UIC Railway Asset Management
Global Conference 2017

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UIC Headquarters, Paris

UIC Railway Application Guide of Practical Implementation of Asset Management through ISO 55001

An Introduction

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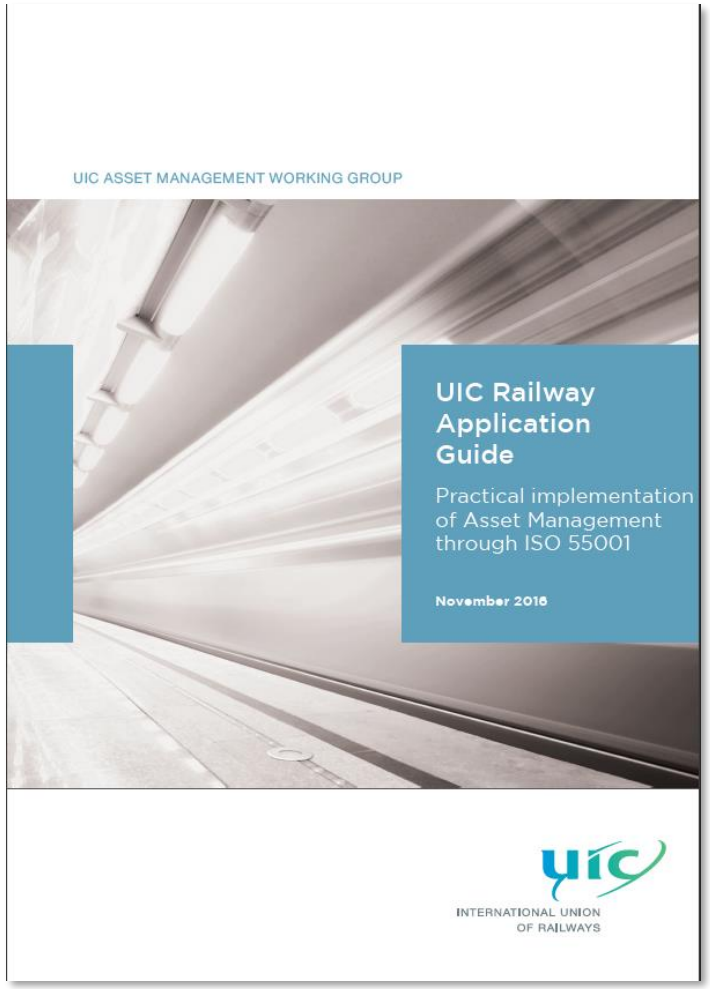
What are we talking about?

- UIC publication
- A practical Asset Management guide for railway infrastructure managers
- Based on a standardised approach (ISO55000 series)
- Translates ISO55001 into a railway context



Where did it come from?

INTERNATIONAL UNION OF RAILWAYS

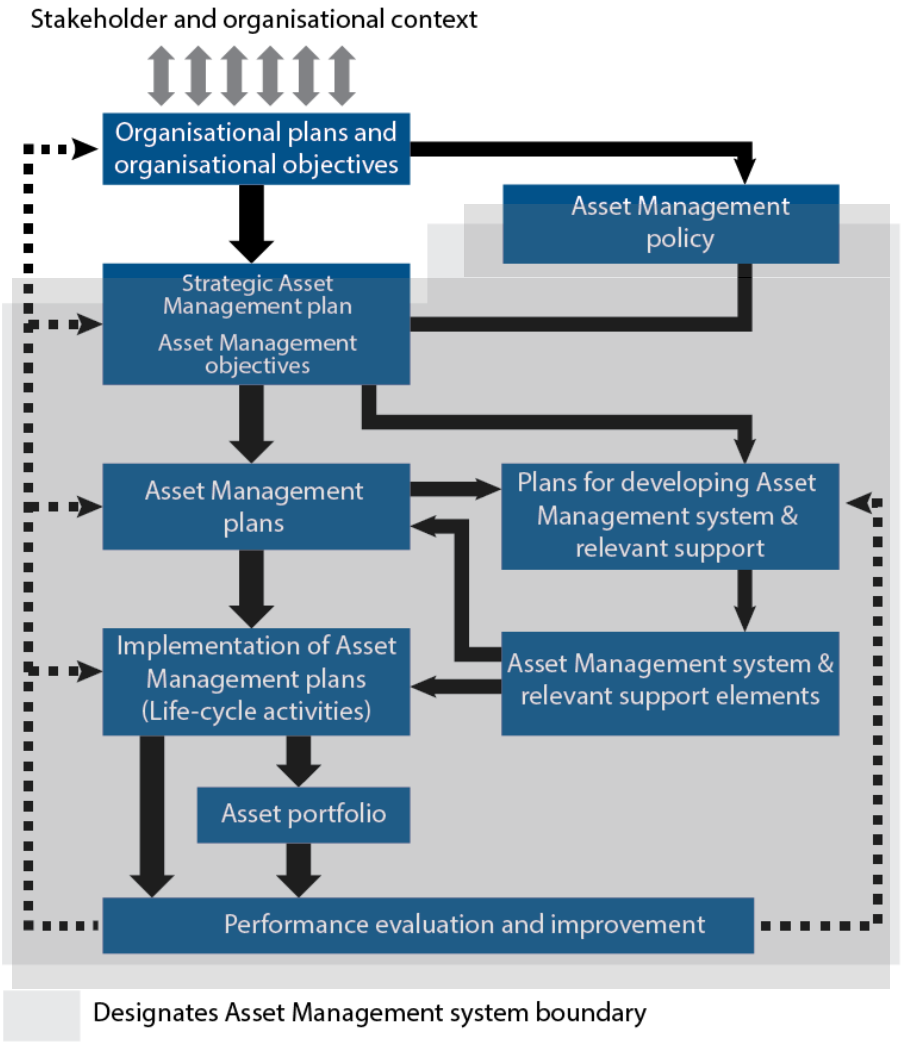
UIC AMWG Members	Individuals
ADIF	Roberto Muela Gutiérrez
FTA	Vesa Männistö
Infrabel	Jan Cocquyt
Irish Rail	Jude Carey
JBV	Hans Svee
Network Rail	Andy Kirwan (Chairman)
NIIAS	Alexey Zamyshlyaev
ÖBB	Christian Holzer
ÖBB	Richard Mair
RFI	Donatella Fochesato
RFI	Gian Piero Pavirani
Trafikverket	Vivianne Karlsson
UIC	Teodor Gradinariu
Consultants	AMCL (Asset Management Consulting Limited)
	David McLeish
	Ruth Wallsgrove

Reviewing Organisation	Name
Amey Consulting	Tim Gadd
Atkins	Navil Shetty
BLS	Benjamin Maerklin/Thomas Soland
CEDR	Margo Briessinck
EFNMS, BEMAS	Herman Baets
FINGRID	Marcus Stenstrand
Heathrow Airport Ltd	Steve Chambers
IESBV (AM Consultancy NL)	Diederik van Leeuwen
Infraestruturas de Portugal	Rui Miguel Alves de Oliveira
Jacobs	Sam Luke
Luleå Tekniska Universitet	Christer Stenström
Main Road West Australia	Florentina Mihai
Network Rail	Tim Kersley
OXAND	Remy Jacquier
PROMAINT	Kari Komonen
Sweco	Per Norrbin
World Bank	Ari Kalliokoski

Why?

- **Opportunity** - Railways are not yet operating at their full potential in terms of providing customers and funders with a safe, quality service that is demonstrably value for money
- **Relevance** - Asset Management is the only system-wide approach that has the breadth, depth and whole life focus necessary to help infrastructure managers to realise this potential
- **Benefits** - Asset Management integrates decisions and activities, and it creates a clear 'line of sight' or alignment between organisational objectives and the delivery of work on the ground
- **Need** - ISO55000 has replaced PAS 55 but is generic…

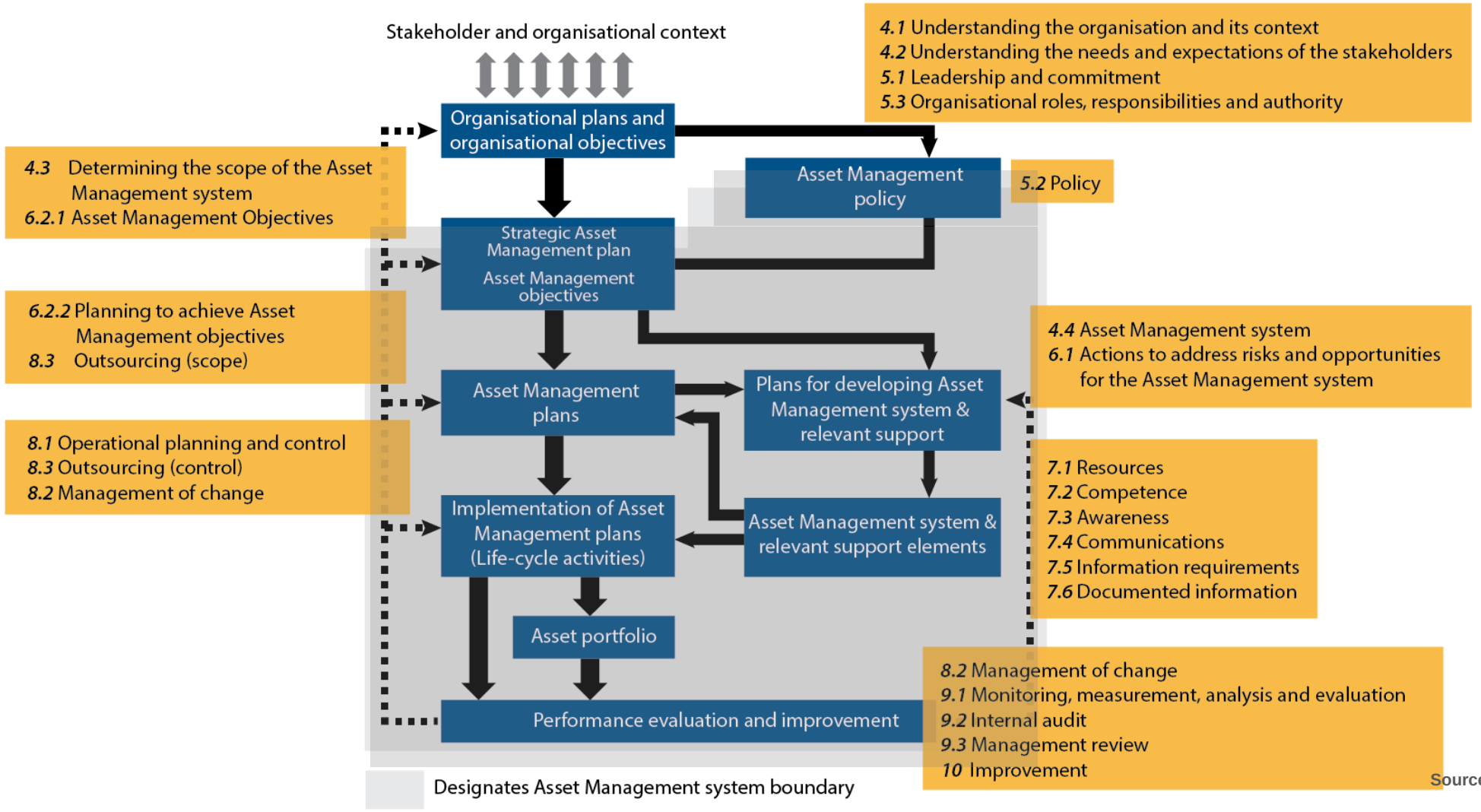
What is ISO55000?



Clause	Title
4	Context of the organization
5	Leadership
6	Planning
7	Support
8	Operation
9	Performance evaluation
10	Improvement

Source: ISO 55000

10 Clauses and 72 'Shall' Statements



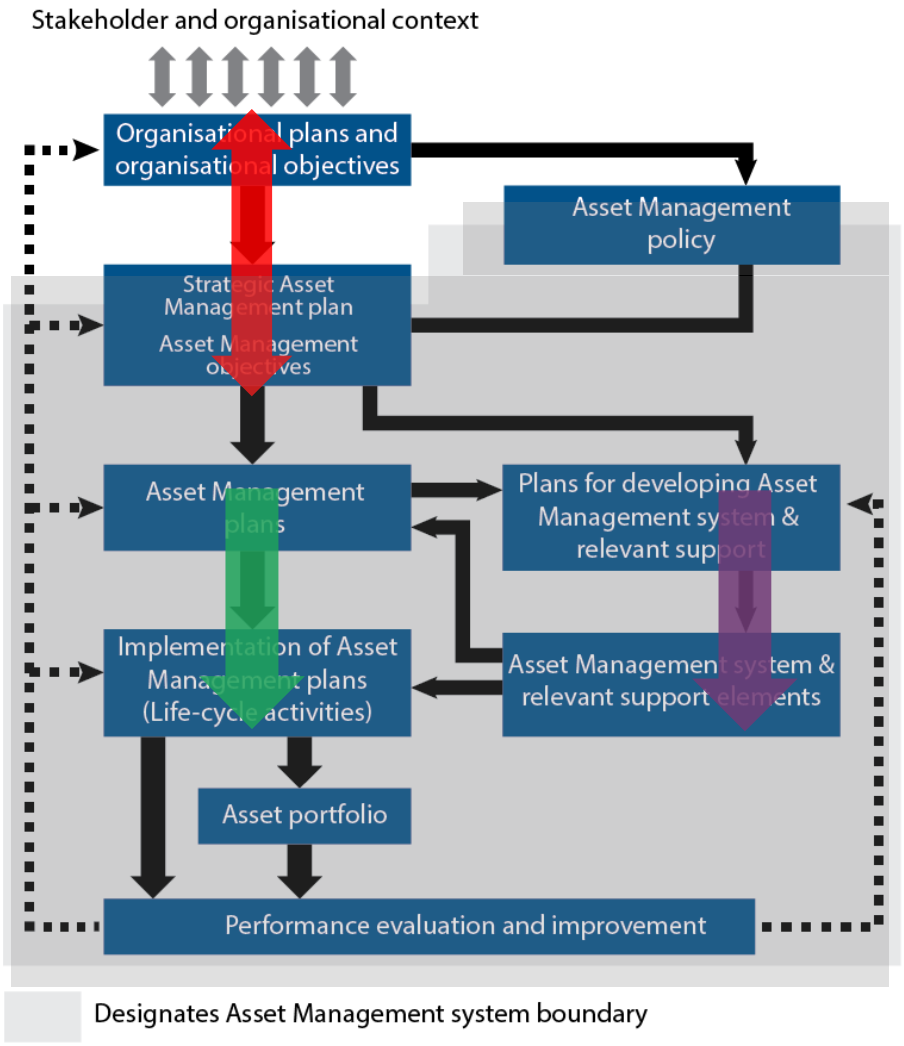
Source: ISO 55000

Planning to meet objectives – Clause 6.2

Aligned organisational / Asset Management objectives

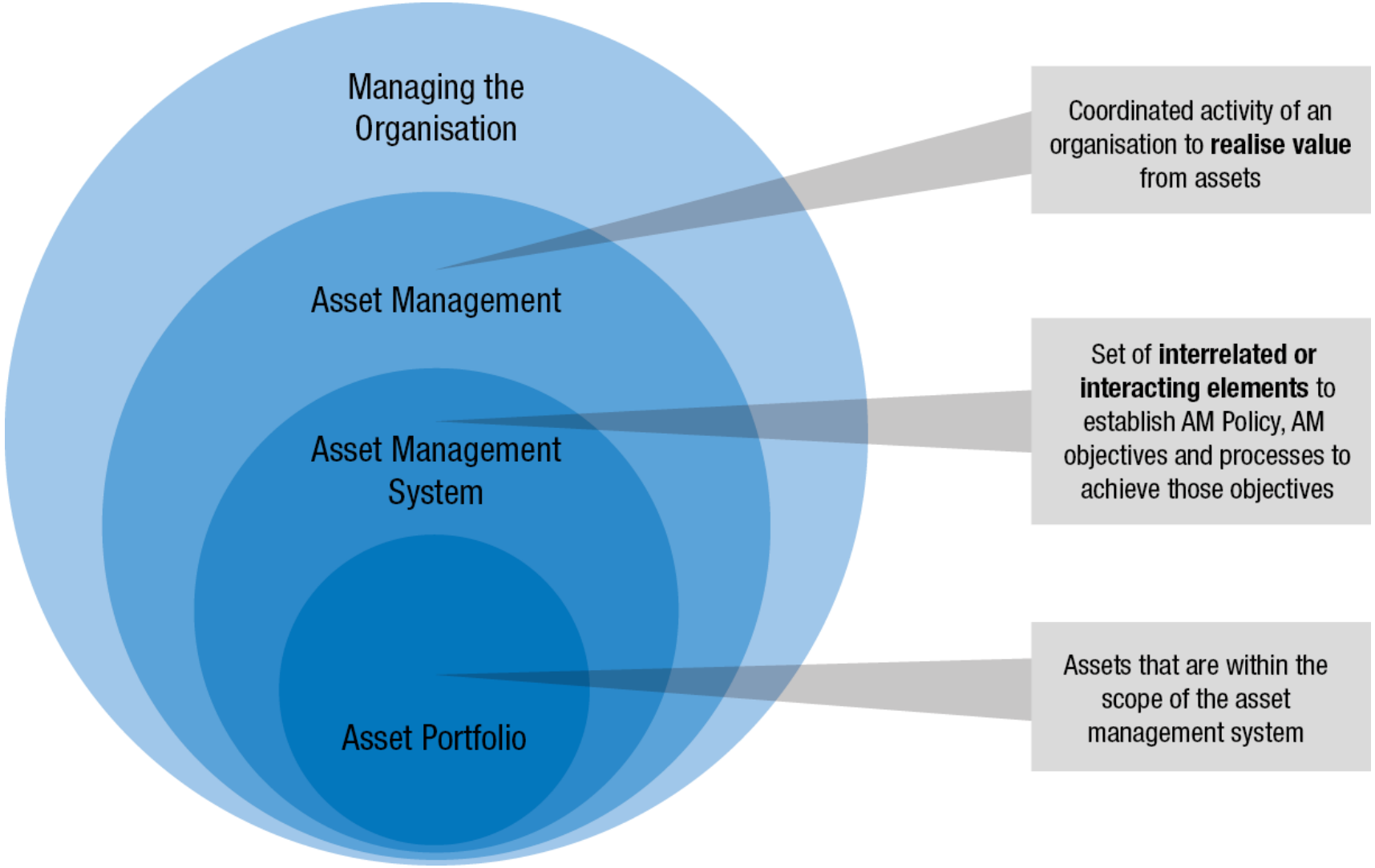
Delivered through activities planned on the assets

and the increasing capability of the organisation



Source: ISO 55000

How does it fit?

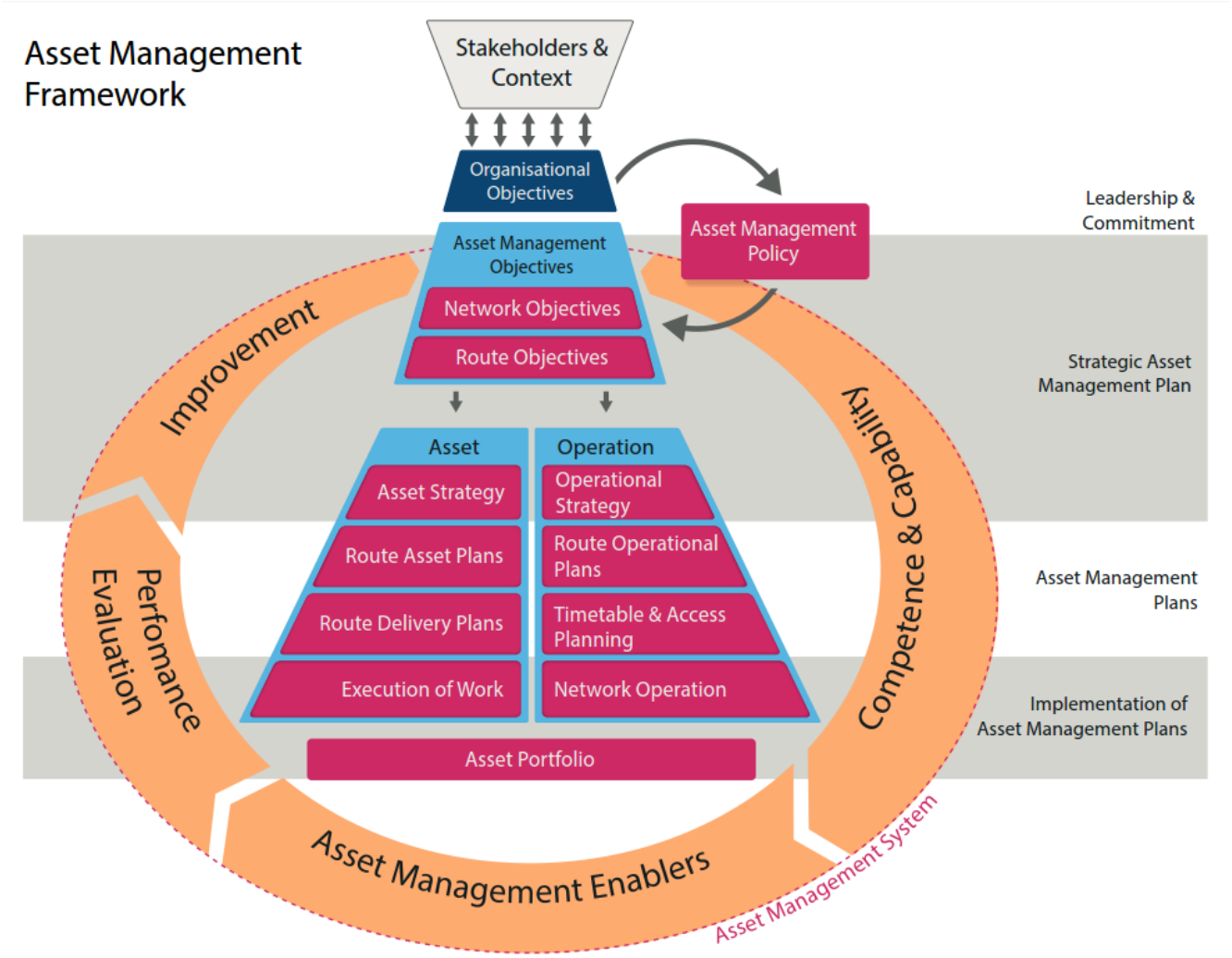


Source: ISO 55000

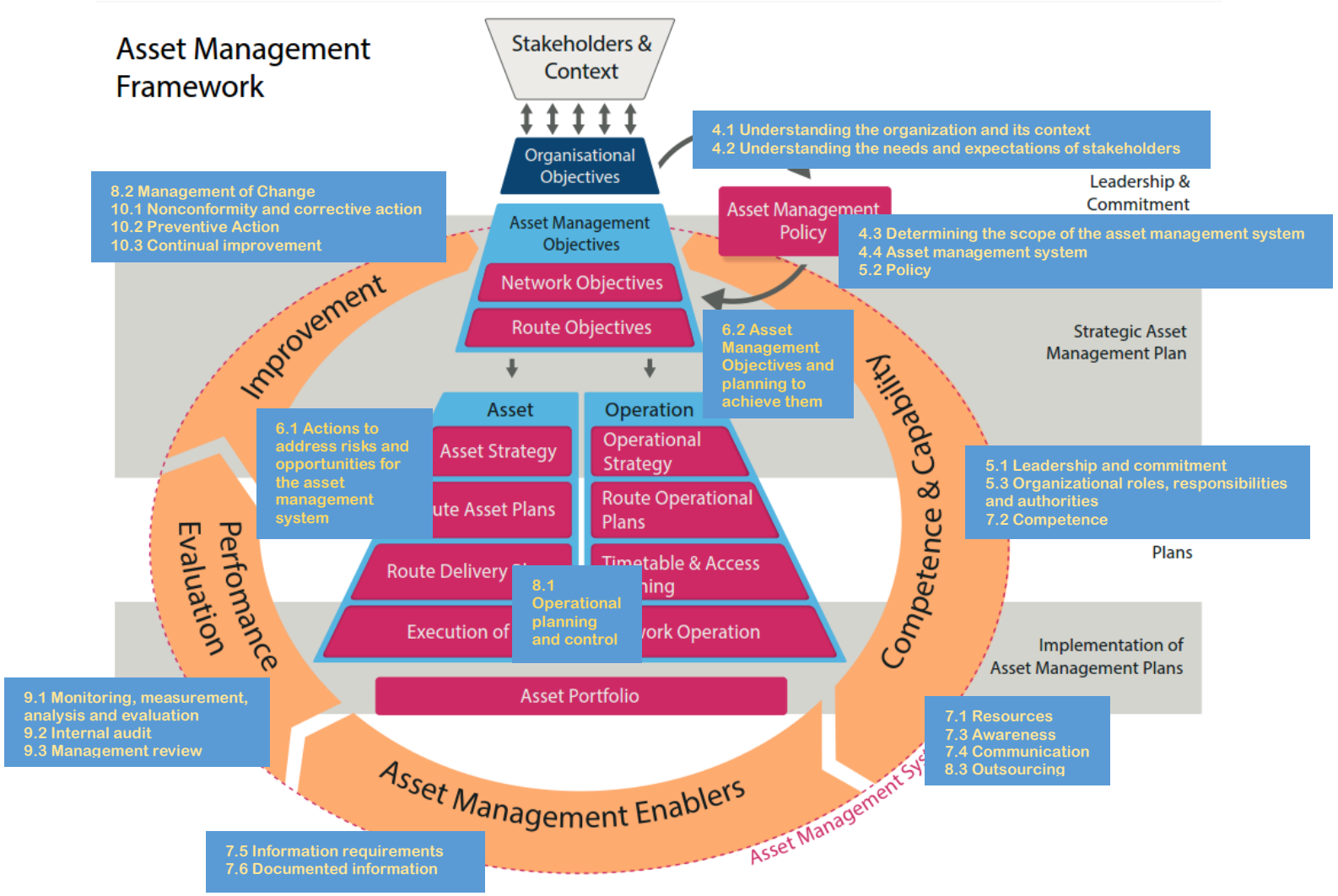
How is the Guide structured?

1. Introduction to Asset Management & ISO	2. ISO55001 Requirements of an Asset Management System	3. Implementation guide
Introduction Asset Management maturity Benefits of Asset Management Principles of the ISO55000 series Definitions UIC Asset Management Framework	Clause by clause breakdown of ISO55001: Definition and intent of each sub-clause Key considerations and practical guidance for each 'shall' statement in railway context Definition of potential evidence in railway context to support compliance with each 'shall' statement Simple tabular structure	Indicative implementation process Implementation tips Certification and audit guide: Certification overview What auditors will typically seek How to prepare

UIC Asset Management Framework



Alignment of ISO55001 Clauses



Railways specific guidance for each clause

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	• 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	• 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

'Shall' Statement 5.1-1 – Demonstrate Leadership and Commitment	
	• Senior management behaviours and attitudes • Evidence of appropriate cross-functional committees, multidisciplinary teams • Feedback from staff about top management leadership • Management review documentation, including plans, agenda and attendees and evidence of application of findings • Documented ownership of the Asset Management System and its key components

2.5.2 Clause 5.2 – Policy

This clause seeks to ensure an Asset Management Policy is in place to define and commit the organisation to appropriate good practice Asset Management principles and overall approach to Asset Management. It should also allow the traceability of all Asset Management activities within the organisation back to the policy statements.

'Shall' Statement 5.2-1 – AM Policy Established 'Shall' Statement 5.2-2 – AM Policy Contents	
Considerations for Railway Infrastructure Organisations	• The Asset Management Policy should provide a high-level statement of intent by the organisation's top management, demonstrating commitment to the adoption of Asset Management principles and showing the role of the Asset Management System in delivering the organisational objectives. • For railway infrastructure organisations these core principles may include key statements relating to whole-life cost, transparency, the management of risk and sustainability and definition of, or reference to, the associated decision making criteria (see Section 1.5.2). • The Asset Management Policy should be clearly endorsed by top management, for example by including a signature and supporting statement from the CEO or equivalent for the organisation. • The Asset Management Policy should be formally communicated throughout the organisation and relevant stakeholders, including service delivery organisations and contractors where appropriate. • The principles should be demonstrably and consistently applied in all Asset Management activities, from strategic decision making, through tactical decision making and planning to asset interventions on the ground. • The Asset Management Policy is conventionally a short document (1-2 pages) that can easily be communicated to internal and external stakeholders.

How do you implement ISO55001?

Why, who and what needs to be done?

Define and develop your Asset Management System, Policy and Objectives

Develop Plans to deliver your Objectives

Develop processes and mechanisms to deliver Plans

Develop processes and mechanisms to review efficacy of Plans, processes and achievement of Objectives

A defined and continually improving management system

A good practice Asset Management System

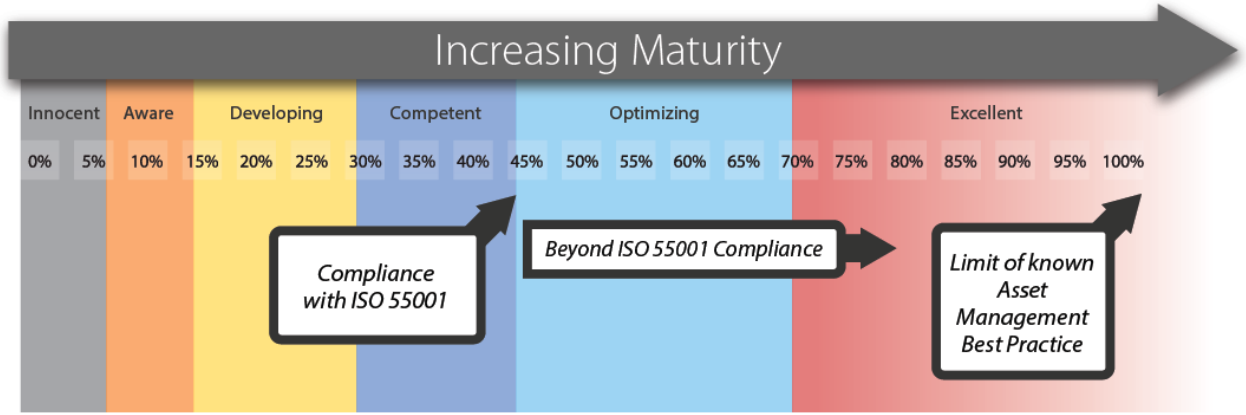
- Define the scope of your Asset Management system:
  - Who in the organisation? Which organisations?
  - Where geographically?
  - Which assets and which activities?
- Establish, document, implement, maintain and continually improve the Asset Management system and its key processes and procedures – set your Asset Management objectives
- Define roles and responsibilities, ensure the Asset Management system is effectively communicated and implemented by competent people
- Internally review your Asset Management system regularly to ensure its continuing suitability, adequacy and effectiveness in delivering your Asset Management objectives

Make a start…and work to continually improve!

What Assessors will look for…

Leadership	Senior level commitment and leadership – demonstrated through regular attendance at AM System governance meetings and ability to articulate an understanding of the AM System
Awareness	Relevant staff, contractors and service providers are aware of the AM System and its role, and how each contribute to achieving the defined AM Objectives
Collaboration	Asset Strategy & Planning, Maintenance, Operations, Engineering, etc. collaborate together with common objectives
Coordinated	All AM related improvement initiatives are coordinated, prioritised, scheduled, monitored and appropriately resourced
Clear Framework	Consistent understanding of how the business works that is supported through a top-down strategic framework – with adequate detail and clarity
Alignment	Decision making is aligned to a common set of AM Objectives that are embedded through strategies, plans and operational activities
Closed Loop	A Plan, Do, Check, Act process across all aspects of the Asset Management System. Includes auditing of processes, data, and implementation of activities
Clear Scope	A clearly defined scope of the AM System that sets out the boundaries in relation to assets, processes and procedures, business functions and other management systems
Integrated	The AM System is integrated with other Management systems and it is not managed in isolation
Enablers	Defined and implemented Governance Framework, Assurance Framework, Performance Framework, Information Strategy, Resourcing Strategy, Processes & Procedures

ISO55001 is not the 'final answer'…



The maturity scale has six maturity states as follows:

1	*Innocent*	The organization has not recognised the need for this requirement and/or there is no evidence of commitment to put it in place
2	*Aware*	The organization has identified the need for this requirement, and there is evidence of intent to progress it.
3	*Developing*	The organization 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.
4	*Competent*	The organization can demonstrate that it systematically and consistently achieves relevant requirements set out in ISO 55001.
5	*Optimizing*	The organization can demonstrate that it is systematically and consistently optimizing its Asset Management practice, in line with the organization's objectives and operating context.
6	*Excellent*	The organization can demonstrate that it employs the leading practices, and achieves maximum value from the management of its assets, in line with the organization's objectives and operating context.