Asset Management Maturity – Current IAM Thinking and Network Rail Case Study

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Overview

1. What is Asset Management maturity?
   The latest view from the Institute of Asset Management (IAM)

2. Assessing Asset Management maturity:
   A case study of Network Rail 2006 to 2013

This presentation is about the assessment of an organisation’s overall capability to do Asset Management well
The UIC’s ‘Guidelines for the Application of Asset Management in Railway Infrastructure Organisations’

Network Objectives

Route Strategies

Asset Strategy

Operational Strategy

Route Asset Plans

Route operational plans

Route Delivery Plans

Timetable and access Planning

Execution of Work

Network Operation

Asset information
Risk management
LCC tools
Business processes
Competencies
Supply chain management

Audits
KPIs
Management reviews
Corrective actions

Enabling mechanisms

Core decision and activities.

Reviewing mechanisms.

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What is Asset Management maturity?

The latest view from the Institute of Asset Management (IAM)
Asset Management maturity is a measure of the capability of an organisation to perform sustainably and economically...
‘Compliance’ and ‘Maturity’ – an ISO 55001 baseline

ISO 55002:

‘It should be noted however, that compliance with all the requirements of ISO 55001 represents achieving the minimum standard for an effective Asset Management system and should not be seen as the final goal.’
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‘It should be noted however, that compliance with all the requirements of ISO 55001 represents achieving the minimum standard for an effective Asset Management system and should not be seen as the final goal.’
The IAM’s current Asset Management maturity scale (PAM)

But what does this mean?

The scale measures up to compliance with PAS 55
The IAM’s latest Asset Management maturity scale concept

Innocent  |  Aware  |  Developing  |  Competent  |  Optimizing  |  Excellent

AM Landscape
39 Subjects

Initial systematic review
“gap analysis”

ROADMAP

ISO55001 Certification

1. Understand the context
2. Identify relevant leading practices
3. Innovate & stretch limits
4. Roadmap & implement
5. Review & repeat
The IAM’s latest Asset Management maturity scale concept

- Convergence to a joined-up, managed system for asset management
- Divergence ‘best appropriate practices’ (context-dependent)

AM Landscape

39 subjects

Putting the basics in place (“gap analysis”)
Development & Integration
Optimisation and Further Integration

Competent Asset Management (to independently certifiable standard)

Initial systematic review
Roadmap

ISO 55001 Certification

1. Identify relevant leading practices
2. Develop and implement
3. Innovate, challenge & stretch limits
4. Roadmap & implement
5. Review & repeat
## The proposed IAM Asset Management maturity scale

<table>
<thead>
<tr>
<th>Scale</th>
<th>Description</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Innocent</td>
<td>The organisation has not recognised the need for this requirement and/or there is no evidence of commitment to put it in place.</td>
</tr>
<tr>
<td>1</td>
<td>Aware</td>
<td>The organisation has identified the need for this requirement, and there is evidence of intent to progress it.</td>
</tr>
<tr>
<td>2</td>
<td>Developing</td>
<td>The organisation has identified the means of systematically and consistently achieving the requirements, and can demonstrate that these are being progressed with credible and resourced plans in place.</td>
</tr>
<tr>
<td>3</td>
<td>Competent</td>
<td>The organisation can demonstrate that it systematically and consistently achieves relevant requirements set out in ISO 55001.</td>
</tr>
<tr>
<td>4</td>
<td>Optimising</td>
<td>The organisation can demonstrate that it is systematically and consistently optimising its Asset Management practice, in line with the organisation’s objectives and operating context.</td>
</tr>
<tr>
<td>5</td>
<td>Excellent</td>
<td>The organisation can demonstrate that it employs the leading practices, and achieves maximum value from the management of its assets, in line with the organisation’s objectives and operating context.</td>
</tr>
</tbody>
</table>
Assessing Asset Management maturity

A case study of Network Rail 2006 to 2013
Tripartite Relationship – Control Periods 3 & 3 (CP3 & CP4)
The IAM’s Asset Management ‘Conceptual Model’

Organisational Strategic Plan

- Customers
- Legislation
- Investors
- Commercial Environment

Scope of Asset Management

- Asset Management Strategy & Planning
- Asset Management Decision Making
- Asset Knowledge Enablers

Organisation & People Enablers

Lifecycle Delivery
- Acquire
- Operate
- Maintain
- Dispose

Risk & Review

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AMEM Assessment – aligned to the Conceptual Model

- **Asset Management Strategy & Planning**
  - 1.01 Policy & Strategy
  - 1.02 Demand Analysis
  - 1.03 Strategic Planning
  - 1.04 Asset Management Plans

- **Whole-Life Cost Justification**
  - 2.01 Opex Evaluation
  - 2.02 Capex Evaluation
  - 2.03 Asset Costing & Accounting

- **Lifecycle Delivery**
  - 3.01 Asset Creation
  - 3.02 Systems Engineering
  - 3.03 Maintenance Delivery
  - 3.04 Resource & Outage Management
  - 3.05 Incident Response
  - 3.06 Asset Rationalisation & Disposal

- **Asset Knowledge**
  - 4.01 Asset Information Strategy & Standards
  - 4.02 Asset Information Systems
  - 4.03 Asset Knowledge & Data

- **Organisation & People**
  - 5.01 Contract & Supply Management
  - 5.02 Organisational Structure & Culture
  - 5.03 Individual Competence & Behaviour

- **Risk & Review**
  - 6.01 Risk Assessment & Management
  - 6.02 Sustainable Development
  - 6.03 Weather & Climate Change
  - 6.04 Review & Audit
## AMCL’s AMEM Asset Management maturity scale

The maturity scale has six maturity states as follows:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Innocent</td>
</tr>
<tr>
<td></td>
<td>The organisation is starting to learn about the importance of Asset Management activities</td>
</tr>
<tr>
<td>2</td>
<td>Aware</td>
</tr>
<tr>
<td></td>
<td>The organisation is aware of the importance of the Asset Management Activities and has started to apply this knowledge</td>
</tr>
<tr>
<td>3</td>
<td>Developing</td>
</tr>
<tr>
<td></td>
<td>The organisation is developing its Asset Management Activities and embedding them</td>
</tr>
<tr>
<td>4</td>
<td>Competent</td>
</tr>
<tr>
<td></td>
<td>The organisation’s Asset Management Activities are developed, embedded and are becoming effective</td>
</tr>
<tr>
<td>5</td>
<td>Effective</td>
</tr>
<tr>
<td></td>
<td>The organisation’s Asset Management Activities are fully effective and are being integrated throughout the business</td>
</tr>
<tr>
<td>6</td>
<td>Excellent</td>
</tr>
<tr>
<td></td>
<td>The organisation’s Asset Management Activities are fully integrated and are being continuously improved to deliver optimal whole life value</td>
</tr>
</tbody>
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Compliance with BSI PAS 55

Beyond PAS 55 Compliance

Limit of known Asset Management Best Practice
Timescales to date

• 2006 – Initial assessment – mid CP3
• 2007 – Development of ‘Asset Management Vision’
• 2009 – CP4 entry assessment
• 2010 – Development of ‘Asset Management Roadmap’ to help Network Rail identify the key actions required to deliver sustainable improvements in asset management capability
• 2011 – Initial Industry Plan (IIP) assessment
• 2013 – Strategic Business Plan (SBP) assessment
The Asset Management Improvement Roadmap
## Setting Specific Targets

<table>
<thead>
<tr>
<th></th>
<th>Network Rail as assessed 2009</th>
<th>Network Rail as assessed at IIP Update</th>
<th>AMCL Roadmap Target for SBP</th>
<th>Network Rail as assessed at SBP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy &amp; Planning</strong></td>
<td>56.3%</td>
<td>61.2%</td>
<td>64.7%</td>
<td>65.8%</td>
</tr>
<tr>
<td><strong>Whole-Life Cost Justification</strong></td>
<td>47.3%</td>
<td>51.9%</td>
<td>59.7%</td>
<td>58.7%</td>
</tr>
<tr>
<td><strong>Lifecycle Delivery</strong></td>
<td>64.8%</td>
<td>66.3%</td>
<td>70.5%</td>
<td>69.2%</td>
</tr>
<tr>
<td><strong>Asset Knowledge</strong></td>
<td>51.7%</td>
<td>55.0%</td>
<td>63.5%</td>
<td>60.9%</td>
</tr>
<tr>
<td><strong>Organisation People</strong></td>
<td>63.0%</td>
<td>64.0%</td>
<td>71.1%</td>
<td>67.3%</td>
</tr>
<tr>
<td><strong>Risk &amp; Review</strong></td>
<td>49.5%</td>
<td>59.4%</td>
<td>58.1%</td>
<td>60.8%</td>
</tr>
</tbody>
</table>
Overall Trajectory and ‘gap analysis’

Key
- Trajectory
- Assessed

Assessment June 2006
Assessment Jan 2009
2011 update Jan 2012
Assessment Jan 2013
Assessment March 2014

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Regular Progress Monitoring
Network Rail Latest Results and current ‘frontier’
Proposed ‘Cap & Collar’ Trajectory for CP5

Overall

Key
- Proposed Trajectory
- Proposed Collar
- Proposed Cap

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Summary

• The development of Asset Management capability is being increasingly well defined through the IAM’s work
• Compliance to PAS 55 or ISO 55001 sets a foundation on which Asset Management ‘excellence’ can be achieved
• Asset Management ‘excellence’ is a context-dependent application of relevant best practices within an industry or sector, which an organisation can demonstrate with respect to its peers

• Network Rail has demonstrated significant improvement in its Asset Management capability since 2006 and is now ready to innovate, challenge and stretch its capabilities through CP5