Practical Implementation of Asset Management through ISO 55001

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10 Years in Irish Rail, initially in the CME (Fleet Maintenance) and last 6 years in Infrastructure

Member of the UIC Asset Management Working Group since 2011
• Heart of the railway centred on Dublin
• Major focus on Commuter Service
• 4% of the Network is Electrified
• 2 key intercity routes to Cork and Belfast
• Competition from a Major investment in Roads
Each week:

- **4,300** train services run
- **823,000** passengers carried
- **638** carriages in our fleet
- **144** stations served countrywide
- **2,400** kilometres in our network
- **325,000** kilometres travelled

**Spend €238m pa on M&R**

**Steady state is €276m**
Our Original Guidelines
Our original Guidelines –

In 2010 the UIC Asset Management Working Group developed

1. A set of guidelines for Rail on the key components of an asset management system and
2. A framework, and
3. A maturity model based on the framework.
Our Framework
Our New Project
Project was launched in late 2014

The Initial Project was launched in late 2014 to migrate the current UIC AM guidelines such that they clearly reflect the requirements of ISO 55000.

➢ Project carried out by the UIC AMWG

➢ We reviewed other industry AM and ISO Guidelines

➢ We engaged expert support – AMCL

➢ Our drafts were reviewed by industry peers and experts
Our Initial Objective

“To provide practical guidance to Railway infrastructure managers who wish to improve their existing Asset Management capability in the context of a standardised approach that is being widely adopted in railways and other asset intensive sectors around the world.”

The principal assertions underpinning our work is:
Asset Management is the only system-wide approach that has the breadth, depth and whole life focus necessary to help infrastructure managers to realise their potential in terms of providing customers and funders with a safe, quality service that is demonstrably value for money.
A number of Challenges & issues arose during the project

• Why should an organisation adopt **Asset Management**
  ➢ Document should be **compelling** to say railway IMs really should adopt and improve asset management.
  ➢ Focus on **Outcomes** i.e. linking asset management and outcomes (quality of service, safety, costs etc.).

• The **Business Case** for Asset Management
  • Difficult to find case studies with €/£ benefit quantified
  • Included the business case in our in Exec summary and introduction to AM

• The role of **Leadership** in a successful AM implementation
  ➢ The endorsement of the CEO
  ➢ Short term objectives versus long term
  ➢ Value is a business concept not an engineering concept
  ➢ Language of AM
Cost

Risk

Performance

Value

Value not Profit

Basis of evaluating actual KPI performance against targets

Informs the Decision Making and Optimisation process

Rail IM’s not meant to generate profit

Value not Profit

www.railway-asset-management.org
Challenges that arose

• **Implementing ISO** does not mean **implementing Asset Management**
  ➢ It instills a good structure and discipline and the initial approach to continual improvement
  ➢ The title of our document was changed to emphasis the implementation of asset management over the compliance with the ISO standard.

• **Risk**
  ➢ The treatment/management of risk is inherent throughout ISO but very difficult to be specific about
  ➢ Risk in Rail includes Safety, Commercial, Fire, Environmental, Reputation

• Who is the **Target Audience**
  ➢ Board, Owners, Train Operators, Regulator, Senior Managers, Asset Managers, Process Developers, Risk Managers
Challenges that arose

• Be **Practical**
  • Provide real practical steps for Rail on delivering Asset Management and better outcomes
  • Not just a conceptual framework

• Vastly differing levels of Asset Management **Maturity** in Rail

• Where does the **SAMP** sit with the “asset management system”
  • Open to quite a degree of interpretation
  • Setting out what we would expect
  •

• The inclusion of examples of **best practice case studies**
  ➢ Highlight examples of organisations that have met the particular ISO requirement and to outline how they went about it and the impact it had
Our Final Objectives

Primary

“To provide practical guidance to Railway infrastructure managers who wish to improve their existing Asset Management capability in the context of a standardised approach that is being widely adopted in railways and other asset intensive sectors around the world.”

Secondary

“To provide high-level information to leaders and executives of railway infrastructure organisations on the differing intent, benefits and implementation requirements of ISO 55001”
Structure of the Guide

➢ Executive Summary
  ➢ Why Asset Management and ISO 55001
➢ Core Document
  ➢ Introduction to Asset Management & ISO 55001
  ➢ ISO 55001 Requirements
  ➢ Implementation Guide

Majority of the ‘target audience’ would tend to read the first few pages to decide on approval.
## Executive Summary

### Introduction to Asset Management & ISO 55001

- CEO
- Board, Regulator, Funder
- Senior Management Team
- Asset Managers
- ISO Implementers
- Process Improvement

### ISO 55001 Requirements

- Executive Summary
- Introduction to Asset Management & ISO 55001
- ISO 55001 Requirements

### Implementation Guide

- Executive Summary
- Introduction to Asset Management & ISO 55001
- ISO 55001 Requirements
- Implementation Guide

## Relevant Clause

- Executive Summary
- ISO 55001 Requirements
- Implementation Guide
Asset Management Framework Updated

Defines our Asset Management System which is compliant with ISO 55001.
Compliant in the context of ISO 55001
Setting out the ISO 55001 Guidance

For each sub-clause,

➢ the overall definition and intent is briefly explained

For each ‘shall’ statement

➢ Considerations and practical guidance for Railway Infrastructure Organisations

➢ Recommended Evidence

### 2.5 CLAUSE 5: LEADERSHIP

2.5.1 Clause 5.1 – Leadership and commitment

This clause consists of a single but lengthy ‘shall’ statement which is focused on organisational management teams demonstrating commitment to the Asset Management System and achievement of objectives. This demonstration should be through outcomes and review & improvement actions rather than simple intent.

<table>
<thead>
<tr>
<th>‘Shall’ Statement 5.1.1 – Demonstrate Leadership and Commitment</th>
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<tbody>
<tr>
<td><strong>Considerations for Railway Infrastructure Organisations</strong></td>
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<tr>
<td>• The phrase ‘top management’ is used by ISO 55001 to define top level or executive decision makers in an organisation. Namely, for a rail organisation, this would include CEO, Board and Executive level sponsorship, governance, continual review and authorisation of the Asset Management System, Asset Management Policy and SAMP.</td>
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<td>• Many organisations have a single ‘top management’ sponsor, often a Director of Engineering, Director of Finance, Director of Maintenance or Director of Operations, or even a Director of Asset Management. However, due to the cross business nature of Asset Management, it is good practice to have multiple Board or Executive level sponsors to ensure the Asset Management system is fully embedded and continually improved across its entire scope.</td>
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<td>• The best individuals or function leads for these roles will vary by organisation but the specifics are not critical, as long as the business-wide Asset Management approach is sponsored at the right level and is not seen as the preserve of a single function.</td>
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<td>• A common approach for many organisations is the establishment of an Asset Management Committee, or similar mechanism, with top management attendance, to drive, govern and oversee all aspects of Asset Management within the organisation.</td>
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<td><strong>Recommended Evidence</strong></td>
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<td>• Clear ownership, governance and continual improvement of the Asset Management System at a senior level within the organisation, usually through a cross-functional Asset Management Committee or equivalent.</td>
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<td>• Asset Management Policy physically signed-off by the CEO, or equivalent &amp; SAMP</td>
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<td>• Asset Management Objectives signed-off by the CEO or a member of the organisation’s Executive</td>
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<td>• SAMP signed-off by a member of the organisation’s Executive</td>
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<td>• Awareness at senior (top level) management</td>
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<td>• Corporate Vision / Objectives and how/whether there is reference to assets and good Asset Management</td>
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Moving Forward
The Next Steps

- Published & Disseminate
- Build up a library of Case Studies of best practice
- Update our UIC AM Maturity model to ISO 55001
- Continue to monitor the progress of the Business Case (IAM)
  - Within the UIC we will focus on Asset Management delivery significantly improved Value
What did it mean for me?

Do I want AM to be a source of initiatives/continuous improvement projects or

The way my organisation works?
And finally

**Do not** read the ISO guidance at one go!

**But do** read it over time
Thank You & Questions