IIP.
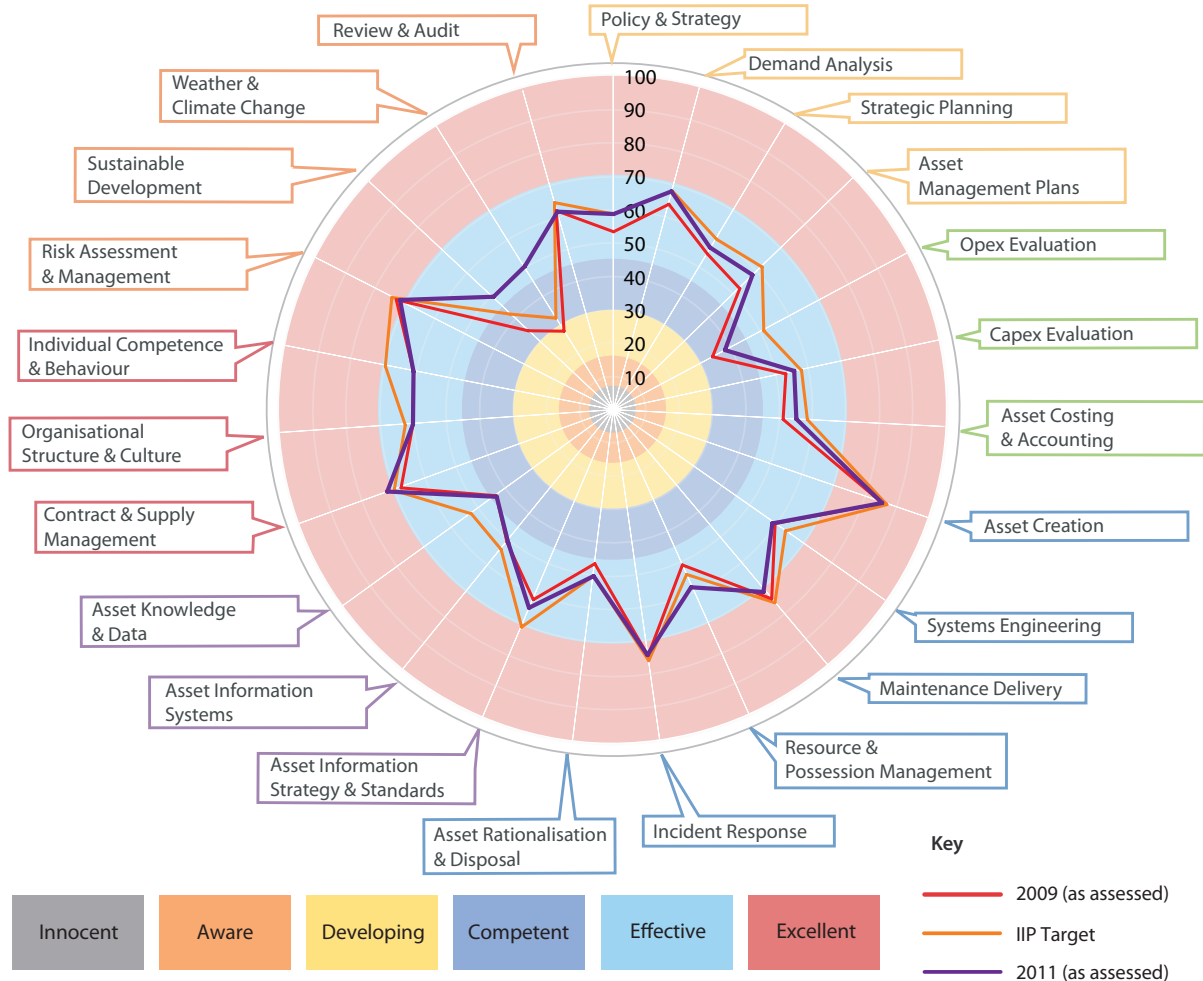
Key
— 2009 (as assessed)
— IIP Target
— 2011 (as assessed)

Innocent | Aware | Developing | Competent | Effective | Excellent

Diagram 1: Network Rail 2011 Assessment Results

This shows that, compared to the 2009 score, Network Rail has:

- increased its score in 13 of the Activities;

- maintained its score in 9 of the Activities;

- fallen back in its score in one Activity.

This also compares Network Rail's June 2011 scores to the September IIP target trajectory from the AMCL Roadmap. This shows that, as at June 2011, Network Rail had not yet achieved the IIP trajectory in 16 of the 23 Activities. This may change when the AMIP deliverables that were completed in September 2011 are included in the update to this assessment.

It should be noted that the Asset Management capabilities vary quite significantly across the asset disciplines and, at an asset discipline level, those that are most developed, most notably Track, have achieved the AMCL Roadmap trajectory for IIP for a greater number of Activities.

It should be noted that the AMEM criteria and question set are updated periodically to reflect emerging best practice in Asset Management and therefore Network Rail has had to develop its capabilities even to maintain its 2009 scores.

There are a number of reasons for Network Rail being behind the AMCL Roadmap trajectory for IIP despite its strong performance in delivering the AMIP deliverables:

- The scope of some of the AMIP deliverables is misaligned with the activities and success criteria defined in the AMCL Roadmap;

- There are a number of Activities where no improvements were defined in the AMIP or the AMCL Roadmap and achievement of trajectory is dependent on Network Rail closing the gap with best practice through other continuous improvement activities;

- The assessment does not include the AMIP deliverables that were completed in September 2011; and

- The assessment examines Network Rail's current capabilities in delivering Asset Management during CP4 as well as the work undertaken by the AMIP which tends to have a longer-term CP5 focus.

Table 1 below also shows the Network Rail 2011 score compared to the September IIP target trajectory from the AMCL Roadmap at the Activity Group level which is consistent with the method that the ORR is using to track progress against the trajectory.

Group	AMCL Roadmap Target for IIP (Sept '11)	Network Rail as assessed June 2011
1 - Asset Management Strategy & Planning	62.0%	60.1%
2 - Whole-life Cost Justification	56.0%	51.0%
3 - Lifecycle Delivery	67.0%	66.3%
4 - Asset Knowledge	59.0%	52.7%
5 - Organisation & People	67.0%	64.0%
6 - Risk & Review	53.0%	58.9%

Table1: Network Rail 2011 Assessment Score by Activity Group

This assessment has also included an evaluation of the extent to which Network Rail complies with the requirements of BSI PAS 55: 2008 Part 1, Specification for the optimized management of physical assets. AMCL is endorsed under the Institute of Asset Management's (IAM) 'PAS 55 Endorsed Assessor' scheme as competent to undertake such evaluations.

We are pleased to confirm that conditional certification to the requirements of PAS 55 is awarded to Network Rail. This certification is conditional on the rectification of two major non-conformances and a number of minor non-conformances prior to the CP5 Strategic Business Plan being issued. The two major non-conformances are summarised as follows:

1. Network Rail must demonstrate a clear 'line of sight' from its Asset Management Policy, Strategy and Route AMPs through to work delivery on the ground.

2. Network Rail must demonstrate that its asset information is fit for the purpose of supporting its Asset Management System decision-making requirements.

Further details on the evidence required to close out these non-conformances and the validity of the conditional certification are provided in the main body of this report.

The key findings of this AMEM assessment by Activity Group are as follows:

Asset Management Strategy & Planning

Network Rail has continued to develop its capabilities in the Asset Management Policy & Strategy and Demand Analysis Activities and has achieved the target level of maturity defined in the AMCL Roadmap. Significant efforts have also been made developing the first generation of Route AMPs which is a vital step in demonstrating the 'line of sight' from the CP4 Delivery Plan and the Asset Policies to the activities actually being delivered on the ground. However, there is insufficient clarity around the strategic framework for how the various processes, documents and models fit together and the Route AMPs themselves are insufficiently developed to demonstrate this 'line of sight'. It is recognised that Network Rail is actively developing this strategic framework. It is understood that current workstreams within the AMIP will address the various disconnects in the strategic planning processes and, by the time the SBP is published, this 'line of sight' will be more clearly demonstrated.

Whole-Life Cost Justification

Asset Policies are used by Network Rail as the primary mechanism to demonstrate that Capex and Opex Evaluations have been undertaken in a consistent manner across the network in order to identify the asset interventions that represent the lowest whole-life costs. Asset Policies for all asset disciplines have been revised in 2011 to follow Network Rail's common '10-stage process' which, in our opinion, represents a good practice process. This assessment has reviewed the CP4 Asset Policies and the draft CP5 Asset Policies as issued in June 2011 and the final version of

these policies as issued in late September 2011 will be reviewed as part of a planned update to this assessment. The asset disciplines have developed the rationale and justification for renewal activities to varying degrees, with Track being the most developed. Decision support tools have been developed which will help to justify the policy interventions, but the use of these tools to justify that the asset interventions represent the lowest whole-life cost is limited at this stage of their development. Additionally, maintenance strategies have not been defined for any of the asset disciplines, and the adoption of risk-based maintenance and inspection varies and has been slow to develop in those asset disciplines that have started to adopt it. The processes used to develop unit costs have developed since the 2009 assessment and represent a significant area of achievement for Network Rail.

Lifecycle Delivery

Network Rail continues to demonstrate a relatively high level of maturity in the Lifecycle Delivery Activities, and the scores for Resource & Possession Management and Asset Rationalisation & Disposal have both achieved the Roadmap target. Asset Creation and Systems Engineering have been assessed at a similar level of maturity as in 2009. The score for Maintenance Delivery has reduced since the 2009 assessment largely as a result of the issues surrounding Structures inspection and examinations. The Maintenance Delivery activities that are managed in-house continue to be an area of relative strength.

Asset Information

Although the increase in the score for Asset Information Strategy & Standards capability is relatively small, the developing Network Rail Asset Information Strategy appears to be comprehensive, forward thinking, and represents a vision of good practice in this field. The Asset Information Strategy is expected to provide the foundation for a step change in Network Rail's asset information capabilities over the next decade. The Asset Information Strategy was not available at the time of this assessment but will be evaluated as part of the planned update to this AMEM assessment. However, due to delays in mobilising the activities in this area, Network Rail is behind the Roadmap trajectory for all three activities in the Asset Information Group although it is possible that some of this gap could have been closed by the work Network Rail carried out between June and September 2011.

Organisation & People

The organisation's ability to embed asset management thinking and practices is being constrained by an approach to developing the Asset Management competences of its people that is not fully formalised and documented. Individual performance expectations, performance reviews, personal objectives and learning and development priorities are not well aligned with Network Rail's asset management objectives. This is compounded by the organisation still developing the culture that is needed to facilitate asset management behaviours and some inconsistencies in the chain of roles

and responsibilities and between functions and departments. As long as these problems are not resolved, it will be difficult to implement policy or strategy effectively or with any certainty that the expected outcomes will be achieved. On a more positive note, Network Rail has continued to develop its capabilities in the Contract and Supply Management Activity and the score for this Activity has exceeded the Roadmap trajectory for the IIP.

Risk & Review

Since the first assessment in 2006, Network Rail has succeeded in embedding its Risk Management Framework and gained enough experience in its implementation to begin the process integrating 'top-down' and 'bottom-up' risk assessment by focusing this framework on organisational objectives which is consistent with the guidance in ISO 31000. The next development of the Assurance Framework should more clearly define the scope of assurance activities within the organisation. Network Rail should take advantage of this revision to clearly link the new Assurance Framework to the Asset Management System. Improvements to Network Rail's Sustainable Development and Weather & Climate Change capabilities are evident, with the publishing of the Corporate Responsibility Report and the full engagement of Network Rail in the national UK climate change effort. This is beginning to translate into tangible strategies and plans.

As Network Rail is behind the AMCL Roadmap trajectory for the IIP in a number of key areas, this is likely to make achieving the 2014 targets more challenging. However, given the strong foundation that has been put in place with the seven work streams in the AMIP, it is our opinion that Network Rail could still achieve the end of CP4 targets providing that it makes the necessary commitments to this important programme of work. Strong leadership from Network Rail's senior team is crucial and this leadership must ensure a constancy of approach to delivery of the AMIP. There have been three different Asset Management initiatives[1] over the last three years which, in our opinion, has impacted on the development of Network Rail's Asset Management capabilities due to the delays in re-programming improvement activities. It is imperative that Network Rail continues with the current AMIP approach (with further developments as outlined in the recommendations in this assessment report) if the organisation is to achieve the Roadmap targets, and more significantly its own goal;

'…to achieve a level of asset management maturity that is at least as good as the best comparable organisations in the UK by the start of CP5'.

Devolution presents a number of risks and opportunities to Network Rail in developing its Asset Management capabilities. This potentially presents an even greater challenge to achieving the Roadmap capabilities and these risks will need to be carefully managed and mitigations put in place to ensure the momentum of the AMIP is not lost as responsibilities transfer from the Centre to the Routes.

footnote:
[1] The original Asset Management Improvement Programme, which was superceded by the Transformation Programme and the current AMIP

In our opinion it will be difficult for Network Rail to make significant validated improvements to outputs, work volume efficiencies, or unit cost efficiencies without developing its Asset Management capabilities to achieve the requirements defined in the Roadmap for the SBP. If these are delivered then, based on emerging evidence in comparable sectors, it is estimated that Network Rail could identify 15% to 20% Opex savings and 10% to 15% Capex savings over the course of CP5 (when compared to the CP4 expenditure) through more risk-based renewal and maintenance interventions. Achieving the Roadmap maturity targets will allow these savings to be robustly identified by the start of CP5, and delivered in a sustainable way progressively over the course of CP5.

A number of detailed recommendations have been made in this report. To consolidate these, it is recommended that the AMCL Roadmap should be updated to reflect the additional improvement activities that Network Rail will need to deliver to achieve the capability maturity trajectory for the end of CP4. It is further recommended that Network Rail updates its AMIP plan to demonstrate to all stakeholders how the revised capabilities and success criteria in the Roadmap will be delivered to achieve this goal.

AMCL would like to take the opportunity to thank Network Rail and the ORR personnel for their time and effort in participating in this assessment.