

Conformity and Certification against ISO 55001



IQ-AM

Institute of Quality
Asset Management

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Some content from other sources
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- **Regulators:**
 - Economic
 - Environmental
 - OH&S
- **Government:**
 - Central agencies – Treasuries
 - Service Agencies
- **Insurance/ Risk Management**
- **Legal (Protection and Attack)**
- **Customers and Community**
- **Boards/Governance /Top Management**
- **Investors and Lenders**

Current (transitional) situation

- Any Conformity Assessment Body (CAB) accredited to certify 'Management Systems' can certify against ISO 55001
- Consulting Engineering groups, unless they are also CAB's, cannot certify conformance, though they can provide SME auditors to a CAB.
- The CAB is responsible for determining its auditor's competence
- ISO/IEC 17021-5 (auditor competency technical specification) published on the 1st of April 2014 but neither it, nor 17021-1 are enforceable as there is no 'accreditation scheme' for CAB's
- The Asset Management community had NO decision making 'power' in this process

Processes under way:

- JAS-ANZ developing a CAB Accreditation Scheme based on:
 - ISO/IEC 17021 – Requirement's for management system auditing CAB's
 - ISO/IEC 17021-5 for ISO55001 audit team technical competencies
- JAS-ANZ take the Accreditation Scheme to PAC (Pacific Accreditation Cooperation) – meeting in Mexico in June
- Then to EA (European co-operation for Accreditation) and ANSI-ASQ National Accreditation Board (ANAB)
- Then to the International Accreditation Forum (IAF).
At each stage the objective is to mandate accreditation of CAB's use and compliance with 17021 & 17021-5.
- JAS-ANZ and other Accreditation Agencies accredit CAB's

Processes to be completed:

- JAS-ANZ and IQ-AM Australia and New Zealand are developing the 1st Draft Accreditation Scheme
 - Will be circulated to a wider technical committee including MB19 (Standards Australia PC251 Mirror Committee), AMCouncil and IPWEA
 - Input from other relevant stakeholders
 - Intended to have complete by AMPeak and in time to also submit to PAC meeting in June.
- Standards Australia to publish AS ISO 5500#
- CAB's apply for Accreditation
- IAF mandate likely to take 2-3 years

Who can be Certified?

ISSUE: Under what circumstances, or contractual arrangements, will Certification be possible?

Owners?



Asset Managers?



Service Providers?



Is the determinant: those who make AND control implementation of life cycle management decisions linked to value generation?

ISSUE: Under what circumstances, or contractual arrangements, will Certification be possible?

- Contracted Service Provision
 - Unit Cost based activities
 - Works Management
- BOO/BOOT
- Alliances
- Others?

Certification Body/Auditor Reference Documents:

- GFMAM Competency Specification for an ISO 55001 Asset Management Systems Auditor/Assessor, Second Edition.
- IAF MD 1:2007 (issue 1) – IAF Mandatory Document for the Certification of Multiple Sites Based on Sampling, available at www.iaf.nu
- IAF MD 2:2007 (Issue 1) – IAF Mandatory Document for the Transfer of Accredited Certification of Management Systems, available at www.iaf.nu
- ISO 55001:2015 – asset management – Management systems - Requirements
- ISO/IEC 17021:2011 – Conformity Assessment – Requirements for bodies providing audit and certification of management systems
- ISO/IEC TS 17021-5:2014 – Conformity assessment ... Part 5: Competence requirements for auditing and certification of asset management systems

Conformity

Fulfils the requirements of ISO 55001 and there is no doubt about the ability of the client's asset management system to achieve its intended outputs.

Minor nonconformity

Partial failure to fulfil one or more requirements of ISO 55001, but there is significant doubt that this partial failure has adversely impacted on the ability of the client's asset management system to achieve its intended outputs.

Major nonconformity

Failure to fulfil one or more requirements of ISO 55001, or a situation that raises significant doubt about the ability of the client's asset management system to achieve its intended outputs.

- Personnel involved in asset management system certification audits shall have the generic competencies described in ISO/IEC 17021 and the asset management knowledge described in ISO/IEC TS 17021-5, clauses 5 and 6.

- World Partners in Asset Management (WPiAM) Certification Scheme:
- WPiAM:
 - ABRAMAN (Brazil) The Asset Management Council (Aust)
 - IFRAMI (France) PEMAC (Canada)
 - SMRP (US).
- Based on GFMAM Competency Specification for an ISO 55001 Asset Management Systems Auditor/Assessor, Second Edition.
- The Competency Scheme is referenced in the JAS-ANZ Accreditation Scheme and is being specified as adequate demonstration of auditor competency for auditors under ISO 17021-5.

- The certification document shall reference a controlled version of the Strategic Asset Management Plan and hence the scope of assets to which it applies.
- ‘SCOPE of ASSETS’
- The audit scope and the audit plan shall clearly identify:
 - a) the Strategic Asset Management Plan and the asset management policy being assessed;
 - b) boundaries (the interface with externalities) including asset boundaries, information boundaries, process boundaries and contractual boundaries as applicable;
 - c) how the AMS requirements that are being fulfilled beyond the boundaries (for example with outsourcing) are to be audited; and
 - d) any exclusions that might otherwise normally have been expected to have been included in the scope of the audit.

- Multi-site sampling

J.9.1.5 Sampling shall be in accordance with IAF MD 1:2007 and also need to ensure that the scope of assets and the range and nature of contracted/outsourced services and service providers are appropriately represented.

Built around:

- System Integrity w.r.t. ISO 55001
- Obligations of members of governance bodies w.r.t.:
 - Common Law: Duties of care and diligence
 - Statutory:
 - Section 180 – Duty of care and diligence and the business judgment rule
 - Section 285–318 – Financial reporting
 - Other issues

Duties of care and diligence:

Directors are required to make an informed and independent judgement on decisions put to the board of directors , and are required to place themselves in a position to guide the company and monitor its management.

Director's Duties and Responsibilities

- Section 180 – Duty of care and diligence and the business judgment rule

A “business judgment” means any decision to take or not take action in respect of a matter relevant to the business operations of a corporation

“...you need to be satisfied that management is ensuring the company for which you are responsible is meeting all of its legal obligations...”

The purpose of Asset Management is to derive ‘value’ from the organisation’s assets, and the definition of Asset Management is the coordinated activities of the organisation to derive this ‘value’.

Section 285–318 – Financial reporting

- The financial reporting provisions in the Corporations Act, including directors' reports, also relate to a director's duty to exercise their powers with care and due diligence. For example, directors may be subject to penalty for failure to maintain proper financial records

Director's Duties and Responsibilities

Sections 189, 190 and 198D assist in determining when directors may reasonably rely on the information or advice of others and their responsibility for the Corporation's Actions of delegates.

it was information or professional or expert advice given or prepared by:

an employee of the corporation whom the director believes on reasonable grounds to be reliable and competent in relation to the matters concerned

the reliance was made:

- a) in good faith
- b) after making an independent assessment of the information or advice, having regard to the director's knowledge of the corporation and the complexity of the structure and operations of the corporation.

What is Asset Management?



During an utility industry benchmarking study it was determined that the cost of the Asset Management System management team or group made up only 3% of industry cost

however:

the outputs (activities and decisions) generated or impacted on at least 82% of industry's Total costs.



ISO55000 'Benefits' of Asset Management

As documented in ISO55000, some of the benefits derived from Asset Management are described as:

- a) **improved financial performance:** improving the return on investments and reducing costs can be achieved, while preserving asset value and without sacrificing the short or long-term realization of organizational objectives;
- b) **informed asset investment decisions:** enabling the organization to improve its decision making and effectively balance costs, risks, opportunities and performance;
- c) **managed risk:** reducing financial losses, improving health and safety, good will and reputation, minimizing environmental and social impact, can result in reduced liabilities such as insurance premiums, fines and penalties;
- d) **improved services and outputs:** assuring the performance of assets can lead to improved services or products that consistently meet or exceed the expectations of customers and stakeholders;

ISO55000 'Benefits' of Asset Management

As documented in ISO55000, some of the benefits derived from Asset Management are described as:

- e) **demonstrated social responsibility:** improving the organization's ability to, for example, reduce emissions, conserve resources and adapt to climate change, enables it to demonstrate socially responsible and ethical business practices and stewardship;
- f) **demonstrated compliance:** transparently conforming with legal, statutory and regulatory requirements, as well as adhering to asset management standards, policies and processes, can enable demonstration of compliance;
- g) **enhanced reputation:** through improved customer satisfaction, stakeholder awareness and confidence;
- h) **improved organizational sustainability:** effectively managing short and long-term effects, expenditures and performance, can improve the sustainability of operations and the organization;
- i) **improved efficiency and effectiveness:** reviewing and improving processes, procedures and asset performance can improve efficiency and effectiveness, and the achievement of organizational objectives.

Focus of Certification Reporting

Items fundamental to Top Management being adequately informed in their leadership, decision making and performance management as part of the AMS:

GENERAL

- Summary on conformance against the specific requirements in terms of the methodologies, processes, practices, and activities of the organization.
- Commentary on identification of any critical/high risk gaps, non-conformances, deficiencies in performance of the AMS, Asset Management, Assets or decision making (including criteria), attributable to deficiencies.
- Scope: Is the scope adequate? Are there other assets that might be considered critical for the organization's performance but not included in the scope?

INFORMATION

- The reliability, timeliness and appropriateness of information being provided to Top Management on the assets and their performance, addressing both monitoring information and that provided in support of requests for decisions to be made.
- The reliability and alignment of financial and non-financial information for decision making.

INFORMATION MANAGEMENT

- The effectiveness of information management processes and practices in ensuring, managing and maintaining asset and asset management information integrity, particularly with regard to uncertainty and reliability of decision making.

DECISION MAKING AND DERIVATION OF VALUE

- The reliability and effectiveness of the asset management decision making processes and criteria in deriving value from the assets over their lives, with particular regard to the principles around management of the whole of life of the asset(s) from conception to extinguishment of liability.
- The alignment of Assets, and their management, to organisational objectives and stakeholder needs and expectations, in particular in the derivation of value.

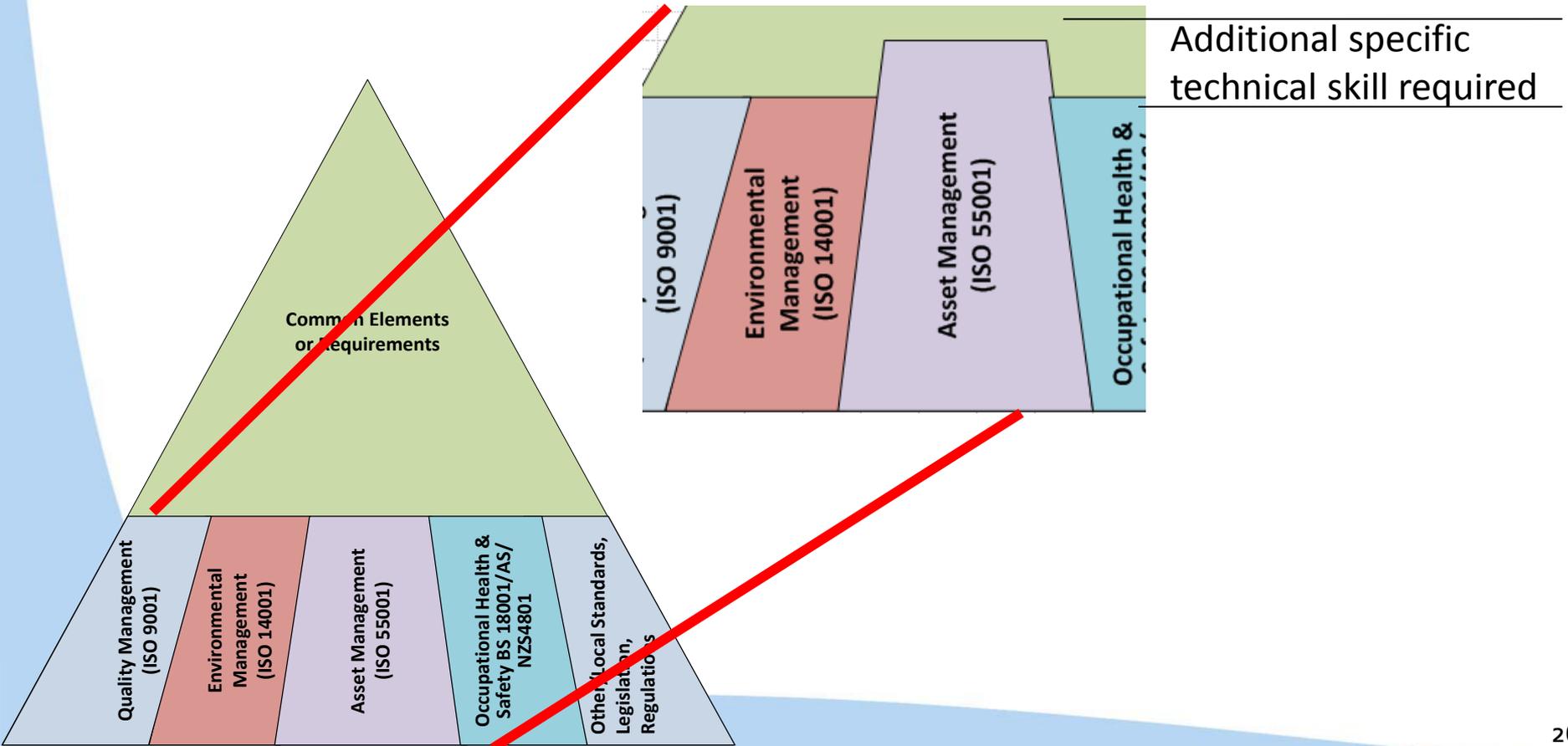
TOP MANAGEMENT

- Top Management's fulfilment of their specified requirements and their effectiveness in meeting these obligations.

IMPLEMENTATION

- The impacts of resource and support management decisions in derivation of value from the assets and any potential impact on asset life and capability targets in the long term.
- The integrity of the AMS in fulfilling the definition of asset management as the coordinated activity of the organization (to derive value from assets).
- The effectiveness of the coordination of activities occurring at different phases in the asset's life from conception to extinguishment of liabilities following disposal.
- AMS performance against its objectives and results of (any) significant improvement actions.

What parts or elements of the ISO 55001 AMS fit under the IBMS framework, & which require Asset Management/AMS specific technical skill.



What arrangements are in place to quantify and validate the duration, resourcing and hence costs of AMS Audits?

Figure QMS 1 – Relationship between Complexity and Audit Duration

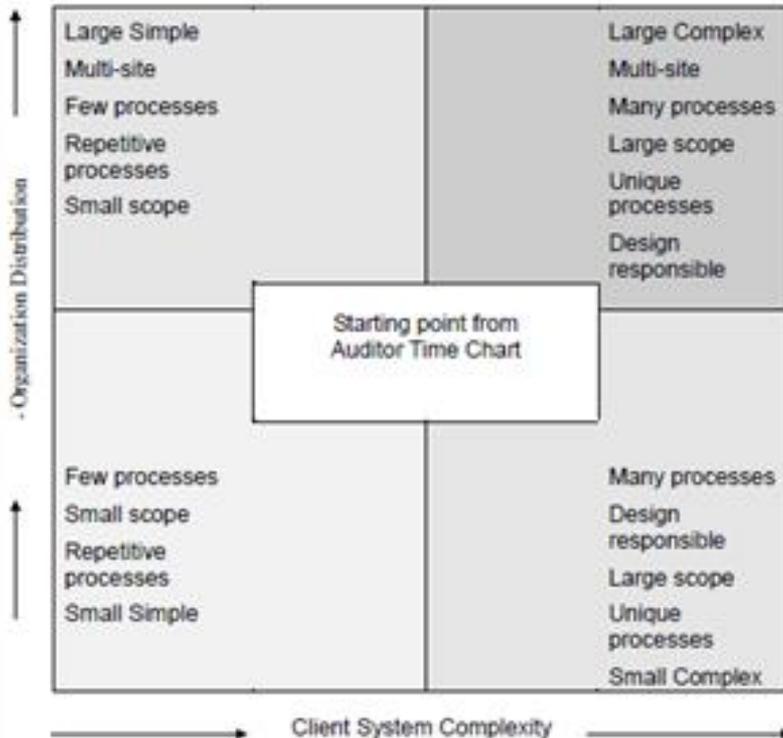


Table EMS 2 – Examples of Linkage between Business Sectors and Complexity Categories of Environmental Aspects

Complexity Category	Business Sector
<i>High</i>	<ul style="list-style-type: none"> - mining and quarrying - oil and gas extraction - tanning of textiles and clothing - pulping part of paper manufacturing, including paper recycling processing

What arrangements are in place to quantify and validate the duration, resourcing and hence costs of AMS Audits?

Annex A – QUALITY MANAGEMENT SYSTEMS

Table QMS 1 – Quality Management Systems

Relationship between Effective Number of Personnel and Audit Duration
(Initial Audit only)

Effective Number of Personnel	Audit Duration Stage 1 + Stage 2 (days)	Effective Number of Personnel	Audit Duration Stage 1 + Stage 2 (days)
1-5	1.5	626-875	12
6-10	2	876-1175	13
11-15	2.5	1176-1550	14
16-25	3	1551-2025	15

Annex B – ENVIRONMENTAL MANAGEMENT SYSTEMS

Table EMS 1 – Relationship between Effective Number of Personnel, Complexity and Audit Duration
(Initial Audit only)

Effective Number of Personnel	Audit Duration Stage 1 + Stage 2 (days)				Effective Number of Personnel	Audit Duration Stage 1 + Stage 2 (days)			
	High	Med	Low	Lim		High	Med	Low	Lim
1-5	3	2.5	2.5	2.5	626-875	17	13	10	6.5
6-10	3.5	3	3	3	876-1175	19	15	11	7
11-15	4.5	3.5	3	3	1176-1550	20	16	12	7.5

What arrangements are in place to quantify and validate the duration, resourcing and hence costs of AMS Audits?

- The number of asset types/groups, particularly focused on the different 'nature' of the asset types, mechanical, electrical, civil, material types.
- Risk level of the assets
- Identify the replacement value of the assets to be audited, the number of classes of asset to be audited and the number of assets in each class.
- The legislative and regulatory environment - High degree of regulation (e.g. food, drugs, aerospace, nuclear power, etc);

What arrangements are in place to quantify and validate the duration, resourcing and hence costs of AMS Audits?

- The number of sites/facilities/platforms/process lines/networks (or systems)
- The number and scope of contracts with clients or customers receiving services or products
- The number and scope of contracts with service providers carrying out AM activities
- The value of the asset base (if so what measure of value? – current replacement cost?)

Questions?