

The Asset Management Landscape

English Version

ISBN 978-0-9871799-1-3
Issued November 2011

www.gfmam.org



Global Forum
On Maintenance & Asset Management



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This version replaces ISBN 978-0-9871799-0-6

The Global Forum on Maintenance and Asset Management

The Global Forum on Maintenance and Asset Management (GFMAM) has been established with the aim of sharing collaboratively advancements, knowledge and standards in Maintenance and Asset Management.

The members of GFMAM (at the time of issue of this document) are:

- Asset Management Council (AMCouncil), Australia;
- Associação das Empresas Brasileiras de Manutenção ABRAMAN), Brazil;
- European Federation of National Maintenance Societies (EFNMS), Europe;
- Gulf Society of Maintenance Professionals (GSMP), Arabian Gulf Region;
- Iberoamerican Federation on Maintenance (FIM), South America;
- Institute of Asset Management (IAM), UK
- Plant Engineering and Maintenance Association of Canada (PEMAC), Canada
- The Society for Maintenance and Reliability Professionals (SMRP), USA.
- The Southern African Asset Management Association (SAAMA), South Africa

The enduring objectives of the GFMAM are:

- 1) To bring together, promote and strengthen the maintenance and asset management community worldwide
- 2) To support the establishment and development of associations or institutions whose aims are maintenance and asset management focused
- 3) To facilitate the exchange and alignment of maintenance and asset management knowledge and practices
- 4) To raise the credibility of member organizations by raising the profile of the Global Forum

This document describes The Asset Management Landscape English Version that is supporting the third of these enduring objectives.

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Global Forum on Maintenance and Asset Management

1 Introduction

As the discipline of Asset Management has developed significantly over the last two decades, a number of approaches, standards, models and principles have been developed across the world. It has become clear that there is benefit in aligning these various approaches and collaborating to develop a global view, in particular for companies that operate Asset Management systems in many countries.

The Asset Management Landscape is a GFMAM initiative focused on the third of GFMAM's enduring objectives *'to facilitate the exchange and alignment of maintenance and asset management knowledge and practices'*.

The Asset Management Landscape initiative has the following objectives:

- 1) To develop a common Asset Management Landscape that provides an overview and perspective of Asset Management and its various features
- 2) To agree a set of Asset Management Subjects and Principles that describe the discipline of Asset Management
- 3) To allow GFMAM Member Organizations and their respective Members to see how and where their knowledge and practices fit against the Asset Management Landscape
- 4) To have a common Core (the Subjects and Principles) but be able to be tailored for each GFMAM Member Organizations to align it with their particular knowledge and practices

This document describes **The Asset Management Landscape** English Version including the Subjects and Principles that depict the discipline of Asset Management.

Each GFMAM Member incorporates this Landscape as part of their Asset Management Framework. An Asset Management Framework shows how and where a Member's 'Knowledge and Practices' fit within the Asset Management Landscape.

Asset Management
Global Forum on Maintenance

2 Asset Management Landscape

The Asset Management Landscape is a framework to enable Asset Management knowledge and practices to be compared, contrasted and aligned around a common understanding of the discipline of Asset Management. The Asset Management Landscape is represented in diagram 1 below:

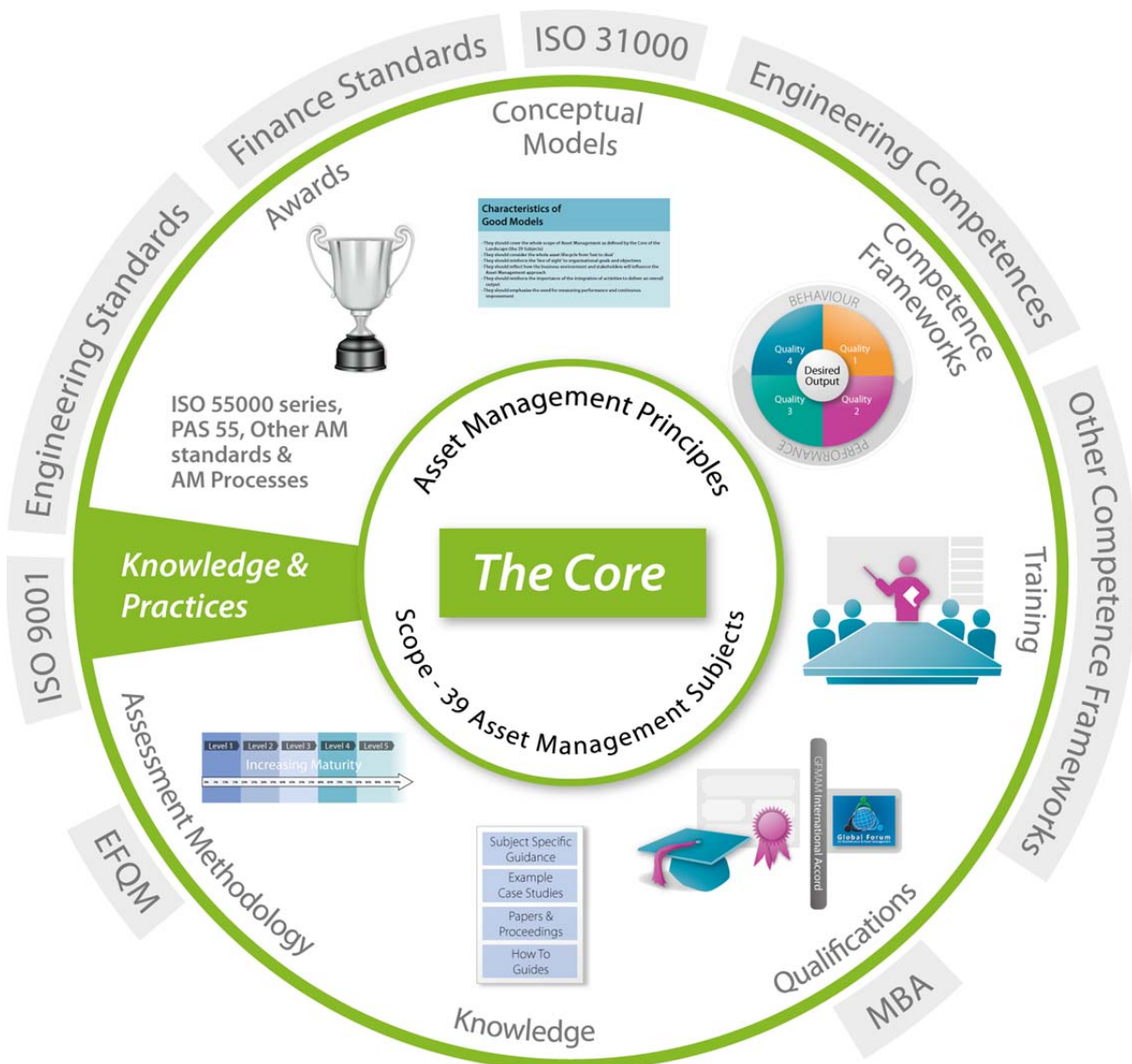


Diagram 1: Asset Management Landscape

This shows that the Asset Management Landscape is made up of three key areas:

- 1) The **Core** of the Asset Management Landscape which will be common across all GFMAM members;
- 2) The **Knowledge and Practices Area** of the Asset Management Landscape which will contain the knowledge and practices of each member society within their own Asset Management Frameworks.
- 3) The **Supporting Area** which contains reference to standards and other knowledge and practices that are considered to be outside the scope of Asset Management but which may influence the Asset Management practices of organizations around the world.

2.1 The Core

The **Core** of the Asset Management landscape comprises the Asset Management **Principles** and the Asset Management **Subjects**. The core has deliberately been kept to a minimum to prevent member organizations from having to re-work existing knowledge and practices.

The Asset Management **Principles** need to be part of the **Core** to ensure GFMAM member organizations have a common understanding of Asset Management; even though they use different models and techniques to describe this to suit their various member communities. These **Principles** are aligned to the emerging work being undertaken to develop an international standard on Asset Management, the ISO55000 series of standards and are described in Section 4.

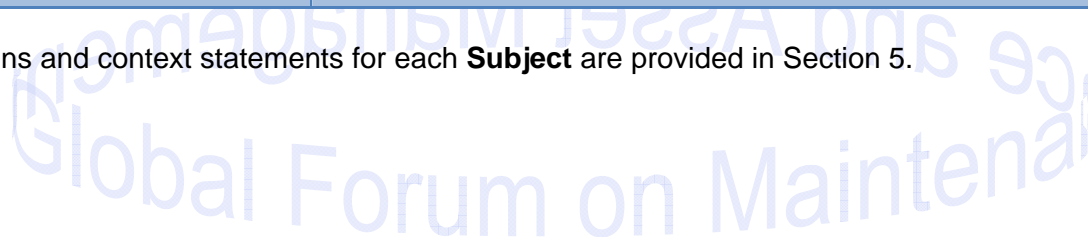
The Asset Management **Subjects** need to be part of the **Core** to enable GFMAM members to be able to compare, contrast and align their knowledge and practices. These **Subjects** are also intended to provide a common understanding on the scope of Asset Management. The list of **Subjects** has been derived from an international review of an extensive list of Asset Management models and assessment methodologies. This review identified 39 Asset Management **Subjects** that together describe the scope of Asset Management, which are shown in the table below.

It is essential to note that this is an arbitrary division of the discipline into individual Subjects for the purpose of understanding the breadth and components of Asset Management more clearly. They cannot be treated as self-standing and independent and it is not possible to understand Asset Management properly without addressing them all as a holistic integrated body of knowledge.

Subject Group	Asset Management Subject
Asset Management Strategy and Planning	Asset Management Policy
	Asset Management Strategy
	Demand Analysis
	Strategic Planning
	Asset Management Plan
Asset Management Decision-Making	Whole-life Cost & Value Optimisation
	Operations & Maintenance Decision-Making
	Capital Investment Decision-Making
	Resourcing Strategy & Optimisation
	Shutdowns & Outage Strategy & Optimisation
	Ageing Assets Strategy

Subject Group	Asset Management Subject
Lifecycle Delivery Activities	Technical Standards & Legislation
	Asset Acquisition & Commissioning
	Systems Engineering
	Configuration Management
	Maintenance Delivery
	Reliability Engineering
	Asset Operations
	Resource Management
	Shutdown & Outage Management
	Fault & Incident Response
	Asset Rationalisation and Disposal
Asset Knowledge Enablers	Asset Information Strategy
	Asset Knowledge Standards
	Asset Information Systems
	Asset Data and Knowledge
Organization and People Enablers	Contract & Supplier Management
	Asset Management Leadership
	Organizational Structure & Culture
	Competence & Behaviour
Risk & Review	Criticality, Risk Assessment and Management
	Contingency Planning & Resilience Analysis
	Sustainable Development
	Weather and Climate Change
	Asset & Systems Change Management
	Assets & Systems Performance & Health Monitoring
	Management Review, Audit & Assurance
	Accounting Practices
	Stakeholder Relations

Definitions and context statements for each **Subject** are provided in Section 5.



2.2 The Knowledge and Practices Area

The **Knowledge and Practices Area** of the Asset Management Landscape represents the knowledge and practices that GFMAM member organizations have developed or may wish to develop. It is intended that each GFMAM member organization will develop their own Asset Management Framework that is aligned with the **Core** of the Asset Management Landscape but is also aligned to the knowledge and practice of each member organization. The components that make up of these frameworks will be different across the different member organizations but are likely to include the items shown in the **Knowledge and Practices Area** of diagram 1. A brief description of these generic components is provided in Section 3 of this document.

These Asset Management Frameworks will allow member organizations to map their knowledge and practices to the Asset Management **Principles** and **Subjects** and enable these to be compared, contrasted and aligned with the knowledge and practices of other member organizations. It also allows member organisations to do a gap analysis of what they offer to their members.

The development of these Asset Management Frameworks should provide the following benefits to the members of the GFMAM member societies:

- Greater access to guidance and best practice material on Asset Management
- Common definitions relating to Asset Management and how Maintenance contributes to Asset Management
- Helps to bring Maintenance and Asset Management to the boardroom
- Greater consistency internationally on guidance on Asset Management
- Greater choice of internationally recognised qualifications through the International Accord
- Increased availability of international case studies and other knowledge

Part Two of this Asset Management Landscape description will contain guidance on how GFMAM member organizations can develop their own Asset Management Frameworks and to compare, contrast and align their knowledge and practices with other members.

2.3 The Supporting Area

The **Supporting Area** of the Asset Management Landscape contains standards, knowledge and practices that are not considered to be within the scope of Asset Management but that may influence Asset Management decisions. At this stage only a few example are shown on diagram 1 and this should not considered to be a comprehensive list.

3 Components of the Knowledge and Practices Area

The following sections provide an overview of the different components of the **Knowledge and Practices Area** of the Asset Management Landscape.

3.1 Conceptual Models

A conceptual model describes, at the highest level, the key aspects of Asset Management and how these interact with each other how they link to the overall corporate objectives and business plan.

Everyone's journey in the understanding and application of Asset Management is different, reflecting differing starting points, cultures, languages and objectives. Thus, differing conceptual models may therefore be helpful to present Asset Management in way that reflects more closely the background and current position of any member organization, whilst still retaining a common approach and content.

However, there are a number of common characteristics that a conceptual model should include which are:

- They should cover the whole scope of Asset Management as defined by the 39 **Subjects** of the Landscape
- They should be consistent with GFMAM Asset Management **Principles**
- They should consider the whole asset lifecycle
- They should reinforce alignment ('line of sight') to organizational goals and objectives
- They should reflect how the business environment and stakeholders will influence the Asset Management approach
- They should reinforce the importance of the integration of activities to deliver an overall output
- They should emphasise the need for measuring performance and continuous improvement.

Three example conceptual models from GFMAM member organizations are in shown in Appendix A that all share these characteristics.

3.2 Competence Frameworks

A competence framework contains the competence requirements that are needed for people working at different levels within an Asset Management organization. Competence requirements are typically described in a hierarchy, for example *Roles*, *Units* and *Elements* of competence. Competence frameworks sometimes define the *level* of competence required for different Asset Management roles or otherwise will define the process by which these should be defined within an organization looking to adopt the competence framework.

Competence frameworks are typically linked to an Asset Management body of knowledge and should be linked with the 39 **Subjects** within the Asset Management Landscape Core to demonstrate coverage of scope.

3.3 Asset Management Training Courses

Asset Management Training courses can be described within an Asset Management Framework by linking this training to the 39 **Subjects** to demonstrate coverage of scope of each course. The training courses can also be linked to the *Units* and *Elements* of competence defined within the competence frameworks.

3.4 Asset Management Qualifications

Asset Management Qualifications will typically form part of an Asset Management Framework whether these qualifications are offered by the GFMAM member organizations or by third parties. Another GFMAM project (the International Accord) will provide the framework for assessing the *relevance* and *level* of different Asset Management Qualifications from providers around the world. The assessment of qualifications will be undertaken using the Asset Management Qualifications Framework which is fully mapped to the 39 **Subjects** in the Asset Management Landscape **Core**.

It is expected that Asset Management Qualifications included within a GFMAM Asset Management Framework will have been assessed using the International Accord. This will be particularly beneficial to multi-national organizations that are members of more than one GFMAM member organization and are seeking a common approach to Asset Management Qualifications globally.

3.5 Knowledge

Most GFMAM member organizations already have a Body of Knowledge, Knowledge Base, Knowledge Centre or other initiatives to collate and disseminate Knowledge, but the ability to compare, contrast, align and share information across member organizations is limited due to the different approaches used to develop these. Mapping the member organizations' Knowledge to the 39 **Subjects** in the Asset Management Landscape **Core** will facilitate the sharing of case studies, papers, how-to guides and best practices, thereby rapidly increasing the volume of material available to end users of the Knowledge.

3.6 Assessment Methods and Awards

As organizations adopt Asset Management they will rapidly want to develop their capabilities beyond the requirements of BSI PAS 55 and the emerging ISO55001 standard. It will be important for GFMAM member organizations to provide guidance to these organizations on a consistent way of assessing Asset Management Maturity across the 39 **Subjects** in the Asset Management Landscape **Core**.

GFMAM member organizations may have developed their own Assessment Methods that may also be used for Asset Management Awards, and there will be an increasing need to ensure these Assessment Methods are aligned with the 39 **Subjects** and are consistent across GFMAM member organizations.

4 Asset Management Principles

Although definitions of Asset and Asset Management are not part of the Asset Management Landscape **Core**, the following definitions are included to provide the context for the Asset Management **Principles** that follow. They are taken from the draft ISO55000, *Asset management - Overview, principles and terminology*. It is likely that these definitions will continue to evolve over the period before publication.

An **Asset** is defined in ISO 55000 as *‘something that has potential or actual value to an organization’*. The following notes are included as clarification:

NOTE 1 Value can be tangible or intangible, financial or non-financial; examples of assets include financial assets, human resource assets, physical assets, organization reputation, etc.

NOTE 2 Value includes consideration of risks and liabilities, and can be positive or negative at different stages of the asset's life

NOTE 3 For most organizations, physical assets usually refer to equipment, inventory and properties owned by the organization. Physical assets are the opposite of intangible assets, which are non-physical assets such as leases, brands, intellectual property rights, reputation or agreements.

Asset Management is defined in ISO 55000 as *‘coordinated activities of an organization to realise value from assets’*. The following notes are included as clarification:

NOTE 1 Value can be tangible or intangible, financial or non-financial

NOTE 2 Value includes consideration of risks and liabilities, and can be positive or negative at different times in the asset life

NOTE 3 Realisation of value will normally involve an optimization of costs, risks, opportunities and performance benefits.

NOTE 4 When asset outputs or required service levels are pre-determined and non-negotiable, or when value is negative (e.g. dominated by risks or liabilities), “realise value” can represent minimising the combination of costs and risks.

This is a much broader view, and a more challenging scope, than just the maintenance of physical equipment, or the maximising of yield from a financial portfolio. It encompasses **all asset types**, tangible and intangible, individual components or complex systems, and **all activities** involved in the asset's **life cycle** – everything from initial identification of requirements or opportunities, acquisition/creation, operations or utilization activities, asset stewardship or care/maintenance responsibilities, through to renewal or disposal and any remaining liabilities. Asset management is therefore holistic – it considers the whole picture rather than just individual contributions.

Where possible, the Asset Management **Principles** within the **Core** of the Asset Management Landscape will be aligned with ISO55000 but, as with the definitions above, these are subject to change as the ISO evolves.

The Asset Management **Principles** are:

1. Assets exist to provide value to the organization and its stakeholders

Asset management is not about the asset itself, it is about what the asset can do for the organization in achieving its short and long term objectives. Value is defined by the organization and its stakeholders, and can be both financial and non-financial in nature.

2. People are key determiners of asset value realization

A key differentiator in value realization is the organization's ability to recognise, develop, retain and reward their people for the management of assets. The output of an engaged workforce is far higher than that of a disengaged one. Engaged employees fully understand the organizational purpose and consistently achieve the objectives and goals.

3. An asset management organization is a learning organization

A culture of organizational learning and continual improvement is critical to the management of an ever changing asset mix and the competitive and social pressures focused on them. Learning organizations have transparency in the decision making process relating to asset management. This approach can be considered as a view of continual improvement that focuses on people, understanding of their role within the organization; their ability to look at the processes and resources provided, and their ability to challenge those arrangements and not feel threatened.

4. Asset management requires understanding of the organization's operating context and opportunities

Asset management should be totally integrated within the organization and be based on a sound knowledge of its internal structures and processes, as well as its external drivers (including regulatory, political, socio-economic, technological and market forces).

5. Asset management decisions consider both short-term and long-term economic, environmental and social impacts

In its day to day decision making processes the organization should consider any short term requirements and opportunities, and objectively weigh them up against their long term impacts (with respect to risk, cost and performance, within the economic, political, environmental and social perspective).

6. Asset management transforms strategic intent into technical, economic and financial decisions and actions

All actions performed at a technical, economic and financial level should be aligned with the organization's strategic intent. It is the connection between the top and the bottom that enables the organization to consistently achieve its defined strategic goals. An organization should facilitate their common alignment through regular communication mechanisms.

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5 Asset Management Subjects

5.1 Asset Management Strategy and Planning

5.1.1 Asset Management Policy

Definition: The principles and requirements derived from and consistent with the organizational strategic plan that the organization will use to manage its physical assets,

Context: The AM Policy provides a framework for the development and implementation of the asset management strategy and the setting of the asset management objectives consistent with any organizational constraints.

5.1.2 Asset Management Strategy

Definition: The strategic objectives and approach to the management of the physical assets of the business that will be used to achieve the organizational strategic plan.

Context: Such strategies often incorporate a long-term optimized approach to management of the physical assets, and may include specific asset management objectives based upon scenario analyses that includes information on the expected economic, environmental and social performance of an organization's asset portfolio.

5.1.3 Demand Analysis

Definition: The processes an organization uses to both assess and influence the demand for, and level of service from, an organization's assets.

Context: Such analyses may include asset utilisation, capacity, reliability and safety. The analyses also consider the use of non asset solutions. Where an asset solution is recommended, Stakeholder requirements are documented and may include an assessment of the gap between the capacity and performance of the current assets and the Stakeholder requirements.

5.1.4 Strategic Planning

Definition: The processes an organization uses to undertake strategic asset management planning.

Context: Such a process may consider how to determine long-term renewal, enhancement and maintenance work volumes and costs with appropriate levels of confidence based on the criticality of different asset types and the needs of the business. This may include assessing how the organization addresses the requirements identified during demand analysis and how the strategic AM plan supports the overall organizational strategic plan

5.1.5 Asset Management Plan

Definition: The plans that specify the activities and resources, responsibilities and timescales and risks for the achievement of the asset management objectives

Context: The plans that specify the activities and resources, responsibilities and timescales and risks for the achievement of the asset management objectives

5.2 Asset Management Decision-Making

5.2.1 Whole-life Cost & Value Optimisation

Definition: The activities undertaken by an organization to trade-off the costs and benefits of different renewal and maintenance interventions.

Context: Where the activities may include the determination of the optimum combination of activities to sustainably deliver the required level of service

5.2.2 Operations & Maintenance Decision-Making

Definition: The process and activities undertaken to define appropriate maintenance requirements.

Context: Such analyses may include the identification and definition of maintenance and inspection activities to mitigate the risk (safety, reliability and environmental). All maintenance tasks shall be technically effective in controlling the risks and be cost effective in implementation - a Return on Investment criteria may be used for this purpose.

5.2.3 Capital Investment Decision-Making

Definition: The activities undertaken by an organization to determine the capital expenditure requirements necessary to deliver the strategic plan.

Context: The activities may include whole-life cost and benefit analysis to an appropriate level of detail based on the criticality of different assets.

5.2.4 Resourcing Strategy & Optimisation

Definition: The activities undertaken by an organization to optimize the use of people, plant, tools and materials to deliver the required asset management activities.

Context: The activities may include the evaluation of work priorities and risks and the optimization of spares and inventory management

5.2.5 Shutdowns & Outage Strategy & Optimisation

Definition: The activities undertaken by an organization to develop an optimized strategy for shutdowns or outages.

Context: The activities may take into account the trade-off between the costs of the shutdown or outage, the risks associated with work being undertaken and the efficiencies gained through the use of longer shutdowns and outages. See related subjects 16 and 20 under lifecycle delivery.

5.2.6 Ageing Assets Strategy

Definition: The activities undertaken by an organization to develop the appropriate interventions for assets approaching the end of their economic life.

Context: The activities may include an analysis of life extension options, future needs for the asset, costs of disposal and an assessment of the cost and risks of alternative interventions.

5.3 Lifecycle Delivery Activities

5.3.1 Technical Standards & Legislation

Definition: The processes used by an organization to ensure its asset management activities are compliant with the relevant technical standards and legislation.

Context: The processes used by an organization to ensure its asset management activities are compliant with the relevant technical standards and legislation.

5.3.2 Asset Acquisition & Commissioning

Definition: An organization's processes for the acquisition, installation and commissioning of assets.

Context: Those processes may include the approval and releasing of funding, project and programme management methodologies, the arrangements for hand-back to operations and the monitoring and capture of actual costs and benefits.

5.3.3 Systems Engineering

Definition: System engineering is a robust approach to the design, creation, and operation of systems.

Context: The approach consists of identification and quantification of system goals, creation of alternative system design concepts, performance of design trades, selection and implementation of the best design, verification that the design is properly built and integrated, and post-implementation assessment of how well the system meets (or met) the goals

5.3.4 Configuration Management

Definition: A management process for establishing and maintaining consistency of a product's physical and functional attributes with its design and operational information throughout its life.

Context: A management process for establishing and maintaining consistency of a product's physical and functional attributes with its design and operational information throughout its life.

5.3.5 Maintenance Delivery

Definition: The management of maintenance activities including both preventive and corrective maintenance management methodologies.

Context: The organization of maintenance activities within an agreed policy including definition of maintenance specifications and schedules, maintenance execution procedures, procedures for missed maintenance and the capture and utilisation of maintenance and inspection measurements and results.

5.3.6 Reliability Engineering

Definition: The processes for ensuring that an item shall operate to a defined standard for a defined period of time in a defined environment.

Context: The processes for ensuring that an item shall operate to a defined standard for a defined period of time in a defined environment.

5.3.7 Asset Operations

Definition: The processes used by an organization to operate its assets to achieve the business goals.

Context: Such processes should provide the required level of safety and ensure appropriate cooperation with maintenance programme.

5.3.8 Resource Management

Definition: The processes used by an organization to manage its resources in support of its asset management plans.

Context: The processes enable work to be carried out efficiently and safely.

5.3.9 Shutdown & Outage Management

Definition: The processes used by an organization to manage shutdowns or outages.

Context: The processes should enable work to be carried out efficiently and safely in accordance with the shutdown / outage strategy

5.3.10 Fault & Incident Response

Definition: The processes used by an organization to predict and respond to failures and incidents.

Context: The processes may include the ability to predict and respond to failures and incidents in a systematic manner including incident detection and identification, use of standard responses, temporary and permanent repair procedures, site access and hand-back, reporting, updating of asset information systems and response evaluation

5.3.11 Asset Rationalisation and Disposal

Definition: The processes used by an organization to examine opportunities for asset rationalisation due to changes in performance and capacity requirements.

Context: This decision process includes the consideration of costs and benefits of rationalisation using a whole life approach, the impact of asset rationalisation on other infrastructure and the processes for disposal of assets

5.4 Asset Knowledge Enablers

5.4.1 Asset Information Strategy

Definition: The approach to the definition, collection, management, reporting and overall governance of asset information necessary to support the implementation of an organization's asset management strategy

5.4.2 Asset Knowledge Standards

Definition: The specification of a consistent structure and format for collecting and storing asset knowledge.

Context: This may include a common asset hierarchy, standards that define condition grades, common methods for categorising and recording asset defects and failures and the processes for consistently recording the performance and utilisation of assets.

5.4.3 Asset Information Systems

Definition: The asset information systems an organization has in place to support the asset management activities and decision-making processes in accordance with the asset information strategy.

5.4.4 Asset Data and Knowledge

Definition: The data and knowledge held within an organization's asset information system.

Context: May include other media and including the extent to which the data is populated to an agreed level of quality and accuracy and in accordance with asset knowledge standards.

5.5 Organization and People Enablers

5.5.1 Contract & Supplier Management

Definition: The management and development of supply organizations.

Context: This includes decisions on what should and should not be contracted out, how requirements are defined, what different forms of contract are used, how suppliers are appraised and selected, how supplier performance is measured and assured and how supplier relationships and competences are developed

5.5.2 Asset Management Leadership

Definition: The leadership of the organizations in promoting a whole-life asset management approach to the stewardship of an organization's assets.

Context: This process particularly seeks the involvement of the Board of Directors and senior management in embedding asset management goals and aspirations throughout the organization

5.5.3 Organizational Structure & Culture

Definition: The structure and culture of an organization in terms of its ability to deliver effective asset management.

Context: Includes concepts of management structure, specific inclusion of asset management responsibilities within roles and individuals and teams and the processes used to incentivise individuals and teams to deliver effective asset management and the overall culture of the organization

5.5.4 Competence & Behaviour

Definition: The processes used by an organization to systematically develop and maintain an adequate supply of competent and motivated people to fulfil its asset management objectives.

Context: This includes arrangements for managing competence in the boardroom and the workplace, recruitment and selection, training and development, assessment and appraisal, accreditation and control of work performance.

5.6 Risk & Review

5.6.1 Criticality, Risk Assessment and Management

Definition: The policies and processes for identifying, quantifying and mitigating risk and enhancing opportunities.

Context: This includes the extent to which risk management processes are adopted across the organization, quantification of risks using probability and consequence analysis, how risks are mitigated to ensure they are ALARP and how risk mitigations are monitored and controlled. Risks include safety, financial, environmental, occupational health & safety and reputation risks.

5.6.2 Contingency Planning & Resilience Analysis

Definition: The processes and systems put in place by an organization to ensure it is able to continue to operate its assets to deliver the required level of service in the event of an adverse impact such as major weather incident, terrorism or major power failure

5.6.3 Sustainable Development

Definition: An enduring, balanced approach to economic activity, environmental responsibility and social progress to ensure all Asset Management activities are sustainable in perpetuity

5.6.4 Weather and Climate Change

Definition: The influence of environmental factors on all aspects of an organization's asset management processes.

Context: This includes how climate and weather information are used in policy formulation, operational procedures and risk management

5.6.5 Asset & Systems Change Management

Definition: An organization's processes for reviewing the impact on its asset management system of any major change.

Context: Includes the development of change management plans to mitigate risk.

5.6.6 Assets & Systems Performance & Health Monitoring

Definition: The processes and measures used by an organization to assess the performance and health of its assets using performance indicators.

5.6.7 Management Review, Audit & Assurance

Definition: An organization's processes for reviewing and auditing the effectiveness of its asset management processes.

Context: Includes internal assurance processes, audit policies and procedures, internal and third party audits, processes for reviewing audit findings and corrective actions and the use of external benchmarking.

5.6.8 Accounting Practices

Definition: An organization's processes for defining and capturing maintenance and renewal unit costs and the methods used by an organization for the valuation and depreciation of its assets

5.6.9 Stakeholder Relations

Definition: The methods an organization uses to engage with stakeholders to articulate different scenarios within its strategic plans.

Context: These methods focus on costs and outputs associated with each scenario in order to understand their priorities and to select scenarios that most closely meet their aspirations.

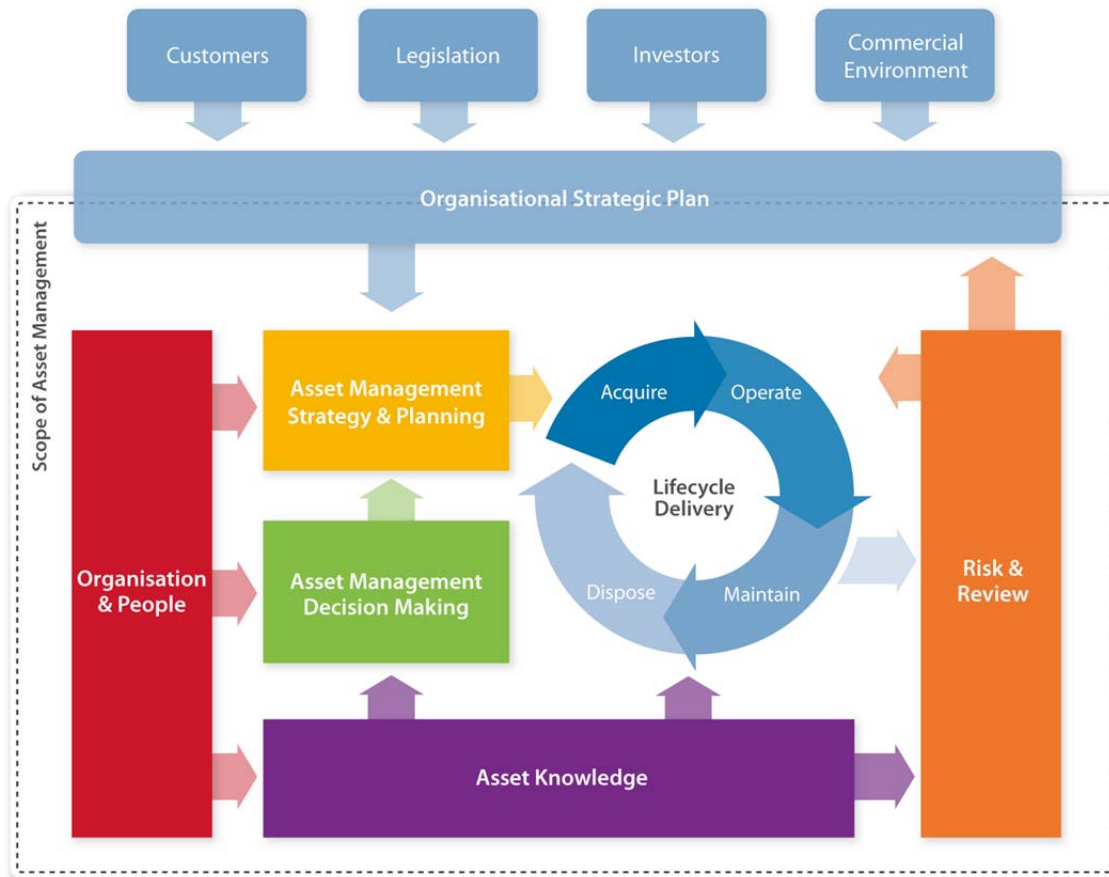
5.7 Review Process

In order to have a stable background for other projects being undertaken by GFMAM, the list of 39 **Subjects** will be retained as it is for two years and reviewed in 2014 against the publication of ISO55000.

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6 Appendix A

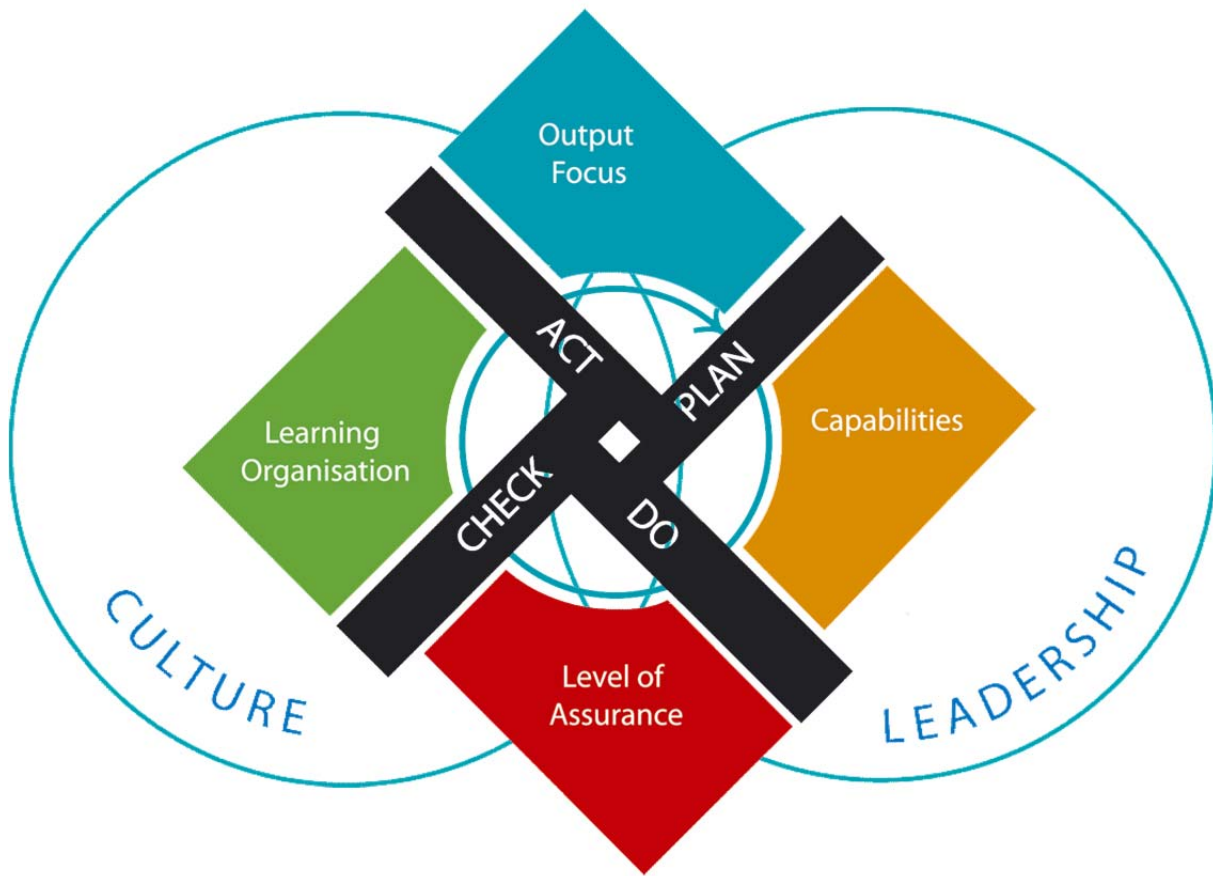
Example conceptual models from three of GFMAM's member organizations are shown below.



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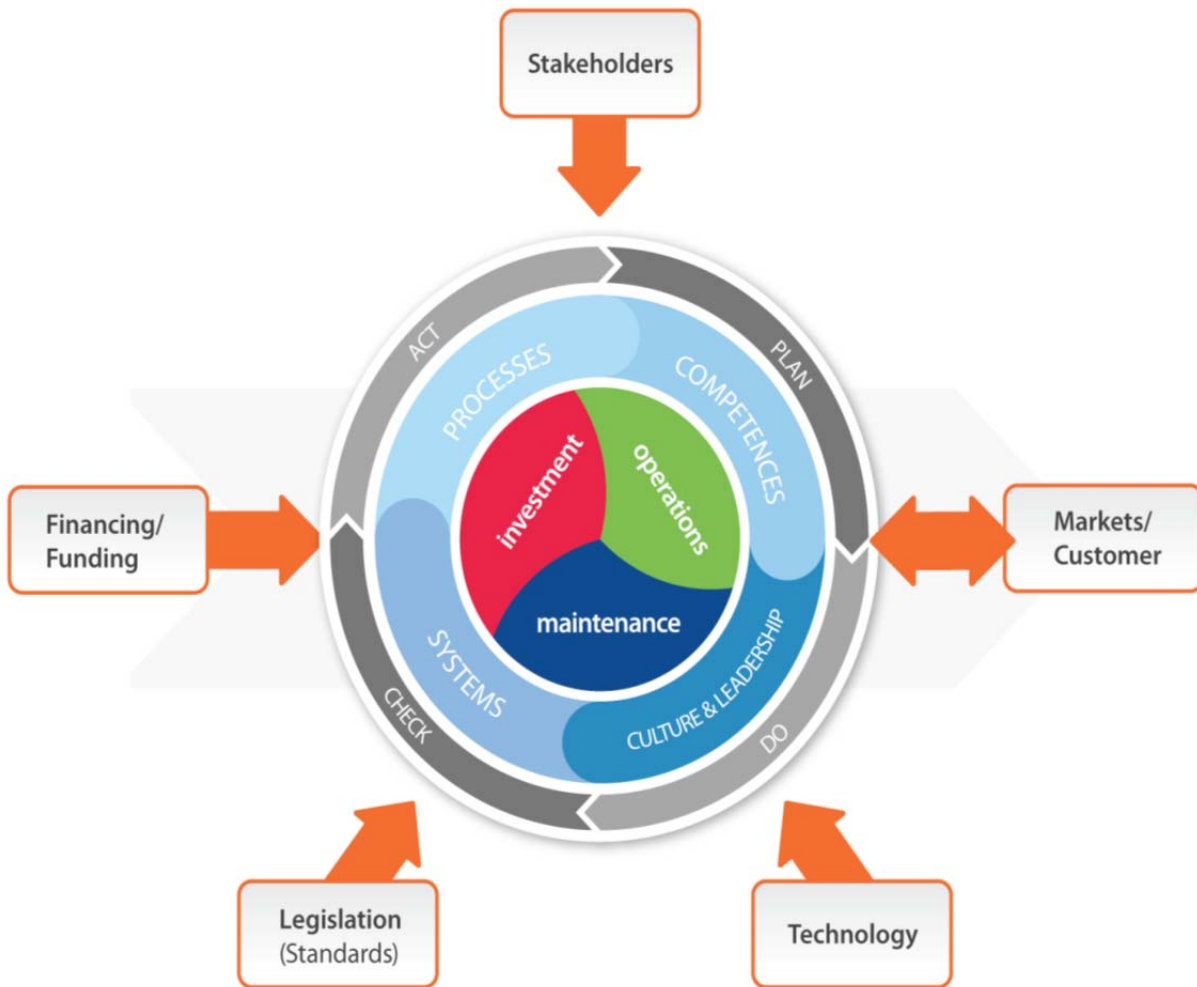
The IAM Conceptual Model for Asset Management

The IAM Conceptual Model for Asset Management
Global Forum on Maintenance & Asset Management



Asset Management Council "Asset Capability Concept Model"

Asset Management Council
Global Forum on Maintenance



EFNMS Conceptual Model for Asset Management

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