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## ISO 45001:2018 - A *New Standard* for *OH&S Management System*

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Grapevine, Texas



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### 1974

- > One office - Dallas, Texas
- > Air quality specialty

### 2018

- > Over 50 U.S. offices, plus China, Middle East, Canada and the UK
- > EHS and business solutions for industry
- > ISO 9001:2015 Certified

### EH&S Services to Industries Globally:

- > Regulatory Compliance Support
- > EH&S Performance & Risk Management
- > Auditing, Verification, and Due Diligence Assessment
- > Software Development
- > IT Solutions for Compliance Performance Management
- > Monitoring & Testing
- > Professional Training
- > Technical Staffing Services



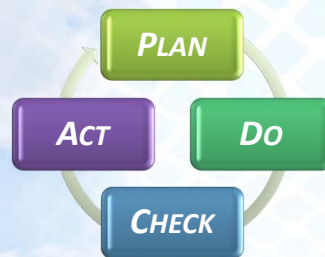
## Outline of Presentation

- > Overview of ISO 45001:2018
- > Key Requirements of ISO 45001 OH&SMS
- > OH&SMS Implementation & Alignment

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## ISO 45001:2018 OH&SMS

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## What is ISO 45001?

- > A management system (MS) for organization's occupational health and safety (OH&S) related activities and requirements
  - ❖ Provides a framework to establish OH&S management policies, objectives, processes and governance
  - ❖ Facilitates an organization's achievement of its strategic goals
  - ❖ Drives continual improvement for an organization's OH&S performance
  
- > To replace OHSAS 18001 as the new ISO approved OH&SMS

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## Why ISO 45001:2018

- > Organizations need to protect its People, Reputation, and Future.
- > OH&S performance is a major business concern beyond being a legal duty.
- > OH&S requirements should be managed in a systematic and sustainable way with a key objective to achieve the highest levels of OH&S performance.

<https://committee.iso.org/home/pc283>



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## Alignment with Several Related ISO Standards

Item	Status	Target Completion
ISO 14001 EMS	Final version has been published	September 2015
ISO 9001 QMS	Final version has been published	September 2015
ISO 45001 OH&SMS	Entirely new standard, mirrors OHSAS 18001 with new Annex SL structure and OSHA VPP and ILO elements Final version has been published	March 2018
ISO 50001 EnMS	Has been out for since 2011 Technical committee work on revision is in progress	Anticipated late 2018
ISO 31000 Risk Management Guidelines	Originally published in 2009 Final version has been published	February 2018



## Annex SL High Level Structure

### 1. Scope

### 2. Normative references

### 3. Terms and definitions

### 4. Context of the organization

4.1 Understanding the organization and its context

4.2 Understanding the needs and expectations of interested parties

4.3 Determining the scope of the [ ] management system

4.4 [ ] management system

### 5. Leadership

5.1 Leadership and commitment

5.2 Policy

5.3 Organization roles, responsibilities and authorities

### 6. Planning

6.1 Actions to address risks and opportunities

6.2 [ ] objectives and planning to achieve them

### 7. Support

7.1 Resources

7.2 Competence

7.3 Awareness

7.4 Communication

7.5 Documented information

### 8. Operation

8.1 Operational planning and control

8.2 Emergency planning and response

### 9. Performance evaluation

9.1 Monitoring, measurement, analysis and evaluation

9.2 Internal audit

9.3 Management review

### 10. Improvement

10.2 Nonconformity and corrective action

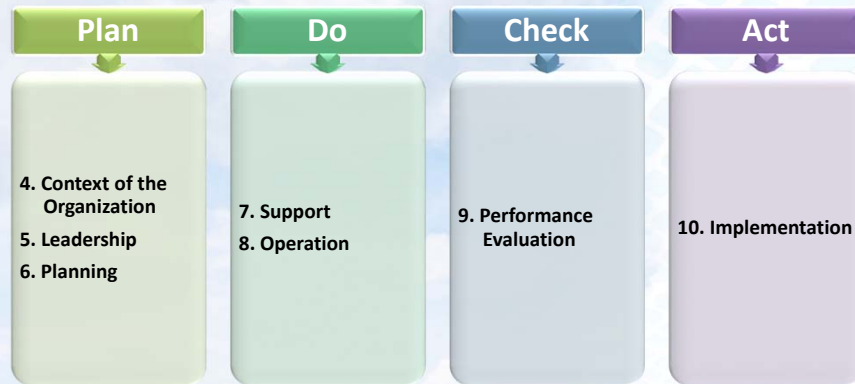
10.3 Continual improvement

[ ] refers to discipline specific requirements



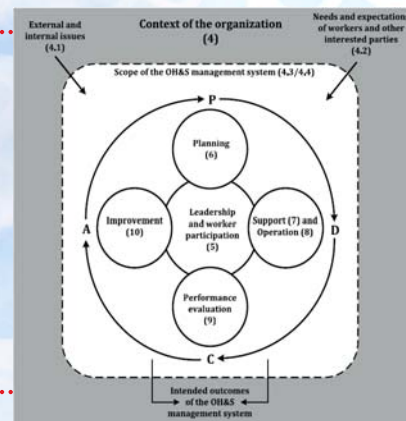
## Conform to *P-D-C-A* Framework

> *P-D-C-A* framework across multiple ISO standards



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## ISO 45001 Key Requirements



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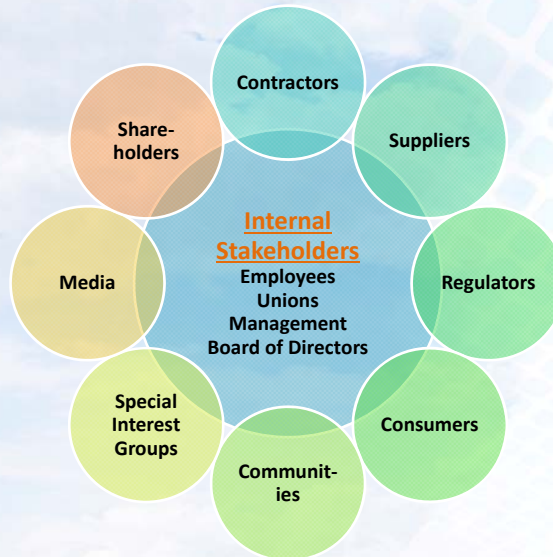
## 4. Context of the Organization

- > Define the organization's operations or business processes to be included within its OH&S management system boundaries.
- > Include all activities, products, and services under the organization's control or influence that could impact its OH&S performance.
- > Maintain the scope of OH&S management system as documented information and make it available to interested parties.

## Understanding Context of Your Organization

- > Evaluate external and internal context
  - ❖ Issues or conditions that are relevant
  - ❖ Consider [OH&S management, external issues, and internal conditions](#)
- > Clarify the needs and expectations of workers and other interested parties
  - ❖ Identify other 'interested parties', in addition to workers
  - ❖ Characterize their interest in the OH&S MS
  - ❖ Determine their relevant needs and expectations with respect to OH&S performance
  - ❖ Identify which needs and expectations equate to legal or other requirements

## Needs and Expectations of Stakeholders



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## Establishing a Process for Stakeholder Engagement

- > *Step 1: Identify Key Stakeholders*
- > *Step 2: Characterize Stakeholders*
  - ❖ *Influence*
  - ❖ *Dependency*
  - ❖ *Engagement Readiness*
- > *Step 3: Prioritize Stakeholder List*
- > *Step 4: Assign Classification*
  - ❖ *Keep satisfied*
  - ❖ *Keep informed*
  - ❖ *Monitor*
  - ❖ *Manage closely*



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## Common Internal Issues for Consideration

- > Governance, organizational structure, roles and accountabilities
- > Policies, objectives and the strategies
- > Capabilities, understood in terms of resources, knowledge and competence
- > Information systems, information flows and decision-making processes
- > New products, materials, services, tools, software, premises and equipment
- > Relationships with, as well as perceptions and values of, workers
- > Culture of the organization
- > Standards, guidelines and models adopted by the organization
- > Form and extent of contractual relationships, including outsourced activities
- > Working time arrangements and working conditions

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## Common External Issues for Consideration

- > Cultural, social, political, legal, financial, technological, economic and natural surroundings and market competition
- > Introduction of new competitors, contractors, subcontractors, suppliers, partners and providers, new technologies, new laws and the emergence of new occupations
- > New knowledge on products and their effect on health and safety
- > Key drivers and trends relevant to the industry or sector having impact on the organization
- > Relationships with, as well as perceptions and values of, external interested parties

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## 5. Leadership and Worker Participation

Leadership and commitment	Policy	Roles & Responsibilities	Worker Participation
<ul style="list-style-type: none"> <li>• Establishing policy and objectives</li> <li>• Committing resources</li> <li>• Communicating the importance of the system</li> <li>• Leading &amp; promoting a safety-focused culture</li> <li>• Taking responsibility to prevent incidents and protect workers</li> </ul>	<ul style="list-style-type: none"> <li>• Be established by top management</li> <li>• Provide safe and healthy working conditions</li> <li>• Fulfill legal and other requirements</li> <li>• Eliminate hazards and reduce risks</li> <li>• Consult and engage workers</li> <li>• Continual improvement</li> </ul>	<ul style="list-style-type: none"> <li>• Assign workers at each level with roles and responsibilities:</li> <li>• To carry out activities for the requirements of the system</li> <li>• Reporting on the performance of the system to top management</li> </ul>	<ul style="list-style-type: none"> <li>• Provide workers training, time, mechanism, and resources for participation</li> <li>• Provide timely &amp; clear OH&amp;S information to all workers</li> <li>• Worker inputs on policy, objectives, how to fulfill legal requirements, business processes, KPI, investigation of incidents, and more.</li> </ul>

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## 6. Planning

- > Hazard Identification
- > Risks and Opportunities Assessment
- > Legal and other requirements
- > Actions to address the above
- > Objectives and planning to achieve them

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## Hazard Identification



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## Risk & Opportunity Assessment




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# Risk & Opportunity Assessment

- > Delphi
- > HAZOP
- > Hazard Analysis & Critical Control Points
- > Event Trees
- > Fault Tree Analysis
- > Failure Modes & Effects Analysis
- > Business Impact Analysis
- > Root Cause Analysis
- > Cause & Effect Analysis
- > Layer of Protection Analysis
- > Decision Trees
- > Human Reliability Analysis
- > Markov Analysis
- > Monte Carlo Simulation
- > Bayesian Statistics
- > Consequence / Probability Matrix
- > Cost Benefit Analysis
- > Multi-criteria Decision Analysis

IEC/ISO 31010 – Risk Management-Risk Assessment Techniques, November 2009.



# 7. Support

**Resources**

- System implementation; maintenance; improvement

**Competence**

- Worker education, training, & experience

**Awareness**


- Policy and objectives
- Workers’ contribution to the system effectiveness - benefits & improvements
- Incidents and outcomes of investigations
- Hazards, risks, actions determined
- Ability to remove themselves from hazards

**Communication**

- Internal
- External – Proactive, documented

**Documented Information**

- Creating & Updating of documents
- Control of documented information

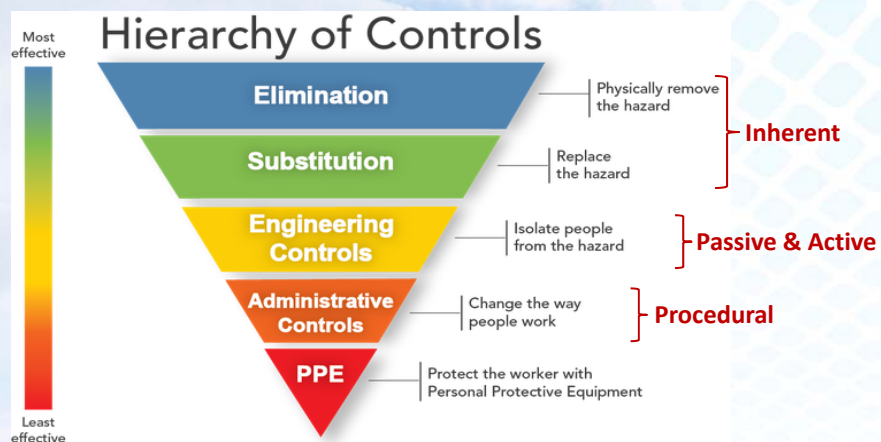


## 8. Operation

- > Operational planning and control
  - ❖ Eliminating hazards and reducing risks
  - ❖ Management of Change
  - ❖ Procurement of products and services
    - ◆ Contractors
    - ◆ Outsourcing
- > Emergency preparedness and response

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## Strategies for Eliminating Hazards - Alternatives



Source: <http://www.cdc.gov/niosh/topics/hierarchy/>

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## Management of Change

- > Management of Change (MOC) constitutes a distinct clause in Operational Planning & Control
  - ❖ Establish a process(es) for the implementation and control of planned temporary and permanent changes
    - ◆ New or changed products, services, processes
    - ◆ Changes to legal and other requirements
    - ◆ Changes in knowledge or information about hazards and OH&S risks (and opportunities)
    - ◆ Developments in knowledge and technology
  - ❖ Review the consequences of unintended changes, taking action to mitigate any adverse effects

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## Why is Management of Change Important?

- > MOC should be an essential part of any management system
  - ❖ Allows a facility/an organization to operate at an acceptable level of risk and improve operations
  - ❖ MOC is central to risk management, lack of change management is a root cause of many OH&S incidents
  - ❖ Change management
    - ◆ Keeps the system at the desired level of risk
    - ◆ Better ensures a successful implementation of changes

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## How Should MOC be Implemented?

- > Level of review/approval should be risk based
  - ❖ Include a review of ALL changes (process, procedure, personnel, equipment, material, supplier, etc.)
  - ❖ Changes with high OH&S risks should be reviewed in greater detail than those with lower risks
- > System should be implemented as part of normal business practices



## 9. Performance Evaluation

### Management Review

#### Monitoring, measuring, analyzing and evaluating performance

- Determine compliance performance tracking process, i.e., frequency and data collection requirements
- Identify KPI, including compliance requirements, for OH&S performance evaluation
- Establish methods for data collection, analysis, and reporting formats
- Communicate KPI to stakeholders as specified in the OH&SMS
- Evaluate system effectiveness for improvement of the KPI reporting process and method

#### Internal Audit

- Plan and Protocol
- Auditor(s)
- Scope and criteria:
  - Policy
  - Management System
  - Compliance requirements
  - Corporate requirements
  - Site specific procedures
- Findings and actions



## 10. Improvement

- > Identify opportunities for improvement
- > Incident management
  - ❖ Define “reportable” Incidents and nonconformities
    - ◆ Legal regulatory requirements
    - ◆ Internal guidance
  - ❖ Investigate and document reported incidents
  - ❖ Consequence impact analysis
  - ❖ Corrective actions
- > Continual improvement



## OH&S Incident Management Process



## HSE MS Implementation & Alignment



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## OH&SMS Implementation & Alignment

- > Conduct a gap analysis and establish a development plan for aligning your current OH&S MS (including EMS/QMS) with ISO 45001:2018 - alignment of common elements
- > Obtain leadership commitment and evaluate resources
- > Develop a plan for revising/developing OH&S MS procedures
- > Revise/develop system required procedures and documents
- > System implementation and maintenance
  - ❖ Training for members with assigned roles and responsibilities
  - ❖ Awareness training to internal stakeholders
  - ❖ Communicate to key external stakeholders as specified
  - ❖ Data collection and OH&S performance evaluation
  - ❖ Internal audit and incidents management
  - ❖ Management review for performance and continual improvement

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## Implementation Timing

- > New certification
  - ❖ Typically, a 2 year period for system planning, developing, implementation, roll-out, auditing, management review, continual improvement
  
- > Transition timing for existing OHSAS 18001:2007
  - ❖ Official transition period - March 12, 2021 (3 years)
  - ❖ Actual system transition time maybe ~2 years
  - ❖ Dual system during transition period
    - ◆ May certify for OHSAS 18001 before March 30, 2020
    - ◆ Existing OHSAS 18001 must complete upgrade assessment by December 31, 2020

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## Take Away

- > An overview of the ISO 45001 health and safety management system
- > Awareness of the new standard for improvement of HS management
- > System implementation and certification process

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*Thank You!*

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Director

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