IMS (ISO 6001:2015, ISO 14001:2015 s ISO 45001:2018) Lead Auditor Training

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Integrated Management Systems

A Management System Standards (MSS) is a set of structured requirements that enable an organization to meet the standard's specific purpose, such as establishing environmental or quality management systems. These standards have different objectives and affect various interested parties. The ISO High-Level Structure (HLS) provides a common structure, text, terms, and definitions for ISO management system standards, making them easier to understand and compare. The primary purpose of an MSS is to provide a framework for systematic and verifiable organizational control that encourages good business practices and meets interested parties' needs and expectations.

Typical Approach of Integrating Management System Standards into a Management System

Step	Description
Lead the Integration	Leadership decision to integrate, based on organizational needs, strategic necessity, and maturity. Includes identifying the need, adapting company policy, determining strategic initiatives, setting integration objectives, and communicating the decision.
Determine the Scope of Integration	Identifying specific standards to be implemented, related timing and issues, and the impact on the existing management system. Deciding which organizational functions, hierarchical levels, products, and locations will be impacted and to what depth.
Plan the Integration	Typically involves a project approach with a defined owner, a cross-functional project committee, a project leader, a communication strategy, consideration of risks and opportunities, and identification of necessary resources.
Connect MSS Requirements and the Organization's MS	Structure the Management System: Considering relationships among processes, resources, and objectives. Structure MSS Requirements: Analysing MSS requirements for commonalities and unique aspects. Map MSS Requirements against the Management System: Analysing how standard requirements fit into the existing management system.
Incorporate MSS Requirements into the Organization's MS	Identify and Analyse Gaps: Comparing the existing management system with the standard requirements. Close the Gaps: Determining and performing corrective and improvement actions. Confirm Gap Closure: Verifying that gap closure actions have been effectively implemented and sustained.
Maintain and Improve Integration	Ongoing activities to monitor and review the integrated system for continued conformance and to make improvements, including adapting to new or changed requirements.
Apply Lessons Learned in the Organization	Utilizing insights gained during the integration process to improve current or future projects and other organizational aspects.

Integrated Management Systems - Structure

The "Integrated Use of Management System Standards (IUMSS)" handbook does **not** provide a specific structure for an integrated management system, either as a requirement or as a guideline.

However, it does describe how organizations generally structure their management systems to accommodate integration:

Concept	Description
Underlying System of the Organization	All approaches to structuring an integrated management system are driven by the understanding and focus on the underlying system of the organization.
Interrelated Processes	An organization manages its activities, resources, and objectives through a set of interrelated processes.
Product and Service Realization Processes as Backbone	The product and service realization processes represent the essential backbone of the management system and are commonly used as the basis for integration.
Adaptation or Combination of Models	Some organizations develop "integrated management system models" by adapting or combining different existing models or approaches from specific standards, such as the "Process Approach" or the "Plan-Do-Check-Act Cycle" approach of ISO 9001 and ISO 14001.
Process Maps	Others comprehend their management systems with the help of process maps, which they subsequently use to connect different standard requirements. **(refer Process Maps)**
Structured, Single Management System	All featured case studies in the handbook used a structured, single management system as the basis for integration, despite variations in how they achieved it. **(refer Corresponding Table)**
Relating and Connecting Requirements	Organizations can address the requirements of multiple standards by relating and connecting them with this integrated arrangement of processes. Often, this relationship is defined by mapping the requirements against the organization's processes.

In essence, while there's no prescribed template, the document emphasizes that an integrated management system should be built upon the organization's core processes, objectives, and resources, with a focus on interrelationships and the ability to absorb various standard requirements in a unified manner.

Synergy of Clauses in ISO Management System Standards

There is significant synergy in auditing ISO 9001, ISO 14001, and ISO 45001 due to their shared High-Level Structure (HLS) and the underlying Plan-Do-Check-Act (PDCA) cycle, as well as common requirements across clauses. This synergy allows for the integration of audit activities, leading to more efficient and effective assessments of an organization's management systems. Instead of conducting separate audits for each standard, an integrated audit can examine common processes and requirements simultaneously.

Synergy in Auditing the Standards:
- **Common Structure:** The identical clause structure (Context, Leadership, Planning, Support, Operation, Performance Evaluation, Improvement) across all three standards means that auditors can follow a consistent audit trail. For instance, when auditing "Leadership and commitment" (Clause

5.1), the auditor can check for top management's commitment across quality, environmental, and OH&S aspects in a single session.

- **Shared Core Requirements:** Many requirements, such as establishing policies, determining risks and opportunities, ensuring competence and awareness, controlling documented information, and conducting management reviews, are common across all three standards. This allows auditors to verify these elements once, rather than three times, looking for how they are applied in a quality, environmental, and OH&S context.

- **Process Approach:** All three standards promote a process approach, where interrelationships and interdependencies among processes are managed to enhance overall organizational performance. Auditors can assess common processes (e.g., procurement, operational control) and examine their effectiveness across all three disciplines.

- **Risk-Based Thinking:** The concept of risk-based thinking is central to all three standards, guiding planning and implementation to achieve intended results and prevent negative effects. Auditors can verify how risks and opportunities, including those related to quality, environmental impact, and OH&S, are determined and addressed in an integrated manner.

- **Continual Improvement:** Each standard emphasizes continual improvement, aligning with the "Act" phase of PDCA. Auditors can assess the organization's approach to identifying and acting on opportunities for improvement holistically across all three areas.

- **Documented Information:** The approach to documented information (control, maintenance, retention) is harmonized, allowing auditors to review a single system for managing all types of documented information required by the integrated management system.

Example of Flow of Clauses for Auditing (Integrated Approach)

Example of How Flow of Clauses Can Be Audited (Integrated Approach):
Let's consider an integrated audit focusing on a common operational process, such as **Procurement** (related to ISO 45001 Clause 8.1.4, ISO 14001 Clause 8.1 on Operational Planning and Control, and ISO 9001 Clause 8.4 on Control of externally provided processes, products and services).
Audit Objective: To confirm that the organization's procurement process effectively addresses quality, environmental, and occupational health and safety requirements for externally provided products and services.
Flow of Audit - Clause by Clause:
1. **Context of the Organization (Clause 4)**:
   o **4.1 Understanding the organization and its context**: The auditor would first review the organization's understanding of external and internal issues that might impact procurement (e.g., supply chain risks, regulatory changes, internal capabilities related to procurement).
   o **4.2 Understanding the needs and expectations of interested parties**: The auditor would check if the organization has identified relevant interested parties related to procurement (e.g., suppliers, regulators, contractors, workers) and their relevant needs and expectations (e.g., quality specifications, environmental performance requirements for suppliers, OH&S requirements for contractors).
   o **4.3 Determining the scope of the management system**: Verify that procurement activities and related external provisions are included within the defined scope of the integrated QMS, EMS,

and OH&S MS.

2. **Leadership (Clause 5)**:
o **5.1 Leadership and commitment**: Interview top management to ascertain their commitment to ensuring that procurement practices align with quality, environmental, and OH&S policies and objectives.
o **5.2 Policy**: Review the organization's quality policy [8], environmental policy [9], and OH&S policy [10] to see if commitments related to procurement (e.g., safe sourcing, environmentally sound purchasing) are explicitly or implicitly included.
o **5.3 Organizational roles, responsibilities and authorities**: Confirm that roles, responsibilities, and authorities related to procurement, particularly concerning quality, environmental, and OH&S aspects, are clearly assigned and communicated (e.g., who is responsible for vetting supplier OH&S performance).

3. **Planning (Clause 6)**:
o **6.1 Actions to address risks and opportunities**:
OH&S (6.1.2.2): Review how OH&S risks and opportunities related to procurement (e.g., new hazardous materials from a supplier, contractor safety performance) are identified and assessed.
Environmental (6.1.2): Review how environmental aspects and impacts related to procurement (e.g., waste generation from packaging, energy consumption of procured equipment) are identified and evaluated, considering a life cycle perspective[11].
Quality (6.1): Review how risks and opportunities related to product/service conformity from external providers are determined (e.g., risk of defective raw materials affecting final product quality)[12].
Planning Action (6.1.4): Verify that actions to address identified risks and opportunities in procurement (e.g., implementing supplier audits, developing green purchasing guidelines, setting contractor safety protocols) are planned and integrated.
o **6.2 Objectives and planning to achieve them**: Check if quality, environmental, or OH&S objectives related to procurement (e.g., reducing non-conforming materials by X%, increasing use of sustainable suppliers by Y%, reducing contractor incidents by Z%) have been established and how plans are in place to achieve them.

4. **Support (Clause 7)**:
o **7.1 Resources**: Confirm that adequate resources (e.g., competent personnel in procurement, software for supplier management) are available to manage procurement processes for quality, environmental, and OH&S.
o **7.2 Competence**: Verify that procurement personnel and others involved in selecting and managing external providers have the necessary competence (education, training, experience) regarding quality, environmental, and OH&S requirements.
o **7.3 Awareness**: Ensure that personnel involved in procurement are aware of the implications of non-conformance regarding quality, environmental, and OH&S requirements from external providers.
o **7.4 Communication**: Review internal and external communication processes related to procurement (e.g., communicating specific environmental requirements to suppliers, communicating OH&S expectations to contractors, internal reporting of supplier quality issues).
o **7.5 Documented Information**: Examine documented information related to procurement, such as supplier contracts, purchasing specifications, records of supplier evaluations, and any specific procedures for controlling externally provided processes/products/services.

5. **Operation (Clause 8)**:
o **8.1 Operational planning and control**:
▪ **General (ISO 45001, ISO 9001, ISO 14001)**: Verify that criteria for procured products/services

are established and controls are implemented (e.g., inspection procedures for incoming materials, environmental performance requirements in contracts).

- **Procurement (ISO 45001, 8.1.4)**: Specifically audit the process for controlling procurement of products and services to ensure conformity to the OH&S management system[13].
- **Contractors (ISO 45001, 8.1.4.2)**: Verify coordination with contractors to identify hazards and assess/control OH&S risks arising from their activities, and ensure their compliance with the OH&S management system[14141414].
- **Outsourcing (ISO 45001, 8.1.4.3; ISO 14001, 8.1; ISO 9001, 8.1, 8.4)**: Confirm that outsourced functions/processes related to procurement are controlled to achieve intended outcomes across all three standards[15151515].
- **Control of Externally Provided Processes, Products and Services (ISO 9001, 8.4)**: Review the established controls, type and extent of control, and information provided to external providers, including requirements for competence, monitoring, and verification activities[161616161616161616].
- **Life Cycle Perspective (ISO 14001, 8.1)**: Assess how environmental requirements are addressed in the design, procurement, and use/end-of-life stages of products/services from external providers[17].
  - **8.2 Emergency preparedness and response**: For specific procured items or services (e.g., hazardous chemicals, emergency response contractors), verify that relevant emergency preparedness and response plans are in place and communicated.

6. **Performance Evaluation (Clause 9)**:
  - **9.1 Monitoring, measurement, analysis and evaluation**:
- **General**: Review data and results of monitoring and measurement related to the performance of external providers concerning quality (e.g., defect rates), environment (e.g., hazardous waste from their operations), and OH&S (e.g., contractor incident rates).
- **Evaluation of compliance (ISO 14001, ISO 45001)**: Verify that the organization evaluates its compliance with legal and other requirements (e.g., procurement regulations, environmental permits related to supplier materials, OH&S requirements for contractors).
  - **9.2 Internal audit**: Check audit reports to see if procurement processes have been internally audited for conformity to QMS, EMS, and OH&S MS requirements.
  - **9.3 Management review**: Confirm that information on the performance of external providers and compliance related to procurement is an input to management reviews, and that decisions related to these aspects are made.
7. **Improvement (Clause 10)**:
  - **10.2 Nonconformity and corrective action**: Review records of nonconformities related to procured products/services or external providers (e.g., quality defects, environmental spills by contractors, contractor safety incidents) and the effectiveness of corrective actions taken.
  - **10.3 Continual improvement**: Look for evidence of ongoing efforts to improve the procurement process in terms of quality, environmental performance, and OH&S (e.g., initiatives for preferred suppliers based on sustainability, improved contractor pre-qualification).

This integrated audit approach leverages the common framework, allowing auditors to trace requirements through the organization's processes comprehensively and efficiently, ensuring that all aspects of quality, environmental management, and occupational health and safety are addressed in a cohesive manner.

Clause	Sub-Clause	Details
Context of the Organization	4.1	Understanding external and internal issues impacting procurement
Context of the Organization	4.2	Understanding needs and expectations of interested parties related to procurement

Context of the Organization	4.3	Determining scope of management system including procurement activities
Leadership	5.1	Leadership and commitment to procurement practices aligning with policies
Leadership	5.2	Review quality, environmental, and OH&S policies related to procurement
Leadership	5.3	Confirm roles, responsibilities, and authorities related to procurement
Planning	6.1	Actions to address risks and opportunities related to procurement
Planning	6.2	Objectives and planning to achieve them related to procurement
Support	7.1	Confirm adequate resources for managing procurement processes
Support	7.2	Verify competence of personnel involved in procurement
Support	7.3	Ensure awareness of implications of non-conformance in procurement
Support	7.4	Review communication processes related to procurement
Support	7.5	Examine documented information related to procurement
Operation	8.1	Operational planning and control for procured products/services
Operation	8.2	Emergency preparedness and response for procured items/services
Performance Evaluation	9.1	Monitoring, measurement, analysis and evaluation related to procurement
Performance Evaluation	9.2	Internal audit of procurement processes
Performance Evaluation	9.3	Management review of performance and compliance related to procurement
Improvement	10.2	Review records of nonconformities and corrective actions in procurement
Improvement	10.3	Evidence of continual improvement in procurement process

From Leadership to Results: How ISO Management Systems Drive Performance Improvement
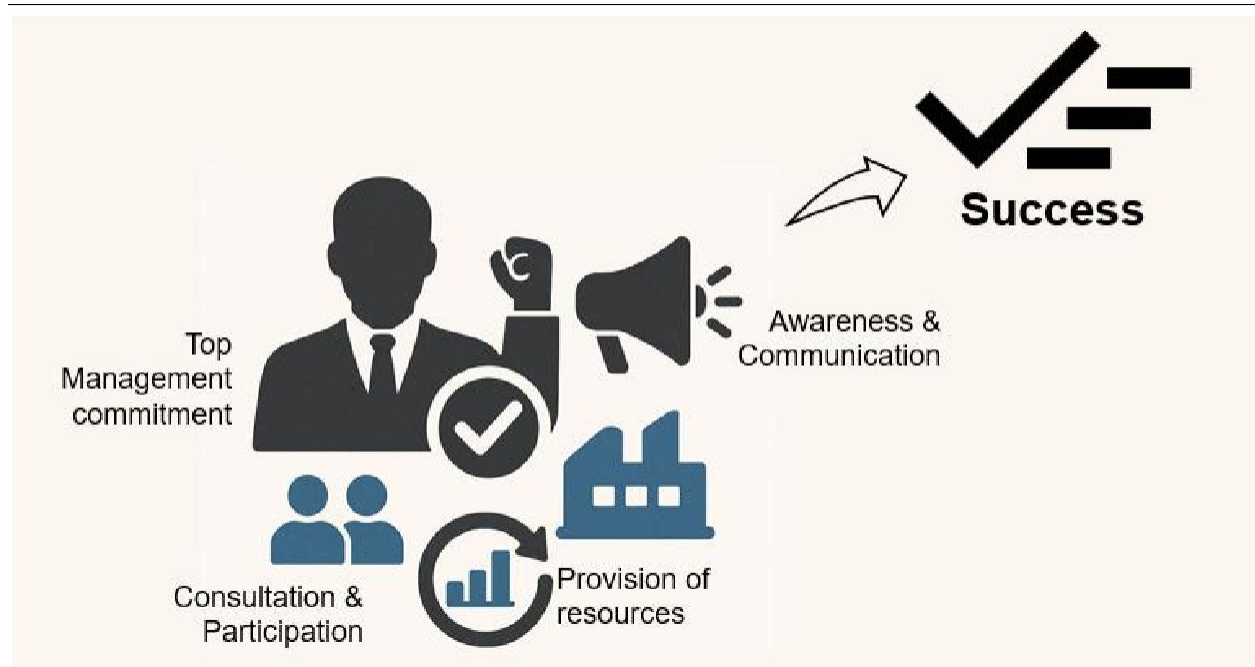
Clause 5 (Leadership and Worker Participation) establishes the foundation for an effective Integrated Management System IMS). The role of leadership is not merely symbolic is the driving force behind the implementation, maintenance, and continual improvement of the IMS. Leadership provides direction, ensures the integration of quality, environment and OH&S into business processes, and fosters a culture where continual improvement is a shared responsibility.

Leadership ensures commitment by:

- **Establishing the quality, environment & OH&S policy and objectives** aligned with the organization's strategic direction (Clause 5.1).

- **Demonstrating visible commitment** through participation, resource allocation, and promoting continual improvement.

- **Encouraging worker consultation and participation** (Clause 5.4) **and internal communication** (Claude 7.4), which promotes ownership and accountability across all levels.

This commitment from leadership becomes actionable through **Clause 7 (Support)**, which translates leadership intention into practical enablers. Clause 7 ensures that the system is adequately supported through:

- **Provision of resources (Clause 7.1)**: Sufficient personnel, infrastructure, and financial means to implement the IMS effectively.

- **Competence (Clause 7.2)**: Workers and contractors must have the necessary skills and qualifications to carry out their roles safely.

- **Awareness and communication (Clauses 7.3 & 7.4)**: Ensuring all individuals understand the quality, environment and OH&S policy, environmental aspects & impacts, hazards OSH risks, and how their actions contribute to improvement through quality, environment and OH&S objectives.

Without these support mechanisms, leadership commitment would remain theoretical. For example, if top management promotes continual improvement but fails to provide training, pollution preventive measure or effective PPE, the implementation of the management system is deemed inadequate, unsuitable and ineffective.

This synergy between **leadership (Clause 5)** and **support (Clause 7)** culminates in **Clause 9 (Performance Evaluation)**. Effective leadership and adequate support ensure:

- **Proper monitoring and measurement (Clause 9.1)** of organisation's processes and quality, environment and OH&S performance indicators.

- **Conducting internal audits (Clause 9.2)** that provide objective evidence of system performance and areas for improvement.

- **Management reviews (Clause 9.3)** that reflect leadership's active role in strategic oversight and continual improvement decisions.

Thus, leadership sets the tone, support enables action, and performance evaluation verifies effectiveness and guides improvement.

From Leadership to Improvement for a Resilient Integrated Management System

1. Leadership (Clause 5): The Strategic Anchor

Top management is the catalyst in driving an effective Clause 5 requires top management to:

- Demonstrate accountability for the effectiveness of the IMS.

- Integrate OH&S into the organization's overall business processes.

- Provide direction by establishing the quality, environment and OH&S policy and measurable objectives.

- Promote effective internal communication, consultation and active participation of workers at all levels.

Impact: Leadership ensures quality, environment and OH&S management is not a separate compliance exercise but a core element of the organization's strategy and culture.
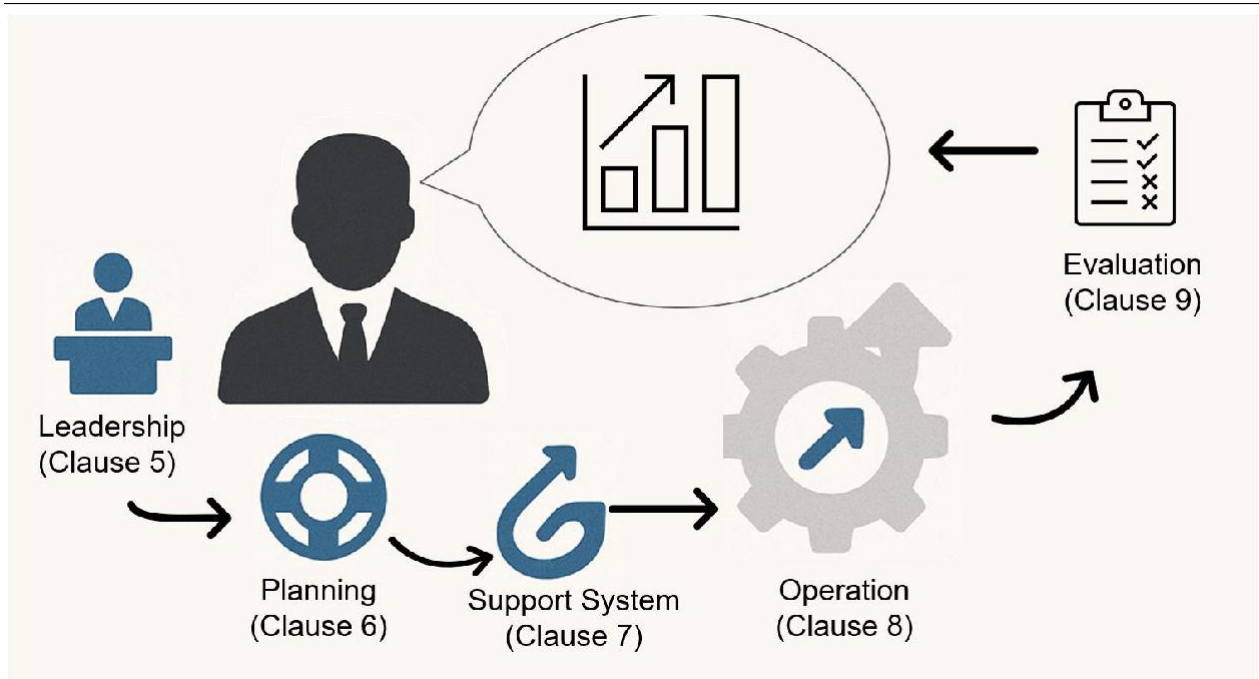
2. Planning (Clause 6) + Context (Clause 4): Building the Foundation

An effective IMS begins with understanding:

- **Clause 4.1**: Internal & external issues (e.g., operational complexity, legal context).

- **Clause 4.2**: Needs and expectations of interested parties (e.g., employees, regulators).

- **Clause 4.3**: Clear system boundaries and scope.

- **Clause 6.1**: Risk and opportunity assessments based on environmental aspects & impacts, hazards and OHS risks, compliance/legal obligations, and stakeholder expectations.

- **Clause 6.2**: Setting measurable objectives for safety performance and improvement.

Integration Insight: A clear context analysis feeds into relevant risk-based planning framework, forming the backbone for operational and performance control.

3. Support System (Clause 7): Enabling Execution

To translate leadership vision and risk-based plans into reality, adequate **support** is critical:

- **Clause 7.1 – Resources**: Ensuring availability of trained personnel, infrastructure, technology, and time.

- **Clause 7.2 – Competence**: Assigning competent persons and ensuring ongoing development.

- **Clause 7.3 – Awareness**: Making employees aware of the risks, responsibilities, and contribution to quality, environment and OH&S.

- **Clause 7.4 – Communication**: Establishing effective internal and external communication channels.

- **Clause 7.5 – Documented Information**: Controlling documents and records for traceability and consistency.

Support functions as the operational engine room, empowering workers with the tools and knowledge to control risks related to quality, environment and OH&S.

4. Operation (Clause 8): Putting Plans into Practice

Clause 8 defines the operational control mechanisms to ensure planned actions are executed effectively:

- Operational planning and control

- Change management

- Procurement

- Emergency Management

All operational controls must align with identified risks (Clause 6) and organizational context (Clause 4).

Key Principle: Any new or modified operation must undergo **pre-implementation risk assessments** (8.1.3), supported by leadership decision-making and worker involvement.

5. Performance Evaluation (Clause 9): Measuring What Matters

ISO 9001, ISO 14001 and ISO 45001 require organizations to **evaluate** whether their IMS is functioning as intended:

- **Clause 9.1**: Monitor, measure, analyze, and evaluate quality, environment and OH&S performance and compliance.
- **Clause 9.2**: Internal audits to verify conformance and effectiveness.

- **Clause 9.3**: Management review to ensure alignment with policies, objectives, and improvement goals.

Insight: Strong leadership and adequate support lead to meaningful performance data—helping top management make informed decisions and resource adjustments.

6. Continual Improvement (Clause 10): Achieving Results and Enhancing Impact

Performance results drive the **continual improvement process** under Clause 10:

- Addressing nonconformities and implementing corrective actions.

- Identifying opportunities for system enhancement and risk prevention.

- Demonstrating sustained commitment to quality, environment and OH&S excellence.

This closes the PDCA loop, ensuring that leadership intent (Clause 5), planning (Clause 6), support (Clause 7), and execution (Clause 8) translate into measurable improvement and positive quality, environment and OH&S outcomes.

Conclusion:

Leadership is not effective unless supported by resources, competence, and communication. Planning (Clause 6), grounded in context (Clause 4), sets a risk-based path, operationalized in Clause 8. Only with proper performance evaluation (Clause 9) can organizations drive real improvement (Clause 10). This full integration ensures the IMS delivers not just compliance—but **proactive risk control, safer workplaces, and sustainable performance**.