Clause-by-clause explanation of ISO 45001:2018

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0. INTRODUCTION

Occupational Health & Safety (OH&S) Systems primarily as tools for meeting regulatory requirements. However, this narrow viewpoint can hinder the full potential of a well-designed OH&S Management System, which offers not only safety benefits but also financial, economic, and reputational advantages. Whether implemented independently or integrated with other management systems such as ISO 9001 (quality) or ISO 14001 (environmental), the clauses outlined in the ISO 45001:2018 standard offer guidance on managing and mitigating occupational health & safety risks. Effectively utilizing this standard can yield numerous benefits for organizations of all sizes.

This handbook aims to assist employees tasked with establishing and maintaining an OH&S Management System within their organizations. Each clause of the ISO 45001:2018 standard will be elucidated in sequence, mirroring the numbering of the standard's clauses, and additional learning resources will be provided within the text to support comprehension

1. PROCESS AND PROCESS APPROACH

1.1 Terms and definitions

Process : This can be defined as a series of activities and actions that can be repeated consistently to produce a transformation from a series of inputs into a defined output

Process approach : Occupational health & safety systems, similarly to other management systems, use a combination of sequences and interactions to produce a desired output. When all activities and actions are managed, together with consideration towards each other and the end result, this method is known as the "process approach." A process approach will also specify the responsibilities of process owners, rather than providing generic

	responsibilities. Therefore, when a company has an OH&S Management System that is considered to be an active and fluid system, taking into account all variables and their effects on the objectives – this is considered a process approach
Inputs :	These are a collection of elements that may be required to feed a process, for example resources, raw materials, and machinery
Outputs :	These are the results of a process, whether desirable or undesirable outputs, such as wastage or pollution. It should be noted that an output is not always a final element, but may only be the input into the next process in a chain

2. PROCESS APPROACH IMPACT

Utilizing the process approach is a crucial aspect of achieving compliance and certification in accordance with the ISO 45001:2018 standard. However, it's essential to recognize that simply adopting this approach does not inherently ensure occupational health & safety or financial advantages. Nevertheless, implementing a process-based Occupational Health & Safety Management System offers significant utility by fostering continuity throughout operations.

Such a system establishes connections between policies, requirements, performance, objectives, and actions, thereby minimizing adverse effects on occupational health & safety. The process approach emerges as the most effective means of managing and mitigating hazards and risks in the occupational health & safety realm. It facilitates a comprehensive and systematic understanding of process interactions and their impacts, as opposed to solely addressing localized issues within individual processes.

Managing the OH&S Management System through a framework that comprehensively grasps the relationships among interacting processes and their consequences can result in both short- and long-term benefits for organizations striving to implement and uphold ISO 45001:2018.

3. THE PLAN-DO-CHECK-ACT CYCLE

The "Plan-Do-Check-Act" (PDCA) cycle serves as a cornerstone in the operation of the Occupational Health & Safety Management System, as outlined by ISO 45001:2018, facilitating the attainment of set objectives and fostering continual improvement. Its components are delineated as follows:

Plan: This phase involves establishing objectives and identifying the processes necessary to achieve them, all in alignment with the Occupational Health & Safety Policy set forth by the organization.

Do: Implementation of the planned processes occurs in this stage.

Check: Monitoring and measuring results against the Occupational Health & Safety Policy, encompassing commitments, objectives, and criteria, are undertaken here. Subsequently, findings are reported.

Act: Based on the findings from the checking phase, actions are taken to ensure continual improvement.

It's worth noting that while the PDCA cycle is a recognized methodology across various business management systems, its incorporation within ISO 45001:2018 is both mandatory and highly advantageous. The standard is structured in a manner that readily aligns with the PDCA cycle, facilitating its seamless integration and application within the Occupational Health & Safety Management System.

4. CONTEXT OF THE ORGANIZATION

4.1 Understanding the organization and its context

This provision is a common feature across all ISO management system standards, mandating organizations to identify both internal and external factors that could impact the attainment of objectives within the Occupational Health and Safety (OH&S) Management System. This encompasses all elements currently influencing these objectives, as well as those with potential future impacts.

4.2 Understanding the needs and expectations of interested parties

The updated standard necessitates organizations to evaluate the stakeholders involved with their Occupational Health and Safety (OH&S) Management System, identifying their respective needs and expectations. Subsequently, organizations must determine whether any of these needs should be transformed into compliance obligations.

4.3 Determining the scope of the OH&S Management System

The scope and boundaries of the OH&S Management System must now be thoroughly examined and defined considering the aforementioned interested parties and their needs, plus resulting compliance obligations. Also requiring consideration are the OH&S Management System functions and physical boundaries, and all products, services, and activities, including the organization's ability to exert control on external factors, with the results of the whole definition included in the OH&S Management System and kept critically as "documented information."

4.4 OH&S Management System

The standard indicates that an OH&S Management System should be established to achieve the desired outcomes by using interacting processes to deliver continual improvement. The ultimate objective is to improve the organization's occupational health & safety performance.

5. LEADERSHIP

5.1 Leadership and commitment

This clause underscores the ongoing responsibility of both the organization and its top management for overseeing the performance of internal and external factors that affect operations. Consequently, it emphasizes the alignment of the Occupational Health & Safety (OH&S) Policy and objectives with each other, as well as with the strategic policies and overall direction of the business, including potential integration with other business systems. Adequate provision of resources is essential to ensure the efficient operation of the OH&S Management System, with top management ensuring that individuals responsible for the system receive appropriate support, training, and guidance to fulfill their roles effectively. Effective communication, both internally and externally, is crucial from a leadership standpoint, necessitating the definition and establishment of communication methods and frequencies. In essence, the leadership of the organization is tasked with demonstrating an elevated level of leadership, involvement, and cooperation in the operation of the OH&S Management System

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5.2 Occupational Health & Safety Policy

Occupational Health & Safety (OH&S) Policy, which must be tailored to suit the organization's size, scope, activities, and aspirations. This policy serves as a formal framework for establishing objectives. It should unequivocally express a commitment to hazard elimination, risk reduction, prevention of workplace injuries, and consultation with workers. Additionally, ensuring compliance with regulatory requirements is paramount, necessitating the establishment of a method for capturing and recording compliance efforts. Crucially, the OH&S Policy must also demonstrate a commitment to the continual improvement of the OH&S Management System and its outcomes. It is imperative that the OH&S Policy is documented, communicated within the organization, and made available to relevant stakeholders.

5.3 Organizational Roles, responsibilities, and authorities

The standard states that it is the responsibility of top management to ensure that roles, responsibilities, and authorities are delegated and communicated effectively. The responsibility shall also be assigned to ensure that the OH&S Management System meets the terms of the 45001:2018 standard itself, and that the performance of the OH&S Management System can be reported accurately to top management.

5.4 Consultation and participation of workers

When it comes to the health & safety of workers, it is vital that these same workers are consulted about the OH&S Management System and participate in implementing the processes necessary to secure a safe workplace. To this end, the organization needs to determine the processes necessary to consult with workers at all levels of the organization in all aspects of development, planning, implementation, performance evaluation, and improvement actions of the OH&S Management System.

6. PLANNING

6.1 Actions to address risks and opportunities

6.1.1 General

This clause replaced "preventive action" in the previous OHSAS 18001 standard. The current standard states that the organization should establish, implement, and maintain the processes needed to address the requirements of the whole of the planning section itself. When planning the OH&S Management System, considerations need to be made regarding the context of the organization (section 4.1) and the needs and expectations of interested parties (section 4.2), as well as the scope of the OH&S

Management System.

Risk and opportunity must be considered with respect to these elements, as well as legal and regulatory issues, and the organization's Occupational Health & Safety hazards themselves. This outcome needs to ensure that the OH&S Management System can meet its intended outcomes and objectives, that any external factors that may affect performance are avoided, and that continual improvement can be achieved.

In terms of emergency situations, the organization is required to determine any situations that may occur and have a resulting occupational health & safety risk. Again, it is vital that documented information is retained concerning the risks and opportunities considered and addressed in the planning phase in order to satisfy the terms of the clause.

6.1.2 Hazard identification and assessment of risks and opportunities
ISO 45001:2018 asks organizations to consider, in a proactive manner, all occupational health & safety hazards within the organization's control. Changes or planned future changes to services also have to be taken into account, as do any abnormal situations that may arise that are reasonable for the organization to predict – for example, if you are about to launch a new product that needs radically new production processes or materials. Again, the organization needs to maintain documented information on this clause and its elements, and communication to the appropriate levels with effective frequency needs to be planned and undertaken. In terms of documented information, if you ensure that all actual and associated risks, the criteria you use to define them, and your significant occupational health & safety risks are documented, then you will satisfy the terms of this clause.

6.1.3 Determination of legal and other requirements
This section of the ISO 45001:2018 standard is essential yet straightforward. It necessitates the organization's determination of the legal and other requirements associated with its occupational health and safety hazards, along with determining the optimal approach for accessing them. Subsequently, the organization must assess how these requirements apply to its operations and incorporate them into the establishment, operation, and continuous improvement efforts of the Occupational Health & Safety (OH&S) Management System. It's imperative to document evidence of compliance with these obligations

6.1.4 Planning actions
This clause of the standard mandates that the organization must strategically plan actions to mitigate its occupational health and safety hazards, risks, opportunities, and compliance obligations, as previously discussed. These planned actions should be integrated into the

organization's Occupational Health & Safety (OH&S) Management System and related business processes. Additionally, evaluating the effectiveness of these actions is essential, considering technological, financial, and operational factors.

6.2 Occupational health & safety objectives and planning to achieve them

6.2.1 Occupational health & safety objectives

The standard advises that occupational health & safety objectives should be established at appropriate levels and intervals, having considered the identified occupational health & safety hazards, risks and opportunities, and compliance obligations. The characteristics of the set objectives are important, too: they need to be consistent with the organization's Occupational Health & Safety Policy, measurable where possible, able to be monitored, communicated effectively, and be such that they can be updated when circumstances require. Once more, it is mandatory that documented information is kept outlining this process and its outputs.

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6.2.2 Planning to achieve occupational health & safety objectives

The standard provides guidance on determining the elements necessary to ensure the achievement of objectives. This entails defining what needs to be accomplished, establishing timelines for completion, identifying the resources needed, assigning responsibility for achieving objectives, specifying methods for measuring results and ensuring progress, and considering how these objectives can be integrated into existing business systems

7. SUPPORT

7.1 Resources

In simpler terms, the standard advises organizations to ensure that they provide the necessary resources to achieve their stated objectives and demonstrate ongoing improvement

7.2 Competence

In accordance with the ISO 45001:2018 standard, employee competence must align with the requirements by ensuring that individuals entrusted with tasks related to the Occupational Health & Safety (OH&S) Management System are competent and self-assured. This entails ensuring that individuals possess the requisite experience, training, and/or education, and that any necessary training is identified and provided. Measures must be implemented, whether internally

or externally, to verify the attainment of this required level of competence. As expected, this process and its outcomes must be documented as part of the documented information for the OH&S Management System.

7.3 Awareness

Awareness is intricately linked to competence within the standard. Employees must be informed about various aspects, including:

a. The Occupational Health & Safety (OH&S) Policy and its contents.
b. Current and potential future impacts that may affect their tasks.
c. The significance of their personal performance to the OH&S Management System and its objectives, including both positive contributions and opportunities for improvement.
d. The potential consequences of poor performance on the OH&S Management System.

Moreover, the standard requires that workers are aware of their right to remove themselves from work situations they perceive as dangerous to their life or health.

7.4 Communication

7.4.1 General

Processes for both internal and external communication must be established and documented within the Occupational Health & Safety (OH&S) Management System. The essential elements to be determined, implemented, and recorded include:

a. What information needs to be communicated.
b. The methods or channels through which communication should occur.
c. The recipients who need to receive the communication.
d. The frequency or intervals at which communication should take place.

It's important to ensure that communication outputs align with related information and content generated by the OH&S Management System to maintain consistency.

7.4.2 Internal communication

The standard advises organizations to communicate information at different levels and frequencies as deemed appropriate. It emphasizes that the organization must ensure that the nature and frequency of communication facilitate continual improvement, allowing the communication process itself to contribute to ongoing enhancements in the Occupational Health & Safety (OH&S) Management System

7.4.3 External communication

Once again, the standard advises the organization to ensure that communication pertaining to the Occupational Health & Safety (OH&S)

Management System occurs according to the established process. The objective is to ensure that compliance obligations and objectives are effectively communicated and met.

7.5 Documented information

7.5.1 General

"Documented information," as referenced multiple times throughout this guide, encompasses the documents and records essential for the Occupational Health & Safety (OH&S) Management System. The requirements are structured to afford each organization the flexibility to tailor documented information to their specific needs, with the exception of the obligatory components outlined explicitly in the standard and this guide. According to the ISO 45001:2018 standard, the OH&S Management System should encompass all mandatory documented information, as well as any elements deemed critical to its operation. It's important to note that the volume of documented information required by an organization may vary depending on factors such as size, industry sector, and complexity of compliance obligations.

7.5.2 Creating and updating

The standard advises that documentation created by the OH&S Management System needs to include appropriate identification, description, and format so that it is can be easily understood what the documented information is for. There is also a need to review and approve the documented information for suitability and accuracy before release.

7.5.3 Control of documented information

The standard advises that documentation generated by the Occupational Health & Safety (OH&S) Management System should be accessible and appropriate for its intended use, wherever and whenever needed. Furthermore, it should be reasonably safeguarded against damage or loss of integrity and identity. Adequate provisions should be in place for processes such as distribution, retention, access, retrieval, preservation, storage, control, and disposal of documented information. It's important to note that documented information sourced externally should also be subject to similar controls and handling procedures. Additionally, careful consideration and control of viewing and editing access levels are necessary.

8. OPERATION

8.1   Operational control and planning

The standard acknowledges that operational control is highly dependent on factors such as the size, nature, compliance obligations, and occupational health & safety hazards of an organization. It grants individual organizations the autonomy to plan and ensure the achievement of desired results. The standard suggests several methods for achieving operational control:

a.   Designing processes to ensure consistency and eliminate errors.
b.   Utilizing technology to enhance control.
c.   Ensuring personnel are trained and competent.
d.   Performing processes in an agreed and prescribed manner.
e.   Ensuring measurability of processes.
f.   Ensuring that documented information aligns with requirements to ensure operational control.

An integral aspect of operational control involves the elimination of hazards and reduction of occupational health & safety risks. This can be accomplished through a hierarchy of controls, ranging from hazard elimination to the use of personal protective equipment. Managing changes in the OH&S Management System is crucial to maintaining its integrity. Procurement, including contractors and outsourcing, must also be managed, with appropriate measures taken to define and control the competency of outsourced service providers.

The degree of control an organization has over outsourced products or services may vary, but certain factors should always be considered. These include compliance obligations, evaluation and control of occupational health & safety risks, and management of risks and opportunities associated with service provision.

8.2   Emergency preparedness and response

Emergency preparedness and response are crucial elements in mitigating occupational health & safety risks. The standard emphasizes that it is the responsibility of the organization to be adequately prepared, and several key considerations and plans need to be in place:

a.   Development of actions to mitigate incidents.
b.   Establishment of internal and external communication methods.
c.   Implementation of appropriate emergency response methods.
d.   Consideration of various types of occupational health & safety incidents.
e.   Implementation of root cause analysis and corrective action procedures to address incidents after they occur.
f.   Regular testing of emergency response procedures and relevant training.
g.   Definition and communication of assembly routes and evacuation

procedures.

h. Establishment and availability of lists of key personnel and emergency agencies, including clean-up agencies, local emergency services, and local occupational health & safety offices or agencies.

i. Establishment of partnerships with neighboring organizations to share mutual services and provide assistance in the event of an occupational health & safety incident.

9. PERFORMANCE EVALUATION

9.1 Monitoring, measuring, analysis, and evaluation

9.1.1 General

In addressing this clause, the organization is tasked not only with measuring progress in occupational health & safety but also with considering its significant hazards, compliance obligations, and operational controls. The methods established should take into account several considerations:

a. Alignment of monitoring and measuring periods with the needs of the Occupational Health & Safety (OH&S) Management System for data and results.

b. Accuracy, consistency, and reproducibility of results.

c. Ability to identify trends based on the results.

d. Furthermore, it is important to report the results to personnel with the authority and responsibility to take action based on the outputs

9.1.2 Evaluation of compliance

The standard acknowledges that evaluation requirements will vary depending on factors such as organization size, compliance obligations, sector of operation, and past performance. However, it suggests that regular evaluation is necessary regardless of these variations. If a compliance evaluation reveals that a legal requirement is not met, the organization must assess the appropriate course of action, which may include contacting a regulatory body and agreeing on a plan for remediation. This agreement will then formalize the obligation as a legal requirement. It's important to note that if a non-compliance is identified by the Occupational Health & Safety (OH&S) Management System and corrected, it does not automatically become a non-conformity.

9.2 Internal Audit

9.2.1 General

The standard emphasizes that internal audits and auditors must be independent and free from any conflict of interest regarding the audit subject. Additionally, it is important to note that non-conformities identified during audits should undergo corrective action. When evaluating the results of previous audits, organizations should consider the findings of both internal and external audits, as well as any previous instances of non-conformities and the actions taken to address them.

9.2.2 Internal audit program

The ISO 45001:2018 standard directs us to ISO 19011 for guidance on the internal audit program. When establishing an internal audit program, several principles can be followed to ensure effectiveness:

Frequency: Base the internal audit frequency on what is reasonable for your organization considering factors such as size, sector of operation, compliance obligations, and risks to the health and safety of workers. Determine what frequency is suitable for your organization, whether it's bi-annually, quarterly, or another interval that meets your needs.

Flexibility: Understand that the audit schedule can be adjusted as needed, particularly in response to changes that require additional internal audit activities. Preferably, any changes to the audit schedule should be made through management review and with leadership guidance.

By adhering to these principles, organizations can develop an internal audit program that is tailored to their specific requirements and contributes effectively to the management of occupational health and safety.

9.3 Management Review

It's important to dispel the misconception that management reviews must be conducted all at once. In fact, they can be organized as a series of high-level or board meetings where topics are addressed individually. However, these meetings should occur at a strategic level and involve top management. Any complaints from interested parties should be carefully reviewed by top management, with a focus on identifying improvement opportunities. The management review process is crucial as it sets the tone for the effective functioning of the Occupational Health & Safety (OH&S) Management System and its associated elements. Therefore, it must be carried out accurately and diligently. All details and data from the management review should be meticulously documented and recorded to ensure that the OH&S Management System aligns with both specific requirements and the broader strategic direction of the organization.

10. IMPROVEMENT

10.1 General

Indeed, outputs from various processes such as management reviews, internal audits, and compliance and performance evaluations serve as valuable inputs for identifying improvement actions within an organization. These improvement actions may take various forms, including:

a. **Corrective Action**: Addressing identified non-conformities or deviations from requirements to prevent recurrence and improve performance.

b. **Reorganization**: Adjusting organizational structures, roles, or responsibilities to enhance efficiency and effectiveness.

c. **Innovation**: Introducing new ideas, technologies, or approaches to improve processes, products, or services.

d. **Continual Improvement Programs**: Implementing systematic initiatives aimed at ongoing enhancement of the Occupational Health & Safety (OH&S) Management System and associated processes.

By utilizing outputs from management reviews, internal audits, and evaluations, organizations can identify areas for improvement and implement actions to drive positive change and enhance their OH&S performance.

10.2 Nonconformity and corrective action

Preventing incidents and eliminating hazards are fundamental aspects of the Occupational Health & Safety (OH&S) Management System, as outlined in the definition of organizational context (4.1) and the assessment of risks and opportunities (6.1). It is essential to take action to correct and control problems when they arise. Additionally, investigating and addressing the root causes of these problems are critical to preventing the recurrence of process nonconformity.

By proactively identifying and addressing hazards, organizations can mitigate risks and create safer working environments for their employees. Furthermore, by investigating incidents and addressing their root causes, organizations can prevent similar occurrences in the future, contributing to the continual improvement of the OH&S Management System.

10.3 Continual improvement

Absolutely, by implementing actions to enhance the overall Occupational Health & Safety (OH&S) Management System, organizations can achieve improved OH&S performance and foster a culture that prioritizes worker participation in system enhancement. Encouraging worker involvement empowers employees to contribute their insights, experiences, and suggestions for improving safety practices and procedures. This not only enhances the effectiveness of the OH&S Management System but also cultivates a sense of ownership and responsibility among workers for their own safety and the safety of their colleagues. Ultimately, promoting worker participation creates a collaborative environment where everyone plays a role in continuously improving occupational health and safety standards.

11. CONCLUSION

ISO 45001:2018 offers organizations invaluable guidance for mitigating occupational health and safety risks and reducing impacts within the workplace. While the primary objective of ISO 45001:2018 implementation is to enhance occupational health and safety performance, a comprehensive understanding and implementation of its clauses can yield numerous benefits for organizations.

Achieving accreditation and compliance with ISO 45001:2018 can lead to several advantages, including:

a. **Reputational Benefits**: Demonstrating commitment to occupational health and safety standards enhances the organization's reputation among stakeholders, customers, and the public.
b. **Motivational Benefits**: Implementing ISO 45001:2018 fosters a safety-oriented culture within the organization, boosting employee morale and motivation.
c. **Financial Benefits**: Improved efficiency, reduced injuries, and enhanced procurement practices can result in financial savings for the organization over time.
d. **Customer Satisfaction**: Meeting ISO 45001:2018 requirements ensures that the organization delivers products and services in a safe and reliable manner, enhancing customer satisfaction.
e. **Stakeholder Expectations**: Compliance with ISO 45001:2018 demonstrates the organization's commitment to meeting the expectations and wishes of stakeholders, including employees, investors, and regulatory authorities.

Considering these benefits and the interconnected nature of occupational health and safety with organizational performance, it becomes evident that implementing ISO

45001:2018 is not just a prudent choice but a strategic imperative for organizations striving for excellence in health and safety management.

12. REFERENCES

- International Organization for Standardization