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Asset management — Overview, principles and terminology

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO XXXX-X was prepared by Project Committee ISO/PC 251, *Asset Management*

ISO XXXX consists of the following parts, under the general title *Asset management*:

- Part X *Overview, principles and terminology*
- Part Y *Requirements*
- Part Z *Guidelines for the application of ISO XXXX- Part Y*

Introduction

For the purposes of this Part of ISO XXXX, asset management is defined in 3.2 as the:

systematic and coordinated activities and practices through which an organization optimally and sustainably manages its assets and asset systems, their associated performance, risks and expenditures over their life cycles for the purpose of achieving its organizational strategic plan

where an organizational strategic plan is defined in 3.25 as the:

overall long-term plan for the organization that is derived from, and embodies, its vision, mission, values, business policies, stakeholder requirements, objectives and the management of its risks

Effective implementation of asset management requires a disciplined approach which enables an organization to maximise value and deliver its strategic objectives through managing its assets over their whole life cycles. This includes determination of appropriate assets to acquire or create in the first place, how best to operate and maintain them, and the adoption of optimal renewal, decommissioning and/or disposal options.

This Part of ISO XXXX provides an overview to the field of asset management, as well as detailing the core principles on which this subject is based; in addition, it defines the terminology for use in this field.

This is the first Part of ISO XXXX on the topic of asset management, out of a family of three such standards; the others being:

ISO XXXX – Part Y: Asset management – Requirements

ISO XXXX – Part Z: Asset management – Guidelines on the application of ISO XXXX – Part Y

It is recommended that these other two Parts of ISO XXXX be read in conjunction with this one.

Asset management — Overview, principles and terminology

1 Scope *(as amended at the "preliminary" meeting)*

This Part of ISO XXXX provides:

- a) an overview of the International Standard on Asset management and its Parts;
- b) an introduction to management systems for asset management;
- c) a description of the underlying principles of asset management
- d) examples of the application of asset management principles,
- e) a brief description of the Plan-Do-Check-Act (PDCA) methodology and its application within the International Standard on Asset management and its Parts; and
- f) details of the terms and definitions for use in the International Standard on Asset management and its Parts.

This Part of ISO XXXX is applicable to all types and sizes of organization.

This Part of ISO XXXX consists of guidance and recommendations and is not intended to be used alone for certification, regulatory, or contractual use.

2 Overview and principles

2.1 The asset management family of standards

Text to be developed

2.2 An introduction to asset management

This definition of asset management given in 3.2 represents a significantly greater scope than just the maintenance or care of physical assets, and is closer to the central purpose of an organization. Good asset management considers and optimizes the conflicting priorities of asset utilization and asset care, of short-term performance opportunities and long-term sustainability, and between capital investments and subsequent operating costs, risks and performance. "Life cycle" asset management is also more than simply the consideration of capital costs and operating costs over pre-determined asset "life" assumptions. Truly optimized, whole life asset management includes risk exposures and performance attributes, and considers the asset's economic life as the result of an optimization process (depending upon the design, utilization, maintenance, obsolescence and other factors).

2.3 The principles of asset management

Asset management is an holistic view and one that can unite different parts of an organization together in pursuit of shared strategic objectives. The key principles and attributes of successful asset management (see **Figure 1**) can be explained as follows:

- **holistic**: looking at the whole picture, i.e. the combined implications of managing all aspects (this includes the combination of different asset types, see **Figure 3**, the functional interdependencies and contributions of assets within asset systems, see **Figure 4**, and the different asset life cycle phases and corresponding activities), rather than a compartmentalized approach;
- **systematic**: a methodical approach, promoting consistent, repeatable and auditable decisions and actions;
- **systemic**: considering the assets in their asset system context and optimizing the asset systems value (including sustainable performance, cost and risks) rather than optimizing individual assets in isolation;
- **risk-based**: focussing resources and expenditure, and setting priorities, appropriate to the identified risks and the associated cost/benefits;
- **optimal**: establishing the best value compromise between competing factors, such as performance, cost and risk, associated with the assets over their life cycles;
- **sustainable**: considering the long-term consequences of short-term activities to ensure that adequate provision is made for future requirements and obligations (such as economic or environmental sustainability, system performance, societal responsibility and other long-term objectives);
- **integrated**: recognizing that interdependencies and combined effects are vital to success. This requires a combination of the above attributes, coordinated to deliver a joined-up approach and net value.

Figure 1 – Key principles and attributes of asset management



2.4 Application of the asset management principles

2.4.1 Enablers for good asset management

The following enabling elements are considered to be essential for the successful implementation of these principles:

- an organizational structure that facilitates the implementation of these principles with clear direction and leadership;
- staff awareness, competency, commitment and cross-functional coordination;
- adequate information and knowledge of asset condition, performance, risks and costs, and the interrelationships between these.

Good asset management requires coherent direction and guidance from top management and delivery by appropriately empowered and competent employees. Unless a clearly articulated organizational direction and set of priorities are provided, it is very difficult to determine how best to manage the assets. Conflicting priorities and messages, and/or the lack of staff understanding of such aspirations, or the lack of cross-functional collaboration to deliver them, can lead to inefficient and ineffective working and wasted effort and resources, as well as considerable frustration and de-motivation. For some organizations this may require a change in culture, new behaviours and ways of thinking. There are, therefore, a number of important “enablers” for good asset management. These have a significant influence on the effectiveness and efficiency of an asset management system and include:

- structure, authority and responsibilities;
- outsourcing of asset management activities;
- training, awareness and competence;
- communication, participation and consultation;
- asset management system documentation;
- information management;
- risk management;
- legal and other requirements;
- management of change.

2.4.2 Decision making in asset management

Good decision making is also vital in joined-up asset management. This requires adequate information about the assets and their associated strengths, weaknesses, opportunities and threats. In particular, it is important to understand the relationship between asset management activities and their actual or potential effect upon short-term and long-term costs, risks, performance and asset life cycles (or asset system sustainability). Only then can informed decisions be made about the optimal mix of life cycle activities (such as design/selection, acquisition/construction, utilization, maintenance, renewal, modification/enhancement, decommissioning or disposal). In many organizations, there will be more potential tasks to carry out than resources, time or budgets will permit. The continuous optimizing and prioritizing of tasks and plans are a way of life for such organizations.

There are numerous tools and methodologies associated with asset management that are widely available and employed by organizations. Such tools include value engineering, life cycle costing, reliability centred maintenance, risk based inspection, total productive maintenance, cost/risk optimization, etc. However, it is essential for organizations to recognize that good asset management cannot be achieved successfully through the use of these tools alone, and no single such tool can address, control or solve all the problems.

2.4.3 Asset-related risks

Where possible, performance requirements and significant risks, such as asset failure, need to be quantified in financial terms to enable like-for-like comparison and for the associated expenditure to be set accordingly. For example, in some instances it could be more cost effective to allow an asset to run to failure, whilst in other cases an increase in maintenance expenditure or capital investment might be more appropriate. It is not always possible to place a direct monetary value on the risks or performance associated with asset related expenditure. However, organizations can do so indirectly by turning the question around and asking, for example, "What would we be prepared to pay to avoid harm to our reputation?"

2.4.4 Sustainability

Sustainable development is an increasingly important consideration within this overall context. In this respect, sustainable development is concerned with ensuring an appropriately long-term approach to economic activity, environmental responsibility and social progress. This is set out more fully in BS 8900.

The reasons for this increasing importance can be found in the strong links between effective asset management and long-term sustainability in several manifestations:

- Effective management of a nation's infrastructure is an underlying component of successful economies. Without appropriate development of this infrastructure over time, the economy will suffer.
- Asset managing organizations can have a huge impact on the environment. This is true from the viewpoint of the raw materials they consume (whether it is water resources, fossil fuels or other raw materials used) or the emissions released in the construction and operation of these assets (both in the form of waste materials and greenhouse gases that may contribute to climate change).
- Physical infrastructure assets provide a foundation stone of societal development, delivering power and warmth, water and sanitation, and the building structures and transport links that allow society to flourish. As such, physical assets are a key enabler for many social structures. Much of this infrastructure is of long life and delivers service from one generation to the next, helping to ensure that these societal structures are enduring.

2.4.5 Asset management challenges

In order to achieve its organizational strategic plan and provide the assurance its stakeholders seek, an organization needs to ask, and to be able to answer, the following key questions:

- Do we know what (existing) assets we have, where they are, what condition they are in, what function they perform and their contribution to value? Do we know the quality of this information?
- Do we know what we want from our assets in the short, medium and long-term?
- Can our assets deliver our asset management objectives cost effectively?
- Are we getting the most value from our assets? (How could we get more value for money from them?)
- Do we have enough capability (or over capacity) in our asset portfolio? Have some assets or asset systems become redundant, underused, unprofitable or too expensive?

- Are we confident that the risks of our assets causing harm to people and the environment are tolerable and at organizational/legally accepted levels?
- Is our asset-related expenditure (capital investment and operating costs) insufficient, excessive or optimal and correctly assigned across the asset portfolio?
- Can we readily evaluate the benefits (performance, risk reduction, compliance, sustainability) of proposed work or investment and, conversely, quantify the total impact to the organization of not performing such work, not investing or delaying such actions?
- Are we allowing future problems to develop (such as performance deterioration, risks, or expenditure requirements) in our efforts to obtain short-term gains?
- Have we given due consideration to the other aspects of the organization that affect our asset management plan(s), such as people, knowledge, finance and intangible assets? Conversely, have we considered the impact of our asset management plan(s) on these other aspects?
- Do we review the appropriateness of our asset management strategy in the light of changes in the operating, regulatory and financial environment?
- Are we continually improving our asset management system performance, and realizing the benefits of the improvements? Do we know what and where improvements will be most effective?
- Do we have the necessary asset management policy, strategy and plan to ensure that we manage our assets in a sustainable way?
- Does our approach to sustainable management of the assets take appropriate account of the needs of our stakeholders and are we open in our communication with these stakeholders?
- Are the working conditions, skills and wellbeing of our employees and contracted service providers given appropriate consideration?
- Are we optimizing our asset management process(es) and/or procedures in the light of the latest developments in technology and innovation?
- Can we answer all of these questions confidently, with a clear audit trail, and demonstrate the answers to our stakeholders?

2.4.6 Types of assets

This Part of ISO XXXX is focussed primarily on the management of physical assets, and other asset types are therefore only considered in this Part of ISO XXXX insofar as they affect the optimal management of the physical assets. These interdependences are extremely important in the holistic delivery of asset management objectives and, ultimately, the organizational strategic plan.

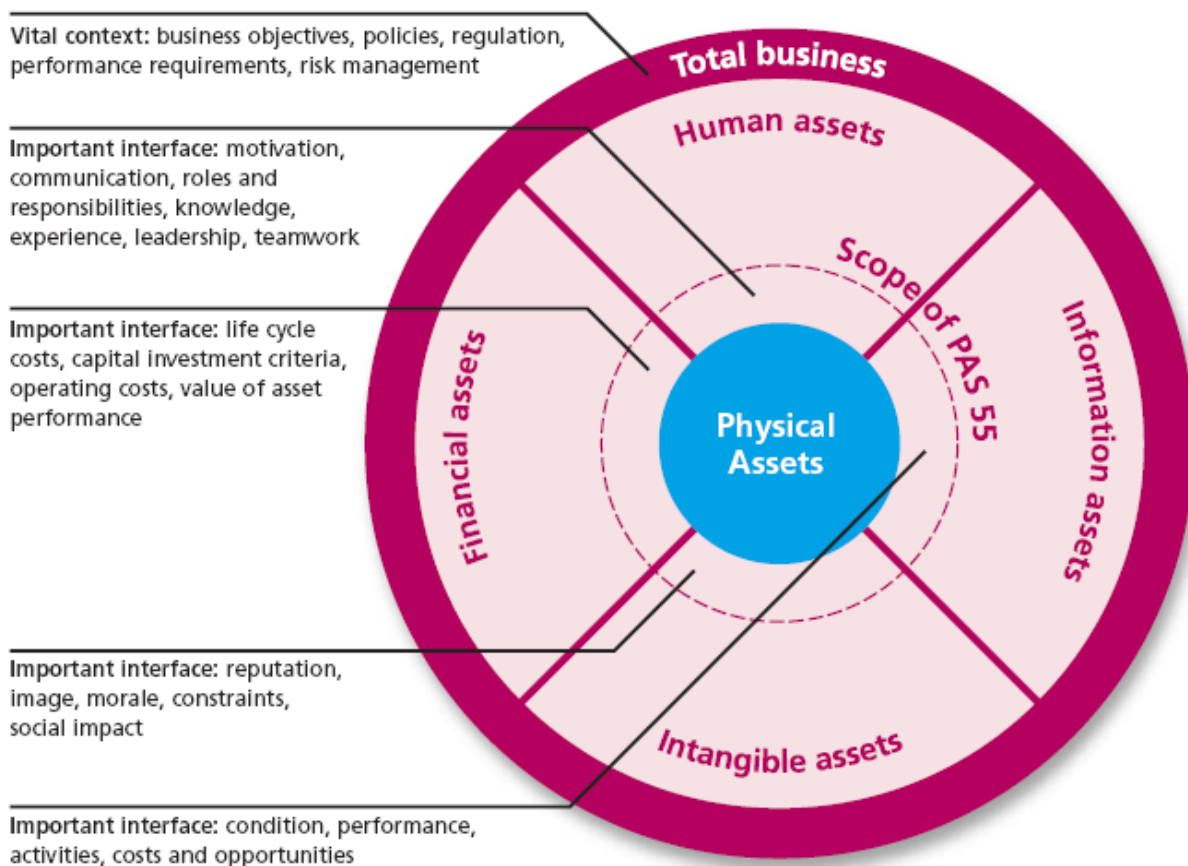
These asset types and the vital understanding of their business context are illustrated in **Figure 2**. The asset management system should recognize such interdependencies and make appropriate provision for the indirect “enablers” that are required to optimize the value of physical assets. Conversely, organizations that are heavily dependent upon physical assets should also recognize that deficiencies in the management of other asset types may have a profound impact on the overall or long-term performance of their physical assets and thus their organizational performance. Such organizations should recognize that all assets will need to be managed in an integrated and holistic manner.

For example:

- **human assets:** the behaviours, knowledge and competence of the workforce have a fundamental influence on the performance of the physical assets;

- **financial assets:** financial resources are required for infrastructure investments, operation, maintenance and materials;
- **information assets:** good quality data and information are essential to develop, optimize and implement asset management plan(s);
- **intangible assets:** the organization’s reputation and image can have a significant impact on infrastructure investment, operating strategies and associated costs.

Figure 2 – Focus and business context of ISO XXXX in relation to other categories of assets



2.4.7 The asset management system

An integrated asset management system is vital for organizations that are heavily dependent upon physical assets in the creation or delivery of their services or products. Large numbers of assets, or diversity characteristics of assets and asset systems, particularly in an environment of conflicting stakeholder expectations, further increase the importance of having a systematic approach to managing the asset portfolio.

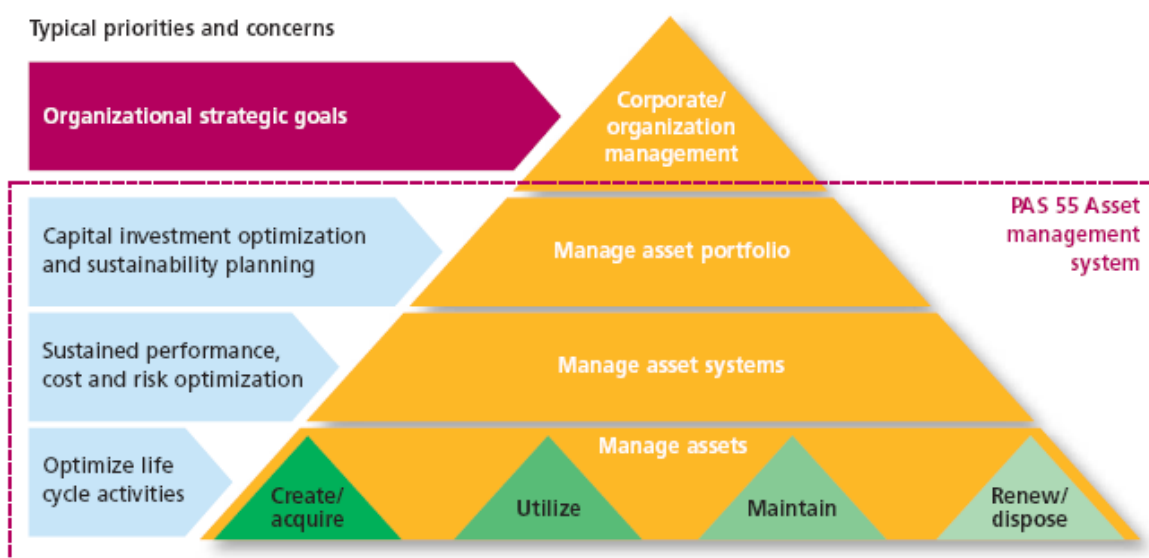
There are different levels at which asset units can be identified and managed – ranging from discrete equipment items or components to complex functional systems, networks, sites or diverse portfolios (see **Figure 3**). Many organizations identify assets as equipment units (sometimes referred to as “maintenance significant items” – the unit at which maintenance tasks or work orders are directed), whereas others use the term to describe functional systems or even integrated business units. It does not matter at what such level an asset unit is identified, provided that:

- the organization’s goals and strategic priorities are directly reflected in the asset management plan(s);
- the asset life cycle costs, risks and performance are considered and optimized. (This will usually require definition of clear asset boundaries for measuring performance, life cycle expenditures and attributing associated risks.);
- the aggregations of assets (through integrated asset systems) and contributions of value (as part of the organization’s portfolio) are managed in a coordinated and consistent manner;
- all parts of the organization understand and use the same terminology in relation to the assets, their components and their asset system groupings or aggregations.

This hierarchy brings challenges and opportunities at different levels. For example, discrete equipment items may have identifiable individual life cycles that can be optimized, whereas asset systems may have an indefinite horizon of required usage. Sustainability considerations should, therefore, be part of optimized decision making. A larger organization may also have a diverse portfolio of asset systems, each contributing to the overall goals of the organization, but presenting widely different investment opportunities, performance challenges and risks. An integrated asset management system is therefore essential to coordinate and optimize the diversity and complexity of assets in line with the organization’s objectives and priorities.

The asset management focus will tend to differ at the various levels of asset integration in an organization. **Figure 3** shows examples of priorities that might be evident at the different levels of asset integration and management

Figure 3 – Levels of assets and their management



Increasingly, stakeholders (such as customers, the public, regulators and shareholders) are seeking assurance that the asset management system will deliver safety, continuity of service and financial performance. Organizations are ever more sensitive to the impact that adverse public opinion and negative publicity can have on their business when assets or asset systems fail. For most organizations, therefore,

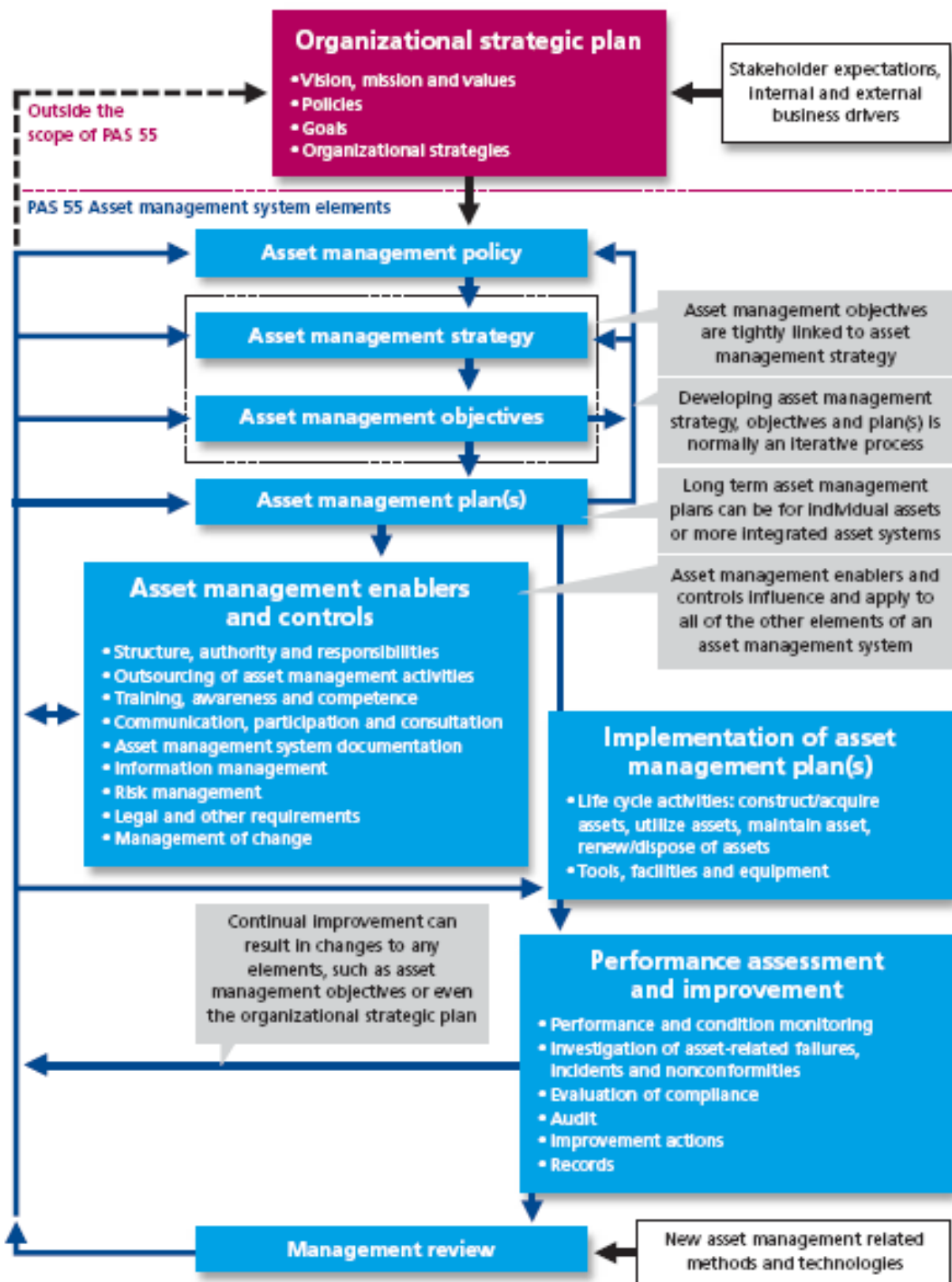
establishing, implementing and maintaining a formal asset management system is increasingly becoming a necessity rather than an option.

An asset management system is primarily designed to support the delivery of an organizational strategic plan, in turn aiming to meet the expectations of a variety of stakeholders. The organizational strategic plan is the starting point for development of the asset management policy, strategy, objectives and plans. These, in turn, direct the optimal combination of life cycle activities to be applied across the diverse portfolio of asset systems and assets (in accordance with their criticalities, condition and performance). This top-down connective thread is a key feature of an asset management system – the clear “line of sight” from organization direction and goals down to individual, day-to-day activities. Similarly, the bottom-upwards monitoring of asset characteristics, problems, risks and opportunities should provide the factual basis for adjusting and refining realistic asset management strategies and plans, through a process of continual improvement. Furthermore, such asset management realities should inform and influence the expectations of stakeholders and the aspirations of the organizational strategic plan.

The operational elements (**Figure 4** shows such typical elements) and processes of an asset management system should be developed to enable such connectivity, integration, total value optimization and continual improvement.

There is no explicit requirement for these elements to be documented separately, and the requirements of ISO XXXX – Y can be achieved through documents that are not exclusive to asset management. However, the documentation describing how physical assets will be managed to achieve the organizational strategic plan needs to be adequately informative and unambiguous. The asset management policy, in particular, mandates the direction, principles and absolute requirements, and is a key driver for the asset management system.

Figure 4 Typical elements of an asset management system

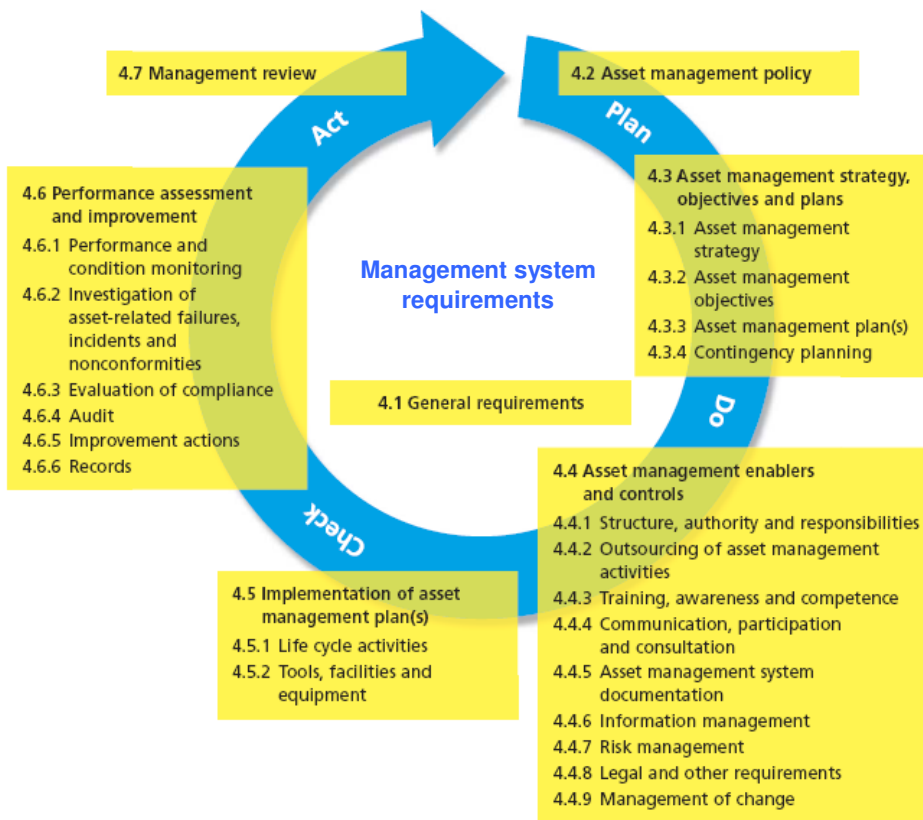


2.5 The Plan-Do-Check-Act (PDCA) methodology

In order to enable organizations to align or integrate their asset management systems with other related management systems, such as for quality management (ISO 9001) and environmental management (ISO 14001), the requirements of ISO XXXX-Y are arranged within the Plan-Do-Check-Act (PDCA) framework as follows (see Figure 6):

- **Plan** establish the asset management strategy, objectives and plans necessary to deliver results in accordance with the organization’s asset management policy and the organizational strategic plan
- **Do** establish the enablers for implementing asset management (e.g. asset information management system(s)) and other necessary requirements (e.g. legal requirements) and implement the asset management plan(s)
- **Check** monitor and measure results against asset management policy, strategy objectives, legal and other requirements; record and report the results
- **Act** take actions to ensure that the asset management objectives are achieved and to continually improve the asset management system and asset management performance

Figure 6 Structure of ISO XXXX-Y



3 Terms and definitions

A term in a definition or note which is defined elsewhere in this clause is indicated by boldface followed by its entry number in parentheses. Such a boldface term may be replaced in the definition by its complete definition.

3.1 asset(s)

plant, machinery, property, buildings, vehicles and other items that have a distinct value to the organization

NOTE 1 For levels of assets, asset systems and asset portfolio, see Figure 3.

NOTE 2 This definition includes any software code that is critical to the delivery of the function of the asset.

3.2 asset management

systematic and coordinated activities and practices through which an organization optimally and sustainably manages its assets and asset systems, their associated performance, risks and expenditures over their life cycles for the purpose of achieving its organizational strategic plan

3.3 asset management information

meaningful data relating to assets and asset management

NOTE Examples of asset management information include asset registers, drawings, contracts, licences, legal, regulatory and statutory documents, policies, standards, guidance notes, technical instructions, procedures, operating criteria, asset performance and condition data, or all asset management records.

3.4 asset management information system

system for the storage, processing and transmission of **asset management information**

NOTE The storage or transmission of asset information can be achieved via multiple types of media.

3.5 asset management objective(s)

- a) specific and measurable outcome or achievement required of **asset system(s)** in order to implement the **asset management policy** and **asset management strategy**; and/or
- b) detailed and measurable level of performance or condition required of the **assets**; and/or
- c) specific and measurable outcome or achievement required of the **asset management system**.

3.6 asset management performance

measurable results of an organization's management of its assets and/or asset system(s)

NOTE 1 Results are normally measured against the organization's strategic plan, asset management policy, asset management strategy, asset management objectives and/or other asset management performance requirements.

NOTE 2 Asset management performance may include the effectiveness of expenditures, the reliability, efficiency, quality, sustainability and value of the assets and their utilization, and/or the impact of assets and asset management upon the organization's financial performance, health and safety performance, environmental performance, compliance and reputation.

NOTE 3 Asset management performance measurement includes measuring the effectiveness of the organization's asset management system

3.7 asset management plan

document specifying activities and resources, responsibilities and timescales for implementing the **asset management strategy** and delivering the **asset management objectives**

3.8 asset management policy

principles and mandated requirements derived from, and consistent with, the **organizational strategic plan**, providing a framework for the development and implementation of the **asset management strategy** and the setting of the **asset management objectives**

3.9 asset management strategy

long-term optimized approach to management of the assets, derived from, and consistent with, the **organizational strategic plan** and the **asset management policy**

NOTE 1 The asset management strategy converts the objectives of the organizational strategic plan and the asset management policy into a high-level, long-term action plan for the assets and/or asset system(s), the asset portfolios and/or the asset management system

NOTE 2 The high-level, long-term action plans for the assets and the asset management objectives are normally the outputs of the asset management strategy. These elements together form the basis for developing more specific and detailed asset management plan(s).

3.10 asset management system

organization's **asset management policy**, **asset management strategy**, **asset management objectives**, **asset management plan(s)** and the activities, **processes** and organizational structures necessary for their development, implementation and continual improvement

NOTE 1 A management system is a set of interrelated elements used to establish policy, strategy and objectives and to achieve those objectives through the implementation of plans.

NOTE 2 A management system includes organizational structure, roles and responsibilities, planning activities, standards, information systems, practices, processes, procedures and resources.

3.11 asset portfolio

complete range of **assets** and **asset systems** owned by an **organization**

NOTE Assets and asset systems may be highly integrated and interdependent or deliver more independent and parallel contributions to an organization's total performance. In the latter case, opportunities may exist to manage and optimize assets or asset systems differently across the portfolio.

3.12 asset system

set of **assets** that interact and/or are interrelated so as to deliver a required business function or service

NOTE For levels of assets, asset systems and asset portfolio, see Figure 3.

3.13 audit

systematic, independent process for obtaining evidence and evaluating it objectively to determine the extent to which audit criteria are fulfilled

[Adapted from ISO 9000:2005, 3.9.1]

3.14 contracted service provider

individual(s) not directly employed by the **organization** including contractors, subcontractors, service providers, consultants, agency staff and casual workers

3.15 corrective action

action to eliminate the cause of a detected **nonconformity** or other undesirable situation

NOTE 1 There can be more than one cause for a nonconformity.

NOTE 2 Corrective action is taken to reinstate capability and/or prevent recurrence, whereas preventive action is taken to prevent occurrence in the first place.

[ISO 9000:2005, 3.6.5]

3.16 critical assets/asset systems

assets and/or **asset systems** that are identified as having the greatest potential to impact on the achievement of the **organizational strategic plan**

NOTE The assets can be safety-critical, environment-critical and/or performance-critical, and can relate to legal, regulatory and/or statutory requirements

3.17 effectiveness

extent to which planned activities are realized and planned results achieved

[ISO 9000:2005, 3.2.14]

3.18 efficiency

relationship between the result achieved and the resources used

[ISO 9000:2005, 3.2.15]

3.19 enablers (asset management)

supportive systems, procedures, processes, activities and resources that enable an **organization** to operate its **asset management system** efficiently and effectively

3.20 functional policy

specified approach, rules and boundaries set out by an organization, that provide direction and the framework for the control of specific asset-related processes and activities

NOTE Functional policies, strategies and objectives relate to asset management activities or processes, such as capital investment, construction methods, maintenance and purchasing. These should not be confused with **asset management policies**, **asset management strategy** and **asset management objectives**, which are cross-functional, considering the life cycle optimization of all relevant activities.

3.21 life cycle

time interval that commences with the identification of the need for an **asset** and terminates with the decommissioning of the asset or any associated liabilities

NOTE The principal stages of an asset's life cycle can include: create/acquire, utilize, maintain and renew/dispose.

3.22 nonconformity

non-fulfilment of a requirement

[ISO 9000:2005, 3.6.2]

NOTE A nonconformity can be any deviation from: asset management system requirements; relevant work standards, practices, procedures, legal requirements, etc.

3.23 optimize

achieve by a quantitative or qualitative method, as appropriate, the best value compromise between conflicting factors such as performance, costs and retained risk within any non-negotiable constraints

3.24 organization

company, corporation, firm, enterprise, authority or institution, or part or combination thereof, whether incorporated or not, public or private, that has its own functions and administration

NOTE For organizations with more than one operating business unit, a single operating unit may be defined as an organization.

[ISO 14001:2004, 3.16]

3.25 organizational strategic plan

overall long-term plan for the organization that is derived from, and embodies, its vision, mission, values, business policies, stakeholder requirements, objectives and the management of its risks

NOTE Some organizations call this Corporate Plan, Corporate Strategic Plan or Business Plan.

3.26 preventive action

action to eliminate the cause of a potential **nonconformity** or other undesirable potential situation

NOTE 1 There can be more than one cause for a potential nonconformity.

NOTE 2 Preventive action is taken to prevent occurrence whereas corrective action is taken to prevent recurrence.

[ISO 9000:2005, 3.6.4]

3.27 procedure

specified way of carrying out an activity or a **process**

NOTE 1 Procedure(s) can be documented or not.

NOTE 2 If a procedure is required to be documented, the term “documented procedure” is used in this specification. Where this term appears within this specification, this means that the procedure is established, documented, implemented and maintained.

[Adapted from ISO 9000:2005, 3.4.5]

3.28 process

set of interrelated or interacting activities which transforms inputs into outputs

[ISO 9000:2005, 3.4.1]

NOTE Processes may be classified in a number of different ways. A distinction is sometimes made between operational processes which are directly concerned with the planned outputs of the organization, and management processes which provide the framework that enables the operational processes to take place.

3.29 record

document stating results achieved or providing evidence of activities performed

NOTE 1 Records can be used, for example, to provide evidence of calibration, audit, incident investigation, results of stakeholder consultation, preventive action or corrective action.

NOTE 2 Generally records need not be under revision control.

[ISO 9000:2005, 3.7.6]

3.30 risk management

coordinated activities to direct and control an **organization** with regard to risk

[ISO/IEC Guide 73:2002, 3.1.7]

3.31 stakeholder

person or group having an interest in the **organization's** performance, success or the impact of its activities

NOTE 1 Examples include employees, customers, shareholders, financiers, regulators, statutory bodies, contractors, suppliers, unions, or society.

NOTE 2 A group can comprise an organization, a part thereof, or more than one organization.

3.32 sustainable

achieving or retaining an optimum compromise between performance, costs and risks over the **asset's life cycle**, whilst avoiding adverse long-term impacts to the **organization** from short-term decisions

NOTE The related noun “sustainability” relates to the quality of being sustainable.

3.33 sustainable development

enduring, balanced approach to economic activity, environmental responsibility and social progress

[BS 8900:2006, 0.1]

NOTE See 3.32 for the distinction between “sustainable development” and “sustainable”.

3.34 top management

appointed and authorized person, or a group of people, who direct and control an **organization** at the highest level

NOTE 1 The top management (e.g. in a large organization, the board or executive committee) are not necessarily the owners of the organization they direct and control

NOTE 2 The top management may delegate some of their duties to one or more subordinate management representative(s) while still retaining accountability.

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