

UIC Railway Asset Management Global Conference 2017

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UIC HEADQUARTERS, PARIS

Practical Implementation of Asset Management through ISO 55001

Jude Carey – Iarnród Éireann



Jude Carey
Iarnród Éireann / Irish Rail



Jude Carey

Infrastructure



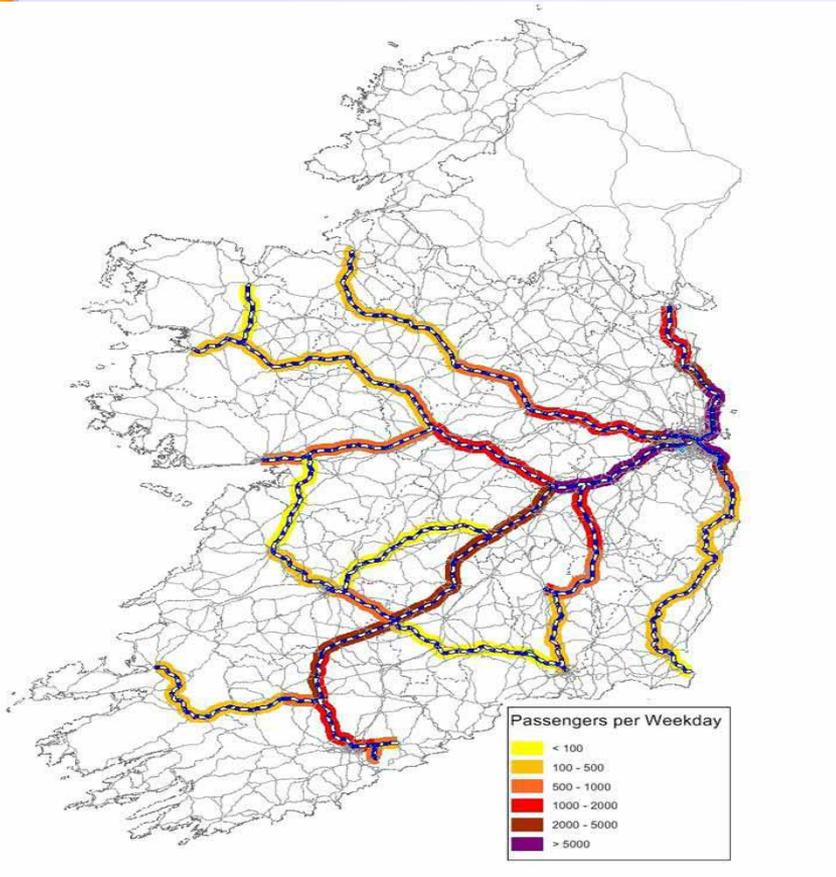
Head of Finance & Commercial Asset
Management

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



Jude Carey



- 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

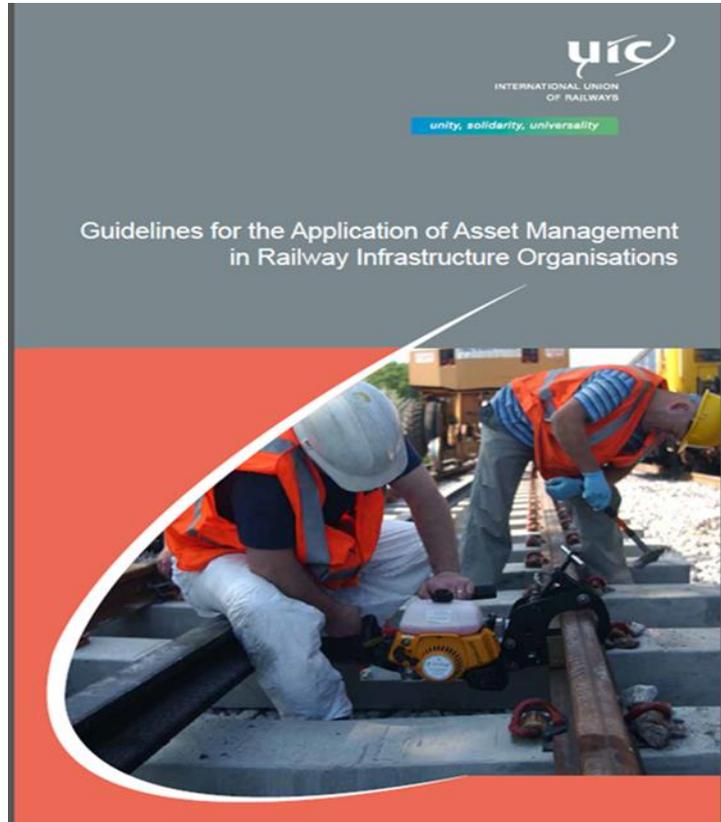
Asset	Unit	NETWORK TOTAL
Track	KM	2,400
Bridges	No.	5,092
P&C	No.	1,250
Fencing	KM	4,000
Level Crossings	No.	2,000

Spend €238m pa on M&R
Steady state is €276m

Our Original Guidelines



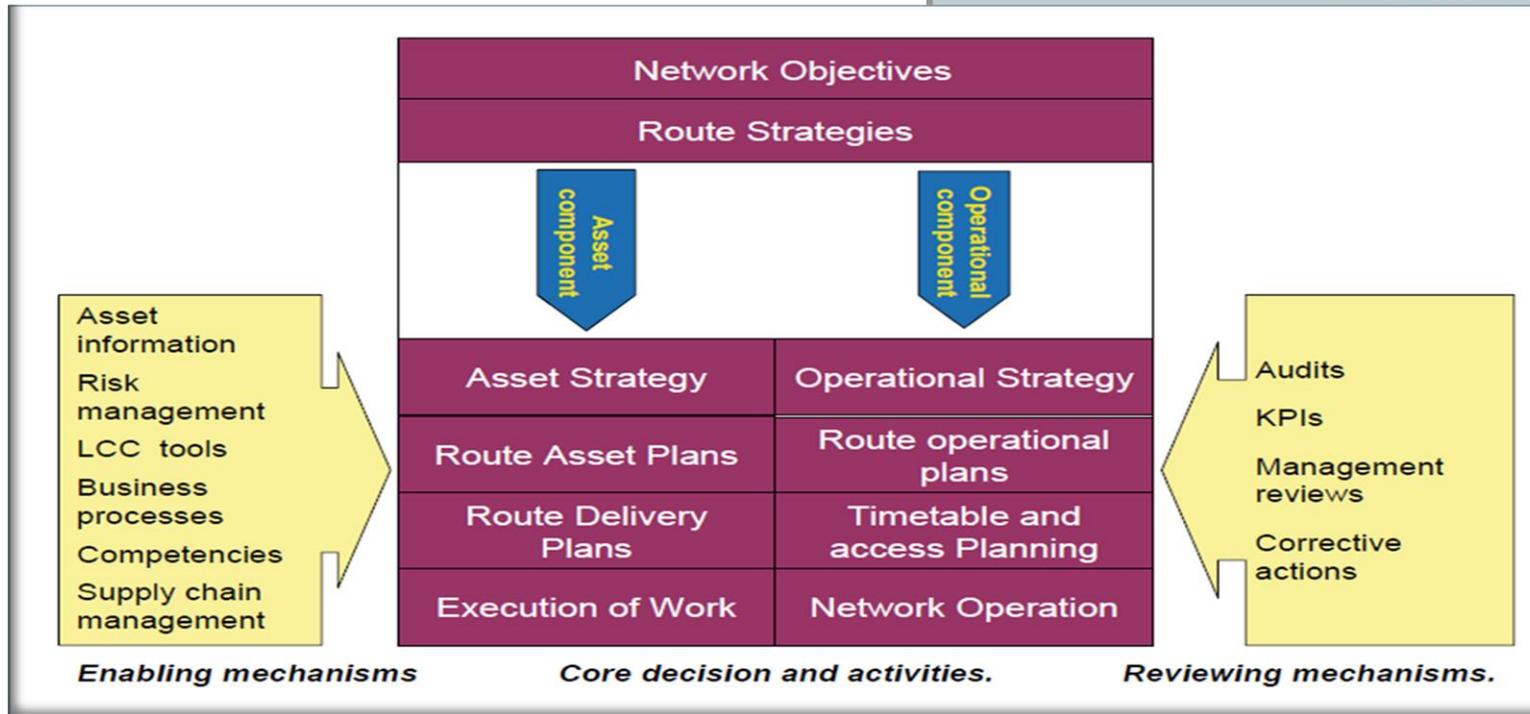
Our original Guidelines –



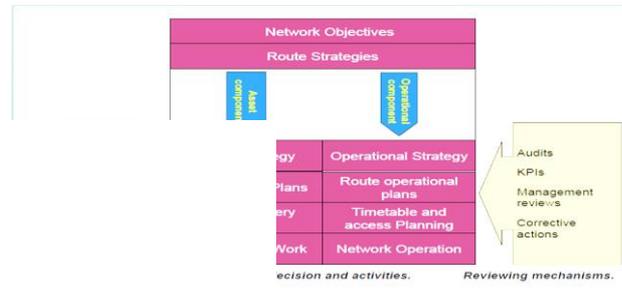
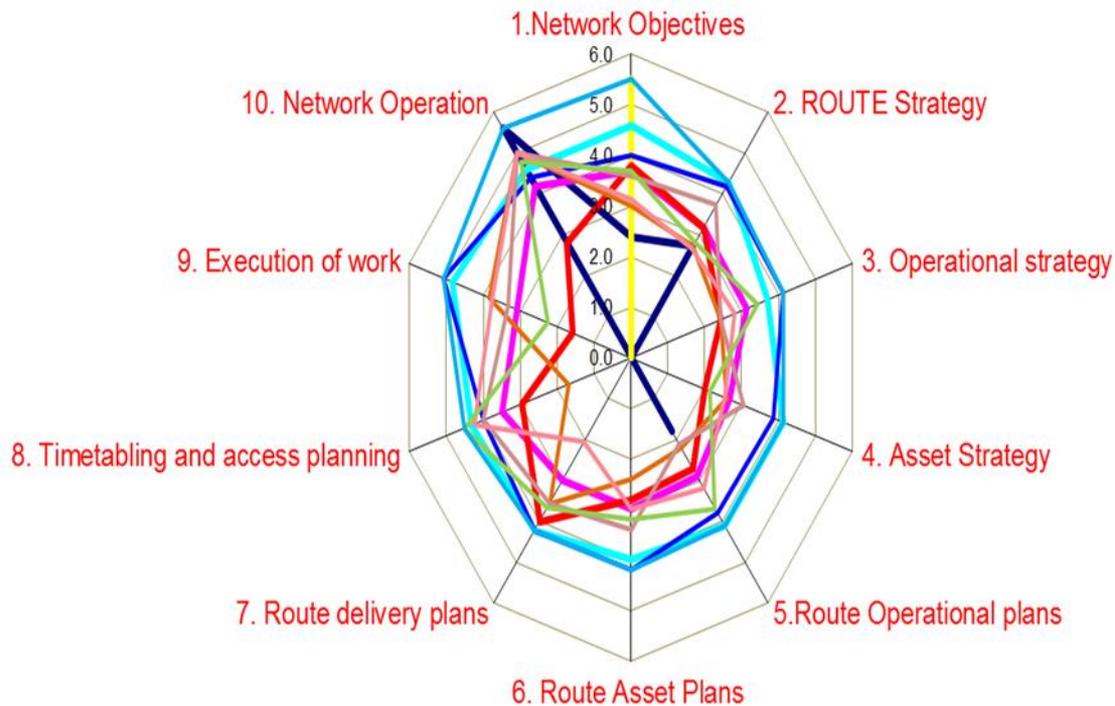
In 2010 the UIC
Asset Management Working Group
developed

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.

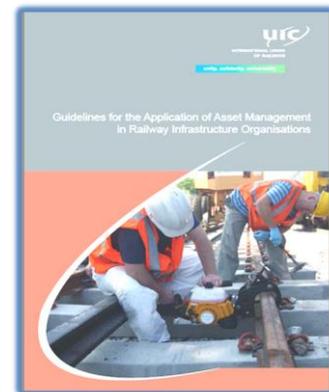
Our Framework



AM – Maturity Tool



- NET A
- NET B
- NET C
- NET D
- NET E
- NET F
- NET G
- NET H
- NET I
- NET L
- BEST



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

Guidelines Objective

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

Rail IM's not meant to generate profit

Value not Profit

Informs the Decision Making and Optimisation process

Value



Cost



Performance



Risk

Basis of evaluating actual KPI performance against targets

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

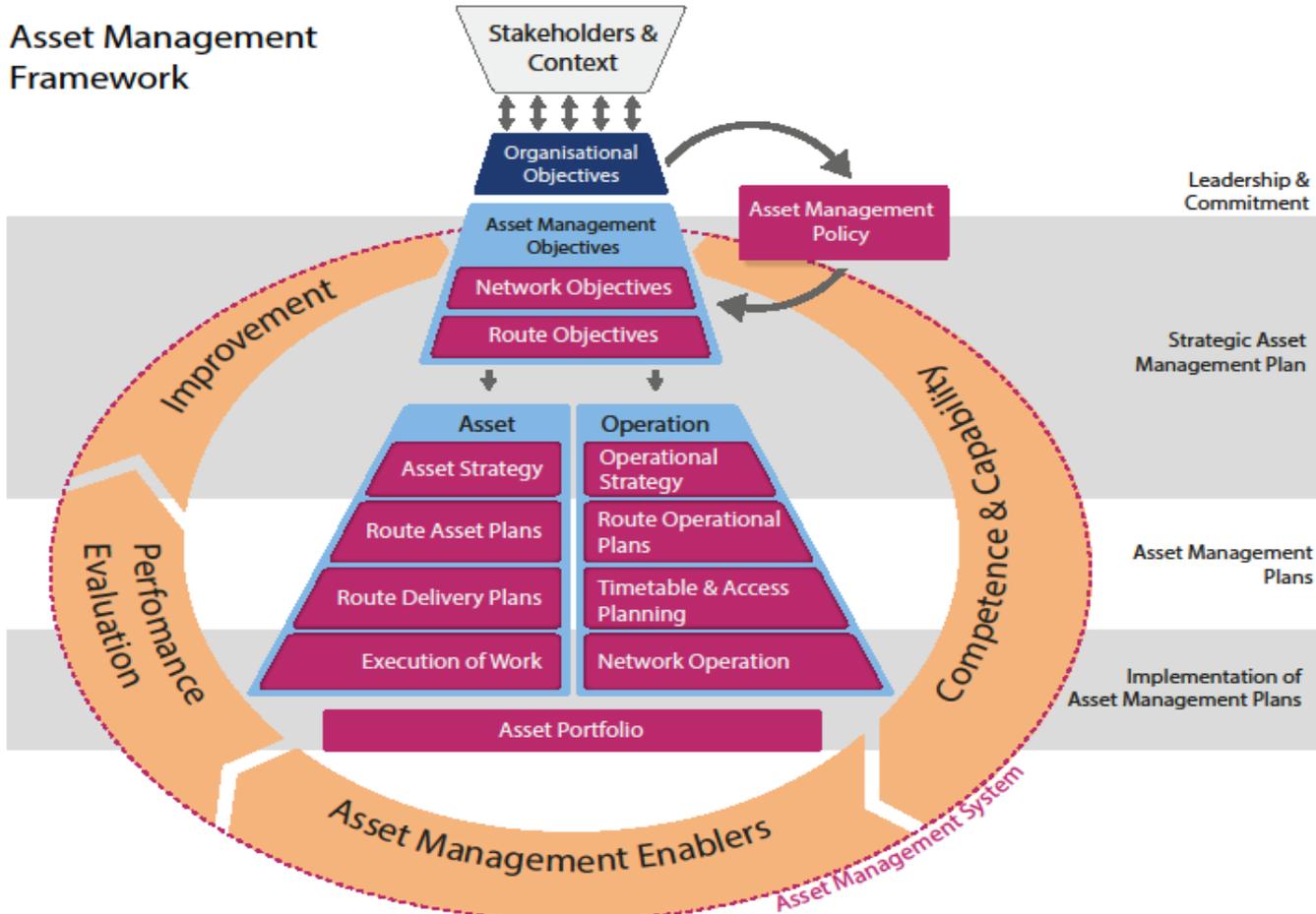
Majority of the 'target audience' would tend to read the first few pages to decide on approval.

Aimed at a wide audience

	Executive Summary	Introduction to Asset Management & ISO 55001	ISO 55001 Requirements	Implementation Guide
CEO	✓			
Board, Regulator, Funder	✓			
Senior Management Team	✓	✓		
Asset Managers		✓	✓	
ISO Implementers		✓	✓	✓
Process Improvement		✓	✓ Relevant Clause	

Asset Management Framework Updated

Asset Management Framework



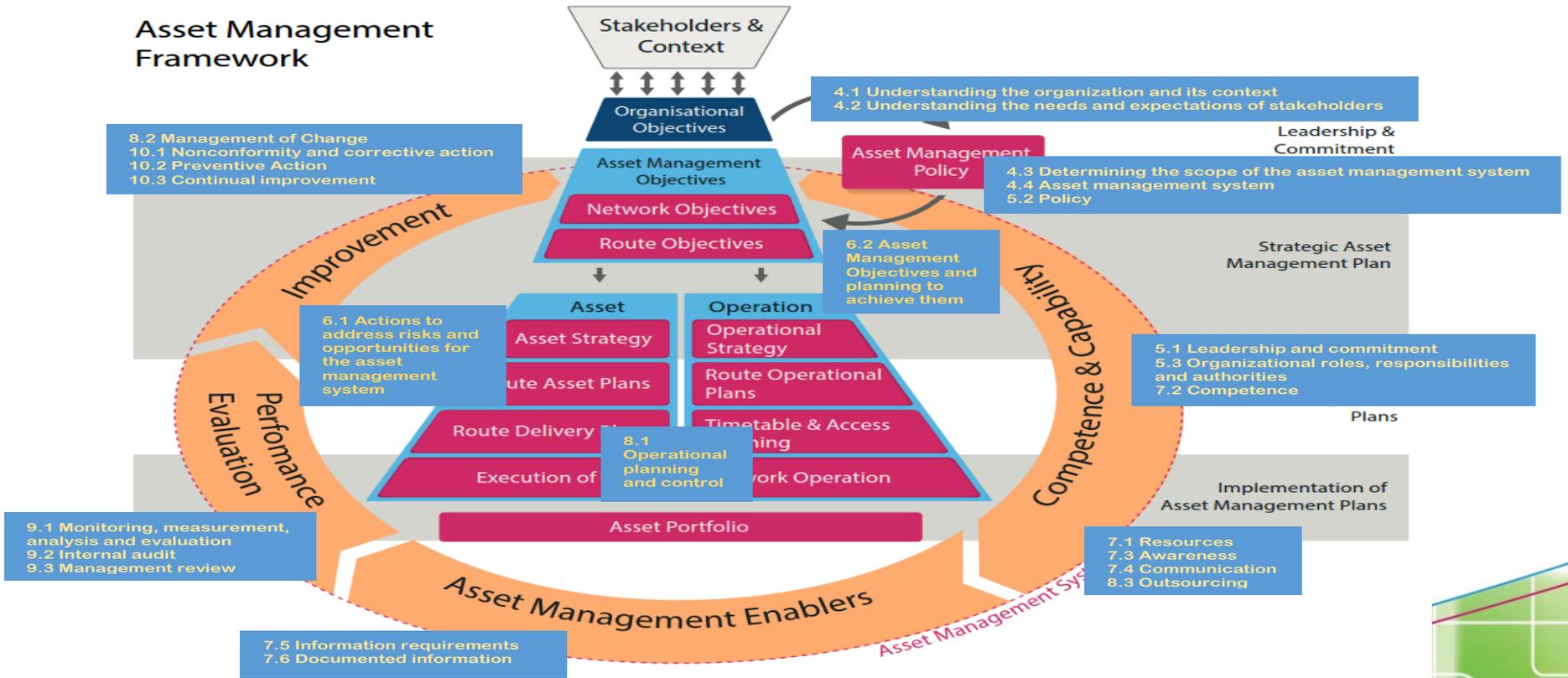
Defines our

Asset Management System

which is compliant with ISO 55001.

Compliant in the context of ISO 55001

Asset Management Framework



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.

"Shall" Statement 5.1-1 – Demonstrate Leadership and Commitment	
Considerations for Railway Infrastructure Organisations	<ul style="list-style-type: none">• The phrase 'top management' is used by ISO 55001 to define top level or executive decision makers in an organisation. Nominally, 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.• 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.• 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.• 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.
Recommended Evidence	<ul style="list-style-type: none">• 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.• Asset Management Policy physically signed-off by the CEO, or equivalent & SAMP• Asset Management Objectives signed-off by the CEO or a member of the organisation's Executive• SAMP signed-off by a member of the organisation's Executive• Awareness at senior (top level) management• Corporate Vision / Objectives and how/ whether there is reference to assets and good Asset Management

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?

Management of Assets

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

or

The way my organisation works?

Asset Management

And finally

Do not read the ISO guidance
at one go!

But do read it over time



Thank You & Questions

