

Strategy and Planning

Asset Management Decision-Making

Life Cycle Delivery

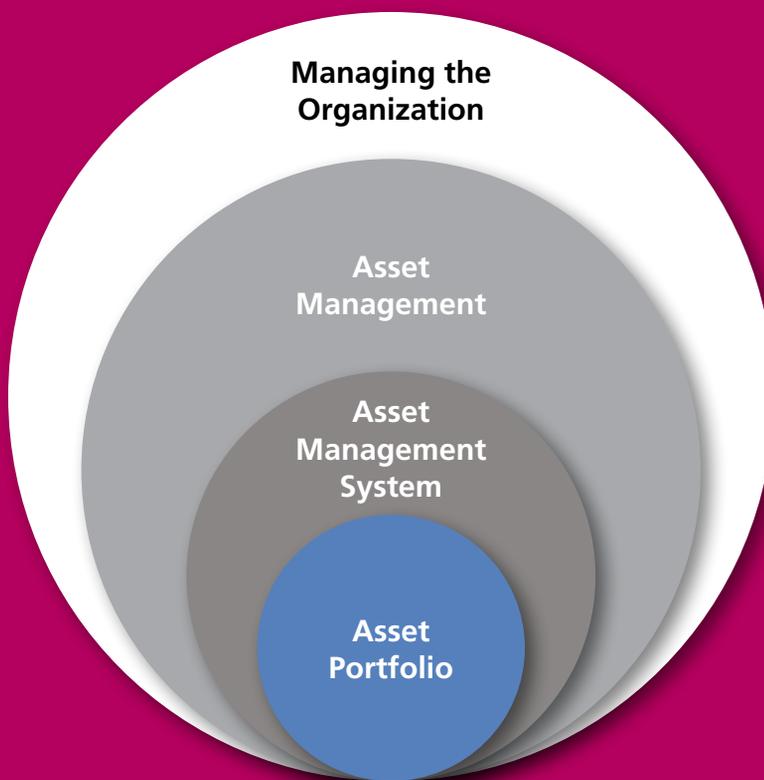
Technical Standards & Legislation

Asset Information

Organization & People

Risk & Review

Version 1 February 2024



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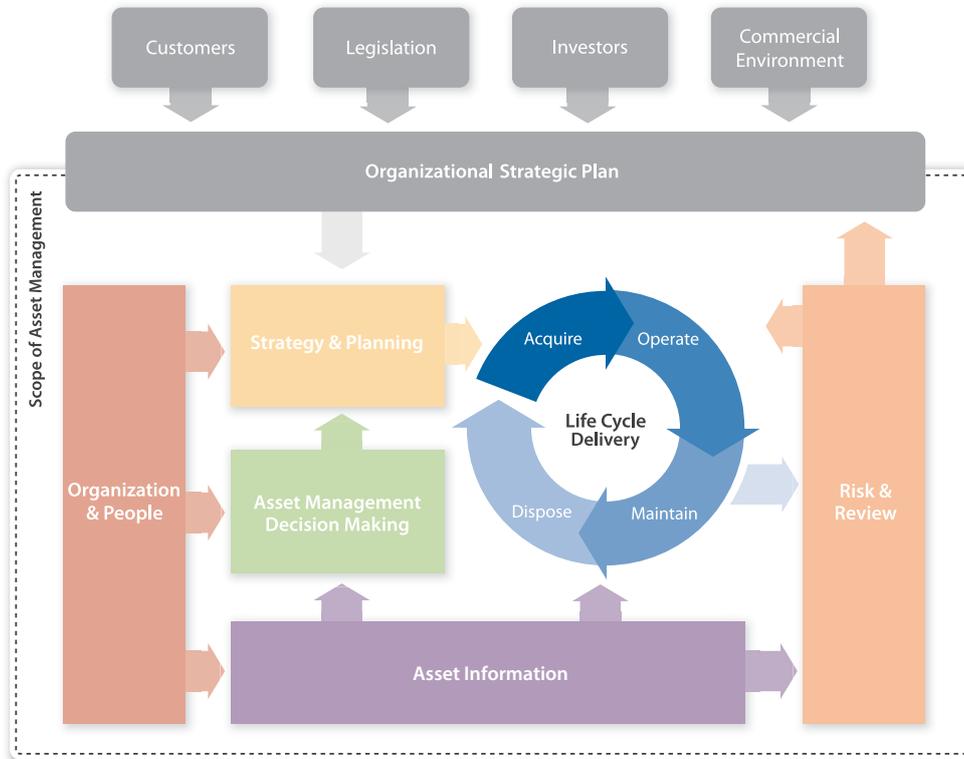
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The Scope of Asset Management



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Group 1

1. Asset Management Policy
2. Asset Management Strategy & Objectives
3. Demand Analysis
4. Strategic Planning
5. Asset Management Planning

Group 2

6. Capital Investment Decision-Making
7. Operations & Maintenance Decision-Making
8. Life Cycle Value Realization
9. Resourcing Strategy
10. Shutdowns & Outage Strategy

Group 3

11. Technical Standards & Legislation
12. Asset Creation & Acquisition
13. Systems Engineering
14. Configuration Management
15. Maintenance Delivery
16. Reliability Engineering
17. Asset Operations
18. Resource Management
19. Shutdown & Outage Management
20. Fault & Incident Response
21. Asset Decommissioning & Disposal

Group 4

22. Asset Information Strategy
23. Asset Information Standards
24. Asset Information Systems
25. Data & Information Management

Group 5

26. Procurement & Supply Chain Management
27. Asset Management Leadership
28. Organizational Structure
29. Organizational Culture
30. Competence Management

Group 6

31. Risk Assessment & Management
32. Contingency Planning & Resilience Analysis
33. Sustainable Development
34. Management of Change
35. Assets Performance & Health Management
36. Asset Management System Monitoring
37. Management Review, Audit & Assurance
38. Asset Costing & Valuation
39. Stakeholder Engagement

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1 Introduction

This Subject Specific Guidance (SSG) is part of a suite of subject specific guidance documents designed to expand and enrich the description of the Asset Management discipline as summarized in the IAM's document 'Asset Management – an Anatomy' (referred to throughout this document as "The Anatomy"). The SSGs cover the 39 Subjects in The Anatomy directly as a 'one-to-one' (where a subject is very broad) or grouped (where subjects are very closely related).

1.1 Purpose of the SSGs

In 2014, the International Standards Organization published the ISO 55000 series Asset Management, which sets out the requirements that describe what needs to be done to be competent in asset management. However, they don't offer advice on how it should be done. The SSGs are intended to develop the next level of detail for each subject in The Anatomy. They should therefore be read as guidance; they are not prescriptive, but rather intended to help organizations by providing a consolidated view of good practice, drawn from experienced practitioners across many sectors.

The SSGs include simple and complex solutions, together with real examples from different industries, to support the explanatory text because it is understood that industries and organizations will differ in scale and sophistication. In addition, organizations are at different stages of asset management; some may be relatively mature, while others are at the beginning of the journey.

Accordingly, there is flexibility for each organization to adopt its own 'fit for purpose' alternative practical approaches and solutions that are economic, viable, understandable and usable. The underlying requirement for continual improvement should drive progress.

1.2 The SSGs in Context

The SSGs are a core element within the IAM Body of Knowledge and they have been peer reviewed and assessed by the IAM Expert Panel. They align fully with the IAM's values and beliefs that relate

to both the development of excellence in the asset management discipline and provision of support to those who seek to achieve that level of excellence.

1.3 SSGs and the Issue of Complexity Versus Maturity

It is important to understand and contrast the terms complexity and maturity and how they impact an organization looking to improve its asset management performance, specifically within the area covered by this SSG.

In simple terms:

- The complexity of the business will drive the complexity of the solution required.
- Organizational maturity will determine its ability to recognize and implement an appropriate solution.

A very mature organization may choose a simple solution, whereas a less mature organization may incorrectly perceive that a complex solution will solve all its problems. In truth, there is no universal best practice in Asset Management or other areas – only good practice that is appropriate for the operating context of any organization. What is good practice for one organization may not be good practice for another.

For example, an organization that is responsible for managing 100 assets, all in the same location, could use a spreadsheet-based solution for an Asset Register and work management system. This is arguably good practice for that organization. However, for a utility business with thousands of distributed assets, this is unlikely to represent a good practice solution.

Part of gaining an understanding of an organization's capabilities involves answering these questions:

- How can you tell if you are doing a good job of managing these assets and monitoring your progress on an ongoing basis?
- How do you manage the interactions of systems and processes that are continually evolving?

- How do poor processes impact interoperability, safety, reliability, efficiency, and effectiveness?

When reading the SSGs, the reader should have a view of the complexity and maturity of the organization, the business context and interpret the guidance that is offered in that context.

1.4 Further Reading

The Anatomy provides a starting point for development and understanding of Asset Management capability and the SSGs follow on to support that further. However, the opportunity doesn't end there; the IAM provides a range of expert and general opinion and knowledge which is easily accessed by members through the IAM website. Suggested further reading specific to the subject of this SSG is given in Section 7 of this document.



2 Scope of this SSG

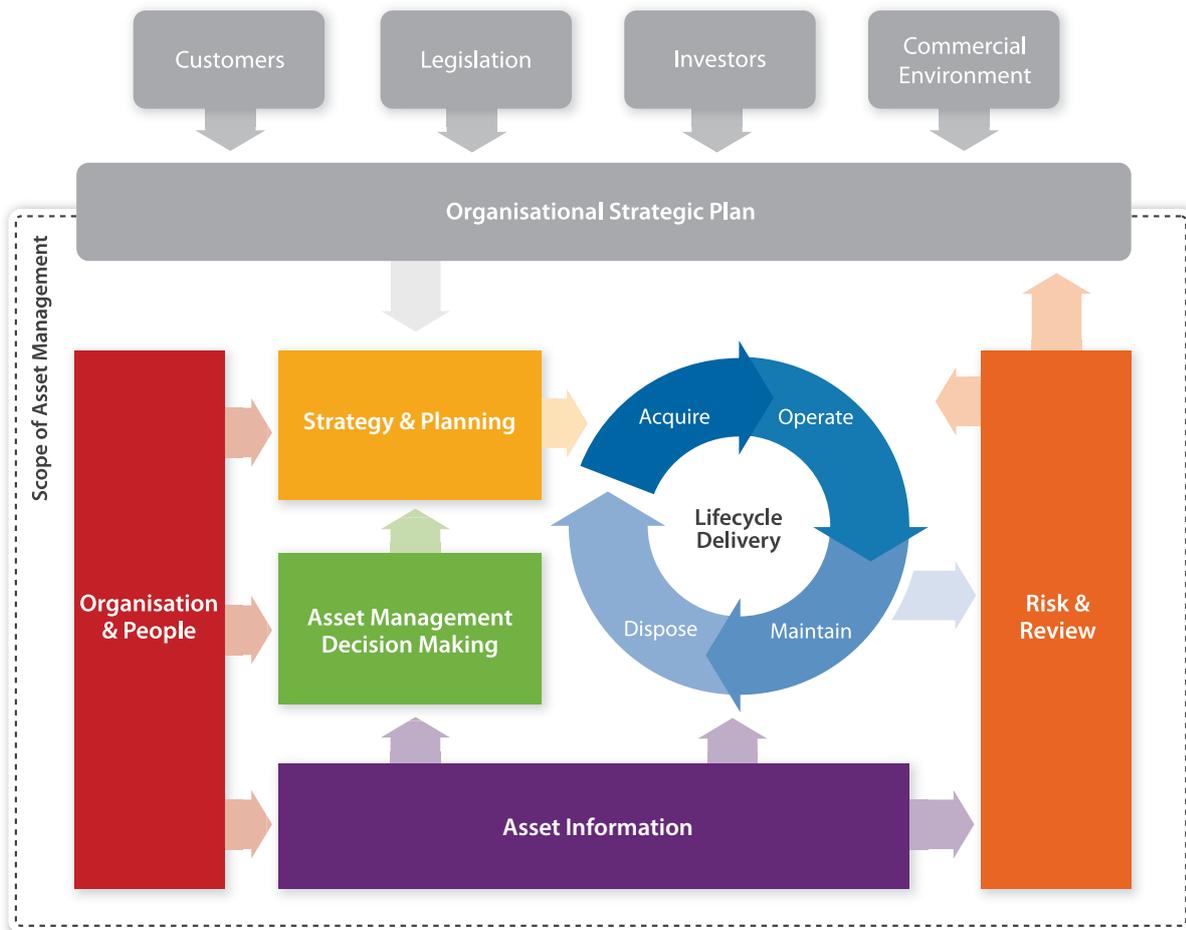
2.1 Introduction

This SSG provides general guidance concerning Legislation and Technical Standards when applied to Asset Management. It is intended to assist Asset Management practitioners in establishing and maintaining appropriate processes to meet their legislative and regulatory obligations.

The scope includes documents that describe technical requirements that are to be applied within an organization to its assets and to activities relating to assets. Organizations and industries often use their own terminology and definitions for documents that describe and achieve these controls.

Where organizations use a management system to deliver asset management (as described in ISO 55001), these documents will form part of the Asset Management System.

Technical Standards and Legislation touches on all aspects of an asset's life cycle and this SSG considers life cycle delivery as a central component of this document. This document assumes that most people who read this SSG will be people who have existing assets and are looking at ways to ensure that their organization's Asset Management activities are fully compliant with all relevant standards and legislation.



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Figure 1: The IAM's Conceptual Asset Management Model



Figure 2: Alignment of the 39 Asset Management Landscape Subjects with the 6 Subject Groups

2.2 The Purpose, Intended Use and Audience of this SSG

ISO 55000 is the formal specification and standard for the implementation of an Asset Management System, setting out the minimal requirements an organization would need to meet to demonstrate an effective Asset Management approach. For any organization or individual wanting to master the discipline, knowledge of ISO 55000 is not the whole picture. As well as the standard and management system aspects, they need to understand the full breadth and depth of the component parts that make up the landscape of Asset Management and this is supported through the SSGs.

Standards could therefore be regarded as ‘what’ is required for an Asset Management System. This SSG, as one of many being developed by the IAM, supports the ‘how’ to deliver the component parts and in its development, has tried to cover the range of industry sectors currently associated with the IAM and recognize that differences in levels of maturity and operating contexts exist within those sectors and the organizations within them. To provide additional

context, this SSG provides case study examples from different sectors to demonstrate the key points of guidance. However, any document generic enough to be applied to multiple industry sectors must be at a relatively high level of detail.

Those familiar with ISO 55000 will be aware that this specification itemizes several requirements for organizations seeking to demonstrate good Asset Management practices. These requirements are a clear foundation for implementing and operating an Asset Management System. They are, however, distinct from the capabilities such organizations need – these are the 39 Subjects described in the Anatomy.

The Asset Management Anatomy has been built around six Subject Groups and 39 subjects and now provides a stable platform on which the IAM can develop SSGs. These six subject groups and 39 subjects are also aligned with The Asset Management Landscape, (published by The Global Forum on Maintenance and Asset Management) to facilitate the exchange and alignment of

maintenance and asset management knowledge and practices.

The Six Subject Groups are:

- Strategy and Planning
- Asset Management Decision-Making
- Life Cycle Delivery
- Asset Information
- Organisation and People
- Risk & Review

This SSG specifically pertains to Legislation and Technical Standards which is typically part of Life Cycle Delivery, (see Fig 3) but can be used to complement, and provide significant benefits, to each of the other Asset Management Subject Groups. It will become part of a full series of SSGs covering all 39 Subjects and a smaller series of Sector Specific Guidelines (where these are desired by a particular sector). These are not designed

as textbooks or course material but as reference documents for professionals working in or requiring guidance in this field. We would expect everybody involved in Asset Management to have a working knowledge of the 39 Subjects, but the degree to which they might need deep or specialist knowledge will depend on the job or task they perform.

2.3 Navigating this SSG

This SSG intends to assist Asset Management practitioners at all levels of experience and others who need an understanding of legislation and technical standards in the context of asset management. It is feasible that some readers will want to read the content from cover to cover in the order that the SSG is written, while others will want to randomly dip into the various chapters to find information for their particular situation. To assist the reader to find the information they are looking the SSG is structured as follows.

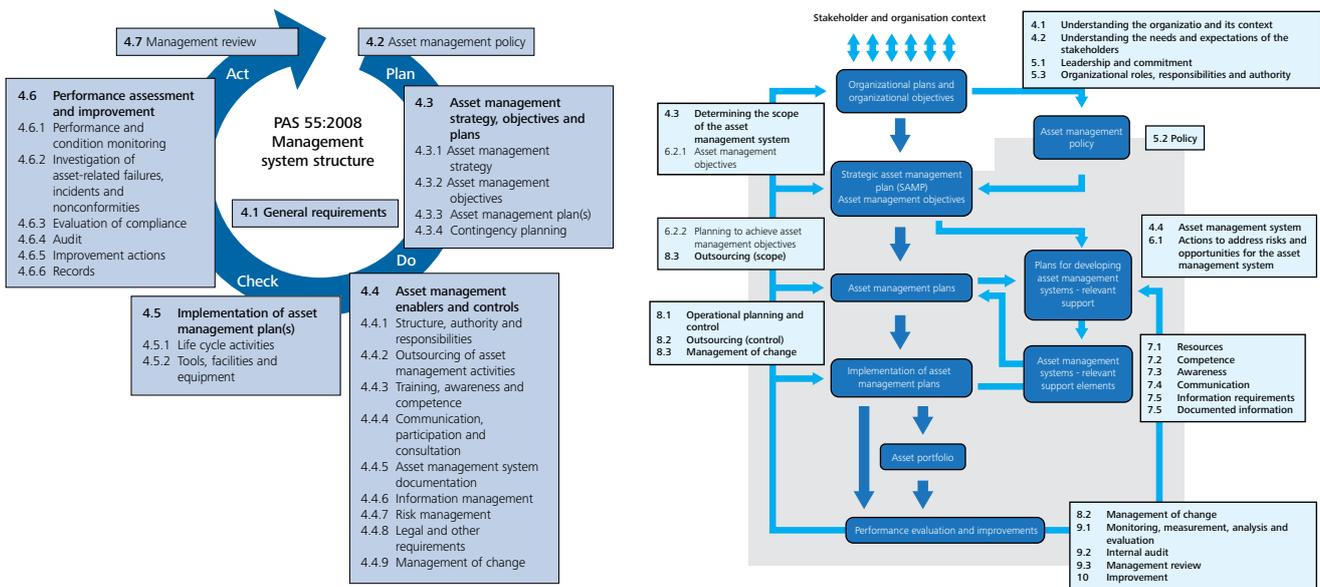


Figure 3: Requirements for Good Asset Management Practices. PAS 55 (left) and ISO 55002 (right)

Scope to SSG 11

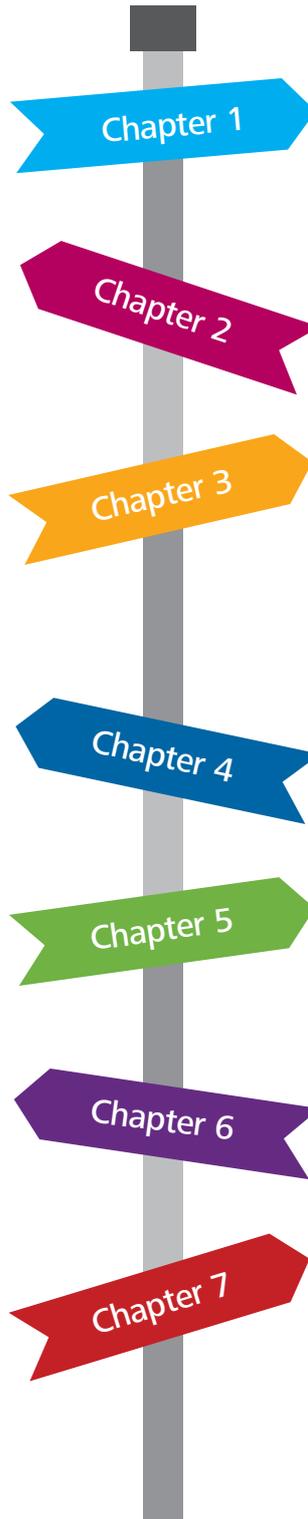
Chapter 2 defines the scope of the SSG and the alignment of Legislation and Technical Standards with the IAM Anatomy and Conceptual Model. It goes on to describe the purpose, use and intended audience for SSG 11.

Technical Standards and Legislation; Importance and Benefits

Chapter 4 explains the importance and benefits that Legislation and Technical Standards can bring to an organization’s operations and how they can enable achievement of organizational and asset management objectives. Case studies are presented to complement the explanations.

Approach to Identification and Compliance with Technical Standards & Legislation

Based on the Plan, Do, Check, Act cycle, Chapter 6 guides the reader through the processes and methods to identify, obtain, manage, and provide assurance of compliance with the Legislation and Technical Standards applicable to an organization.



Introduction to SSG

Chapter 1 outlines the general purpose and context of Subject Specific Guidelines within the Asset Management landscape.

Definitions and Relationship Between Legislation and Technical Standards

Chapter 3 sets the scene for the remaining chapters by providing definitions for legislation, regulation and technical standards. The chapter expands on the definitions with an overview of the SSG’s aim to assist Asset Management practitioners understand how Legislation and Technical Standards underpin an organization’s Asset Management activities.

Impact of Technical Standards & Legislation Across the Asset Life Cycle

Chapter 5 outlines the impact that Legislation and Technical Standards can have on an organization and wider community.

Further Reading and Useful Information

Chapter 7 concludes the SSG with a bibliography and a list of other resources relevant to Legislation and Technical Standards that may be useful to the Asset Management practitioner. The list is not comprehensive, and the reader is encouraged to perform their own research to gain a greater understanding of the topic.

Figure 4: Document Navigation

3 Definitions and Relationship Between Legislation, Regulation and Standards

3.1 High-Level Definition of Legislation, Regulation and Technical Standards

All asset management organizations are required to comply with relevant laws. The law is enacted through legislation and may be supported by regulations that describe what is required. These laws may be international or national and normally represent a considered view that considers many factors and stakeholders. Regulations may, of course, relate to some specific industry or assets

and can be initiated by many factors including, for example, corrective action from inquiries and political initiatives.

The regulations may in turn be supported by standards that may include criteria for compliance – such as permitted levels and tolerance for a noxious chemical. These form the basis for testing

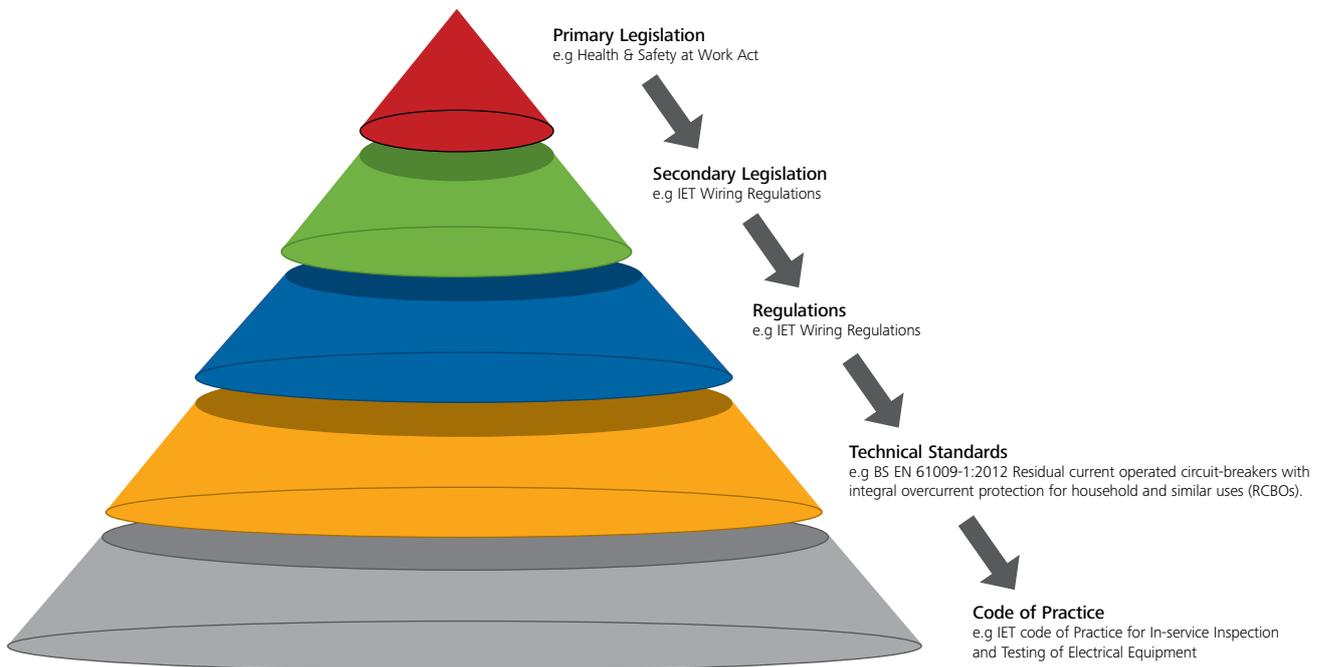


Figure 5: Hierachy of Legislation, Regulation and Technical Standards

Legislation: Laws enacted by government. Differs from Country to Country.
Regulation: The rules that govern how legislation is to be complied with.
Technical Standards: Detailed criteria for Compliance.
Codes of Practice: Non-regulatory standards detailing recognized good practice.