



# Operating Management System Framework

OGP Report No. 510  
June 2014

*for controlling risk and delivering high performance in the oil and gas industry*



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## About IPIECA

IPIECA is the global oil and gas industry association for environmental and social issues. It develops, shares and promotes good practices and knowledge to help the industry improve its environmental and social performance, and is the industry's principal channel of communication with the United Nations. Through its member-led working groups and executive leadership, IPIECA brings together the collective expertise of oil and gas companies and associations. Its unique position within the industry enables its members to respond effectively to key environmental and social issues.



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## Revision history

Version	Date	Amendments
1	June 2014	First issued

# Acknowledgements

This report and its supplement—report 511—were produced by an OGP task force with the substantial support and input of IPIECA over a four-year period. More than 40 people contributed to this work, representing oil and gas operators, contractors and industry associations. They were supported throughout by the OGP and IPIECA secretariats, and a technical editor.

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# Foreword

In 1994, OGP published *Guidelines for the Development and Application of Health, Safety & Environmental Management Systems*—report 210. It provided a basis for companies to establish systems to consistently manage health, safety and environmental issues. Since the report’s publication, company management systems have developed considerably, the scope of systems has expanded, lessons have been learned and many good practices have been shared across the industry. To consolidate this progress, OGP and IPIECA have collaborated to update report 210 and produce this guidance. Its aim is to provide a framework for companies establishing a new Operating Management System (OMS) or improving an existing system.

This new Operating Management System Framework (hereafter, “OMS Framework” or “the Framework”) is designed to help companies define and achieve performance goals and stakeholder benefits, while managing the broad and significant range of risks inherent in the oil and gas industry.

In this context, “operating” applies to every type of upstream or downstream company activity, from construction to decommissioning, throughout the entire value chain and lifecycle of the business and its products. The Framework offers an integrated approach and the flexibility to address some or all of a wide range of risks, impacts or threats related to occupational health and safety; environmental and social responsibility; process safety, quality and security.<sup>1</sup> The degree of integration and the scope of an OMS will be determined by individual companies and will differ depending on their activities, organisational structure and management system maturity.

To be successful, a company should be disciplined and maintain high standards, with operational controls implemented systematically across the entire company. Lapses in execution can result in harm to people or the environment, loss of license to operate, or threaten the reputation or viability of a company. The Framework addresses operating discipline through the application of four equally important principles (the “Fundamentals”)—Leadership, Risk Management, Continuous Improvement and Implementation. The ten Elements then set out the structure for establishing an OMS and define the expected outcomes of implementation. They build on and expand the scope of the seven Elements of report 210’s management system.

This document is published with a supplement—*OMS in Practice* – report 511—that supplies guidance on how to establish and sustain an OMS, with many examples of industry-specific processes and practices. The OGP and IPIECA websites also offer guidance and examples of good practices, as well as links to other publications that can be used to support OMS implementation.

Taken together, these publications provide guidance on one approach for the implementation of an OMS. Companies may adopt or adapt it, or choose alternative, equally effective approaches. Whatever approach is taken, the single, clear objective is that the oil and gas industry continues to improve its performance through systems for operating responsibly and managing risk while maintaining energy supplies.

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<sup>1</sup> This OMS guidance is not intended to cover every aspect of managing a company, business, asset or project. For example, financial risk and performance is not included in its scope. However, companies may choose to further integrate an OMS with other aspects of management.

# Introduction

The aim of this document is to provide a framework for companies establishing a new Operating Management System and/or improving or integrating existing ones.

The scope of the OMS can address a broad range of risks, impacts or threats; such as those associated with occupational health and safety, environmental and social responsibility, process safety, quality and security. By bringing together the management of key aspects of running a successful business, an OMS can achieve company-wide consistency, across all assets and activities, at every location and the entire workforce.

Since the early 1990s, organisations such as the International Organization for Standardisation (ISO), the American Petroleum Institute (API) and the Centre for Chemical Process Safety (CCPS) have published management system standards and guidance. These are usually based on similar concepts, but often varying in scope; covering areas such as environment, social responsibility, quality, process safety and offshore operations (see References). In 1994, OGP issued *Guidelines for the development and application of Health, Safety & Environmental Management Systems*—report 210. It proposed a model that could be used to develop an HSE management system, or analyse and improve an existing system. This OMS Framework builds on the content of report 210 and has been informed by evolution of management system guidance and standards.

This guidance document is divided into three main sections:

- Overview
- Fundamentals
- Elements

## Definitions

**Management System:** A structured and documented set of interdependent practices, process and procedures used by the managers and the workforce at every level in a company to plan, direct and execute activities.

**Operating:** The design, implementation and control of activities that convert resources into products and services to fulfil a company's business strategy. The word 'operating' refers to the entire lifecycle of a company's activities and products.

See Glossary for definitions of all terms used in this document.



## Implementation guidance

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The *OMS in practice* report (511) is a supplement to this Framework that provides practical guidance on:

- **Getting started:** how to use the Framework
- **Process and practices:** examples of common industry of standards, processes, practices, rules, methods, guides, tools, procedures and work instructions
- **Sustaining the system:** examples of measures to assess the successful implementation and improvement of an OMS, and its effectiveness.

The OGP and IPIECA library of publications and tools provides access to additional guidance developed over many years by member companies. See <http://www.ogp.org.uk/publications/> and <http://www.ipieca.org/library>

Links to further information can be found in the references at the end of this report.

### *What gets achieved*

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**A consistent approach** to risk management—including assessment, assessment, mitigation and control—so as to reduce the likelihood of adverse consequences, whilst providing opportunities to improve the reliability, benefits and effectiveness of operations.

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**A systematic process** to use at all company levels to plan, manage and carry out activities as intended, while ensuring the workforce are constantly mindful of risks related to hazards, effects, impacts and threats. This is achieved through a continuous improvement cycle: **‘Plan-Do-Check-Act’**.

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**A consolidation** of the company’s knowledge and requirements into a single framework to safely and responsibly manage assets and activities. This includes the company’s policies, standards, practices, procedures and processes. This ‘corporate memory’ is organised within the system’s Elements and Expectations, which are designed to ensure controls are complete and robust.

# Overview of OMS Framework

The Framework comprises two interdependent components:

- **Four Fundamentals** focus attention on management principles that are arguably the most important for an effective OMS—Leadership, Risk Management, Continuous Improvement and Implementation.

These principles are not sequential and they apply equally to every Element of the OMS to drive its success. Constant focus on each Fundamental will sustain the OMS, strengthening performance and effectiveness.

- **Ten Elements** establish a structure to organise the various components of an OMS. Each of the ten Elements includes an overview, a purpose statement and a set of **Expectations** that define the system’s intended outcomes.

Every Element requires the establishment and maintenance of appropriate documentation and records.



**Figure 1:** The OMS Framework—Four Fundamentals underpin ten Elements

## Scope and applicability

The OMS Framework’s intent is to cover all phases of a company’s business activity and the word “operating” refers to the entire business lifecycle. Companies should tailor their OMS development and implementation to account for differences in risk and complexity across their range of activities; this means it is important to consider the scope and applicability of the OMS from the outset.

*Scope:* An OMS will vary between companies, depending on factors like types of activity and location of assets. The OMS Framework is flexible enough to allow companies to address different types of risk and business approach (e.g. integration of social responsibility, quality or security aspects, in addition to HSE). This Framework is not designed to cover financial control systems, monetary accounting or commercial risk management. These areas are normally served by a separate management system to meet regulatory and shareholder requirements.

*Applicability:* Boundaries of applicability of a company’s OMS should be clearly defined. In general, an OMS will apply whenever the company has direct management control of activities. Whenever activities are not directly managed by the company, it is important to confirm that risks are managed at the appropriate level. This is particularly important when working in partnerships, including with contractors, subcontractors and other suppliers; partner-operated joint ventures; or when companies are supplying products to customers or collaborating with local communities.

### *OMS terminology*

This guidance is broadly applicable to management of different operating aspects and risks. This includes occupational safety and health; environmental and social responsibility; and process safety, quality and security. The terminology used in the report and defined in the glossary is intended to be generic. Companies may still need to interpret and adapt it in some areas to broaden its applicability and to meet the scope of their system.

This document does not mandate requirements or use terms that imply requirements such as “must” or “shall”. It uses terms including “should”, “will” and “ensure” throughout when a specific approach is recommended to support implementation of a suggested or example process or action. The words “may” and “can” are generally used to encourage consideration of one of several potential options.

A company’s OMS should use clear and consistent terminology to clarify system applicability and differentiate between required and optional processes or actions.

# OMS Fundamentals

The four Fundamentals are the management principles that are arguably the most influential success factors of an OMS. They define how a company establishes and maintains its OMS and are what brings strength and integrity to the structure provided by the ten Elements.

## Leadership

*“Focus constantly on system effectiveness”*

Successful management systems need leaders who are committed advocates and owners of their OMS; who don't compromise on implementation and execution.

Commitment and support should come from the top. The company's executive leaders should give each level of the organisation the necessary authority and resources to establish and implement the OMS. Accountabilities, roles and responsibilities should be clearly identified and cascaded throughout the organisation.

Leaders need to demonstrate integrity, communicate openly, do what they say they will do and foster an environment in which people provide feedback openly. Everyone involved in the OMS should understand their responsibilities for ensuring the system is effective and recognise the opportunity to demonstrate leadership. Success relies on people at every level being champions and role models to others, and dedicating time and effort to achieve the OMS objectives and desired levels of performance.

While everyone can be a leader by virtue of their role and influence on colleagues, an organisation should also recognise that leadership is vital for people with specific accountabilities within the OMS, such as technical authorities, supervisors and line managers. For leaders to be successful advocates of the OMS they need to be proactively involved in the other Fundamentals: Risk Management, Implementation and Continuous Improvement. And they should not communicate conflicting messages about their commitment—for example, lack of strict adherence to OMS requirements or toleration of non-conformances can lead to performance lapses or other unintended outcomes.

Leaders should seek assurance that the OMS is working well by actively looking for insights about system effectiveness and using appropriate measures to understand performance. Regular review of audit outcomes, key performance indicators (KPIs), and incident investigations are formal opportunities to monitor performance. But they are only one type of input; another is a culture embodying constant vigilance or “mindfulness”. Personal observation, careful listening and an acute awareness of risks can help maintain a state of alertness. In turn, this develops sensitivity and response to “weak signals” of emerging changes in areas such as operating discipline, workforce attitude and stakeholder concern. This is particularly critical for process safety risks where companies need to ensure robust risk controls/barriers are maintained to prevent occurrence of low-likelihood/high-consequence events.

### *Leaders – ask yourself*

How do I demonstrate personal ownership of the OMS?

What are the significant risks in my organisation?

How do I know effective controls have been implemented and are maintained, including for contracted activities?

What can I do to ensure that learning from incidents and audits is applied?

How do I demonstrate that I put protection over production?

An organisation’s culture develops over time, based on commonly held attitudes, societal norms, accepted values and reinforced beliefs. Leaders at all levels need to be aware of how important their actions are in fostering a strong, positive culture, and in nurturing values such as the necessity to operate responsibly.

It is important for a company to set out its expectations and requirements regarding its employees and contractors. Leaders should clearly communicate OMS expectations and responsibilities, and then recognise and reward positive behaviour or intervene and address behaviour that does not meet expectations. Consistent application of an OMS provides a robust platform for leaders to improve culture and behaviour.

Executive leaders should establish and effectively communicate priorities, objectives, requirements and accountabilities of an OMS. Leadership is therefore essential for meeting the expectations of Element 1—Commitment and accountability.

## Risk Management

*“Eliminating the negatives, enhancing the positives”*

The oil and gas industry has hazards and risks that are inherent to its assets, activities, operational locations and products. Using a standardised approach to risk management, that is applied consistently across all types of operation, has the advantage of accounting for different sources and types of risk (including, but not limited to, consideration of the potential consequences of environmental impacts, security threats, community grievances and capability scarcity, as well as personal and process safety incidents). These processes also help identify opportunities for improvement—for example, to benefit the environment or societal stakeholders by improving protection, conserving scarce resources or by enabling economic and social development. The same principles and management techniques can be applied to reduce risks and realise opportunities.

Within the Framework, risk management is an integral part of many of the organisation’s processes and, at the same time, it is central to decision-making within the OMS, explicitly addressing uncertainty to protect the company and create value.

The general approach to risk management starts by considering both external and internal contexts. External context may include social, cultural, economic, regulatory and environmental aspects at local, regional, national or international levels; and how these affect the company’s objectives and its relationships with stakeholders. Internal context may include how the company is organised and governed, its policies and objectives, capabilities and resources, information and decision-making systems, contractual and partnering relationship, and its culture.

### *A strong, positive culture:*

Empowers individuals and teams to fulfil their OMS responsibilities

Values competence, recognises and uses expertise

Communicates openly, transparently and effectively

Embeds learning and improvement systematically into the OMS

Encourages habits of questioning, observation and seeking improvement

Fosters mutual trust across, up and down the organisation, with no fear of reprisal for constructive criticism or reporting shortfalls

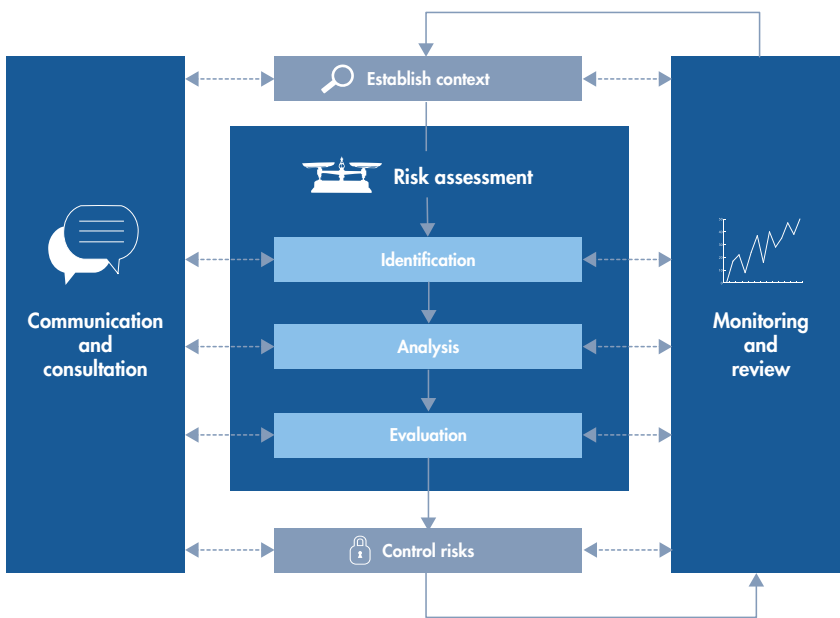
Ensures managers engage with workers and other stakeholders, responding to concerns

Maintains awareness of “weak signals” and constant vigilance regarding hazards and risks

To enable the integration of risk management, a company-wide risk assessment process that embeds continuous improvement should be established, see example in Fig 2. This should be supported by appropriate resources and incorporated into company policies, objectives, accountabilities, reporting and communications.

### Process of risk management

Before starting any operation or project, it is important to establish the context and assess the risks. There should be a clear understanding of the technical objectives, scale of operations, geographic location and timeframe. Taking this into consideration, as well as any relevant stakeholder input, all potential consequences—beneficial and adverse—should be assessed in terms of hazards, effects, aspects or threats (which can be adversarial or non-adversarial when considering security). The likelihood (probability) and the potential severity of a consequence are used to assess the level of risk. A realistic view can then be taken of the worst-case outcome of a scenario, taking into account the extent to which severe consequences can be foreseen, particularly those with low likelihood of occurrence.



**Figure 2:** Example risk management process (based on ISO 31000)

An activity's consequence is not necessarily a single acute event or occurrence. Many potential environmental, health and social consequences are chronic, continuous or cumulative; such as long-term medical conditions or impacts on local biodiversity. Consequences may also be indirect or secondary, such as positive or negative effects on the livelihoods of communities or access to fresh water. By embedding risk management in an integrated OMS, companies can address the full breadth of their operating risks with a balanced and consistent approach.

Risks are controlled by implementation of planned measures, which may take various forms and are often used in combination to increase effectiveness and reliability. The most effective measures result in elimination or avoidance of the risk (e.g. by substitution). Other measures put in place risk controls/barriers/layers of protection to reduce the risk (such as physically engineered systems, plans and procedures). Measures include quality checks or other forms of monitoring, together with actions to mitigate potentially adverse consequences, including contingency or emergency plans. Measures may also be compensatory, such as offsets to address the likelihood of environmental or social impacts, or they may provide positive outcomes, such as contributions to sustainable social development.

In common with governments and societies, companies recognise it is not always possible to eliminate or avoid risk entirely, but they are expected to take reasonable measures to reduce and/or mitigate risk to a level deemed acceptable. To enjoy the benefits of road transport, for example, people generally accept a level of risk while expecting governments to improve measures to reduce accidents and pollution. Likewise, when a company is establishing controls to manage operating risk, acceptance judgements and decisions regarding any "residual risk" will need to be made at a level in the organisation commensurate with the risk. To ensure consistency, risk management is commonly supported by criteria and approval processes. Decisions requiring acceptance of higher levels of residual risk are escalated as necessary, including to the company's highest governing body.

The risk management process incorporated into a company's OMS is typically supported by instructions and definitions; competency requirements for personnel involved; and specific tools for consistent implementation. Element 5 sets out Expectations for Risk Assessment and Control, report 511 – *OMS in Practice* provides examples of processes and practices.

## Continuous Improvement

### *“Always Plan-Do-Check-Act”*

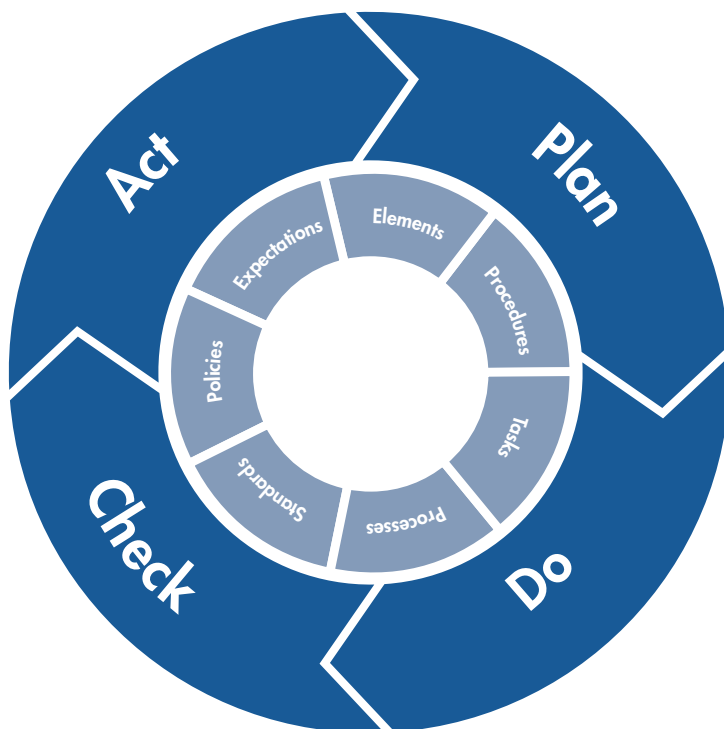
The concept of achieving continuous improvement through a logical sequence of repeated steps is fundamental to an OMS. Many versions of the continuous improvement process exist, this Framework applies the ‘Plan-Do-Check-Act’ cycle (PDCA), which has been adopted by ISO and others. This simple process has developed into a widely applied practical basis for management systems. It starts with careful planning, followed by controlled execution, which is monitored for effectiveness, leading to the inclusion of improvement actions when further planning in a continuous cycle.

The table below shows how the four steps can be applied to systematically manage the business or activity and improve performance. The Plan step involves significant effort before execution of an activity; this is reflected in the Expectations in Elements 2 to 7. Similarly, Elements 8 to 10 describe Expectations aligned with the Do-Check-Act steps of the cycle at execution and evaluation of an activity.

	DESCRIPTION	ALTERNATIVE TERMINOLOGY
PLAN	Clarify objectives of the activity and organise appropriate resources. Engage all parties involved or affected. Ensure risks are identified and measures defined to eliminate them. Remaining risks are assessed to define appropriate controls or mitigation.	Define Prepare
DO	Execute and control the activity based on plans and procedures, including those to manage risk.	Execute Implement Deliver
CHECK	Monitor to ensure plans and procedures are being followed and to confirm risk controls/ barriers are effective. Measure progress and assess processes for improvement opportunities and/or assurance.	Monitor Measure Review Assess
ACT	Review outcomes and performance. Establish improvement actions, incorporate into (future) plans for the activity and embed relevant learning in the OMS.	Adjust Improve



Figure 3 illustrates the PDCA cycle, which has to be consistently applied to improve the OMS, any of its Elements and/or any detailed part of the system, such as a local procedure. The cycle also underpins the Implementation Fundamental, illustrated by Figure 4 in the next section, by ensuring continuous improvement at the working level.



**Figure 3:** Plan-Do-Check-Act

The PDCA cycle guards against complacency. It is not uncommon to focus on the Plan-Do steps and assume the cycle is virtually complete. This overconfidence can lead to a lack of focus on the equally important Check-Act steps that ensure performance constantly improves through, for example, technological advances.

The success of this cycle relies on the commitment of individuals. Leaders should integrate PDCA into their routines for managing the business and demonstrate by example how the cycle is applied. Individuals with OMS accountabilities and authority (referred to as “system owners” in the Implementation Fundamental) ensure that OMS documentation is regularly reviewed and updated. This includes revising the OMS to reflect organisational and other changes, incorporating lessons from past experiences (good and bad) and responding to input from the workforce or external good practice.

## Implementation

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### *“Making it happen”*

Effective implementation is essential for a management system’s success and should lead to continual improvement. This requires that the system be established centrally and implemented company-wide, whether for strategic planning or day-to-day operating, so that individual risk controls are consistently applied.

Personal commitment and accountability (Element 1) is critical for successful implementation. The ultimate owner of the OMS is the chief executive or managing director of the company. They will retain overall responsibility, but delegate clear accountability and authority so that every part of the system has an owner. This cascading will lead to further delegation of the more detailed tiers of the system, including processes, practices and procedures that deliver the Expectations, or manage specific activities or assets within the organisation. Many parts of the system will be inter-related and they will have many different dependencies, so clarity of ownership is important.

Each owner should be trained and allocated sufficient time and resources to perform their role, and they should regularly review the progress of their part of the system. Owners should also ensure OMS documentation is complete and maintained, including associated records of revisions and updates.

### **Developing the OMS**

Development of an OMS starts with setting up and documenting the system, which is then supported by a detailed implementation process.

The policies, standards, process and procedures that make up the system need to be developed to describe how to prepare for and execute activities. These should be documented and the documentation maintained and improved to ensure company requirements are clearly defined and met.

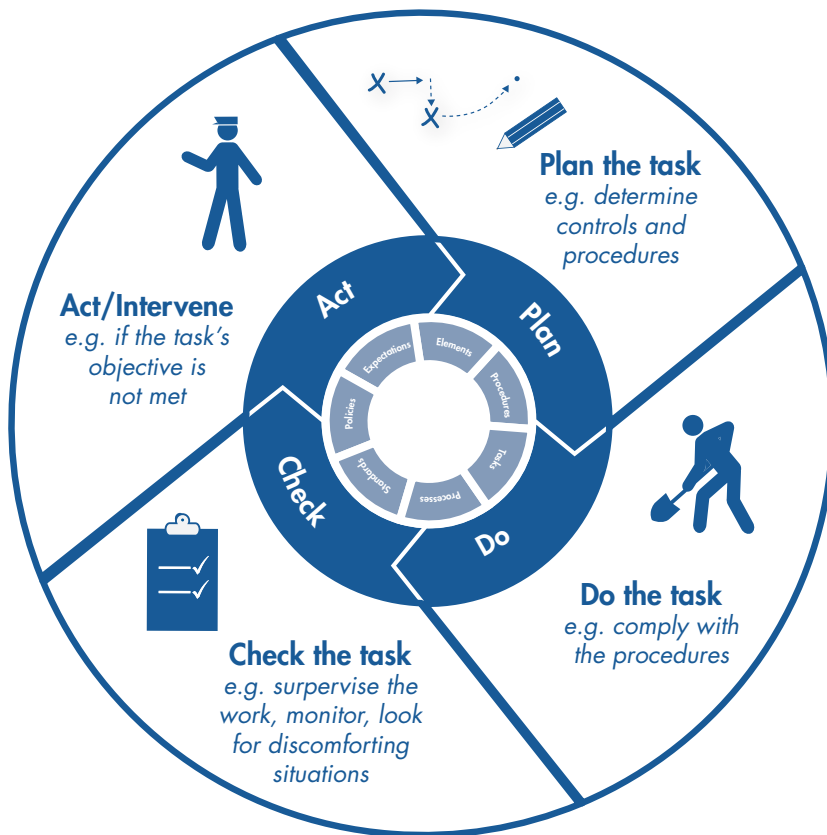
*OMS in practice*—report 511—provides extensive guidance on OMS development, including how to get started, establishing processes and practices, and how to sustain and improve the system.

## Implementation at the working level

At the working level, processes and practices need to be developed for the company’s businesses, assets or projects, and be specific to the type of risk or opportunity being managed.

Within day-to-day operations and individual tasks, the PDCA cycle ensures that risks are managed (as illustrated in Fig 4); whether undertaking a design or maintenance task, operating a plant or driving a vehicle, reducing environmental discharges or engaging with the community, securing a boundary or performing a heavy lift.

Effective implementation needs a disciplined and capable workforce with a shared commitment to carry out work safely, responsibly, reliably and in conformance with plans and procedures. It is reliant upon all four Fundamentals to ensure the Elements and Expectations of the OMS are delivered effectively.



**Figure 4:** PDCA cycle helps manage risks within day-to-day operations and individual tasks

# OMS Elements

## Introduction

To aid understanding and maintain consistency in this section, terms defined in the glossary are highlighted when first used or when they are essential to a particular Element.

Besides the Fundamentals, this Framework organises the OMS into ten Elements, each with its own set of Expectations. The Elements listed in Figure 1 are intended as a starting point for a company developing or improving its OMS. Based on its operating activities, a company may modify these in relation to its specific context and operating risks. The **Elements** and **Expectations** provide guidance; they do not aim to cover all legal, regulatory or voluntary requirements a company may need or want to address. When developing an OMS, it should be clearly set out what is expected of management and the workforce as well as defining whether the incorporated Expectations are mandatory or have any degree of flexibility in implementation.

In “OMS in Practice”, the Getting Started section provides further guidance on developing a manageable, accessible and familiar structure for organising the detailed parts of the system.



**Figure 1:** The OMS Framework—Four Fundamentals underpin ten Elements

# Element 1 – Commitment and accountability

Commitment is essential for the success of the OMS, as is everyone’s **responsibility** for their actions. Everyone should understand their **accountability** for OMS policies, systems, decisions, and outcomes; it is a basic requirement for those who direct and control **activities**. Managers support a strong **culture**, establish strategic objectives, communicate requirements and provide clear direction to guide the organisation in sustaining responsible **operations**.

## Purpose

This Element supports the development of a company culture and individual behaviours that recognise **operating** responsibly is expected. It underpins the Leadership Fundamental by establishing:

- personal commitment on the part of all the organisation’s **managers** and **workers** to apply the OMS to achieve business policies and objectives
- accountability based on well-defined authority levels, acceptance of decision-making and a clear understanding of **job** responsibilities to deliver results.



## Expectations

- E1.1 The OMS is in place across the organisation, with priorities established, **authorities** and accountabilities assigned, and **resources** allocated to meet OMS Expectations.
- 
- E1.2 Managers commit to ensuring a culture is developed and maintained to enable safe, reliable, responsible operations and **continuous improvement**.
- 
- E1.3 The **workforce** is committed to performing activities in accordance with **company** policies, standards and objectives, and in **compliance** with external requirements.
- 
- E1.4 A code of conduct is in place to establish behavioural, ethical and compliance obligations for **employees**.
- 
- E1.5 Accountabilities are clearly defined and aligned with job responsibilities, authority levels and **performance** objectives. Personal commitment to meeting OMS Expectations is visible and demonstrated at all levels in the company.
- 
- E1.6 Communication and engagement mechanisms are established and sustained to ensure clear and consistent reinforcement of the OMS and its Expectations.
- 
- E1.7 Processes are in place to manage documentation to ensure the latest versions are approved, identifiable and available, with defined retention, back-up and archival systems for management of information and related records.
- 
- E1.8 There is a commitment to learning from internal and external sources, with processes to incorporate continuous risk reduction and performance improvement.

## Element 2 – Policies, standards and objectives

Policies, standards and objectives (PSO) need to provide clear statements on what a company intends to achieve. Policies provide high-level commitments on general principles, limitations and statements of intent about how a company will operate. Standards and objectives support the policies with more detailed requirements and longer-term aims. They reflect the scope of the OMS regarding specific types of risks, impacts or threats. Company PSO reflect values set and applied across the entire organisation. However, assets, businesses, projects or other levels of the organisation may establish additional PSO as required (consistent with those at company level) to manage specific projects, operating activities and local issues.



### Purpose

This Element ensures appropriate PSO are in place to define the expected outcomes of OMS implementation, including:

- protecting the company and its stakeholders by limiting risk exposure
- providing commitments and boundaries to guide activities and priorities, and define success criteria
- assisting the company to meet or exceed regulatory requirements and other voluntary commitments to which the organisation subscribes, and setting responsible expectations where regulatory requirements do not exist.

### Expectations

- E2.1 PSO are defined, documented and communicated across all organisation levels to address applicable aspects of business activities throughout their lifecycle.
- 
- E2.2 PSO are authorised by the highest level of management/organisation appropriate to each activity and implemented to meet OMS Expectations.
- 
- E2.3 Policies and standards establish risk-based requirements, including the commitment to comply with applicable regulatory or other requirements.
- 
- E2.4 Objectives include measurable success criteria based on continuous improvement; maintaining standards; or compliance with policy, regulatory or other requirements.
- 
- E2.5 Where different entities operate on the same facilities (including joint venture partnerships), PSO are harmonised to ensure a consistent message and application.
- 
- E2.6 Deviations from PSO are reviewed, subject to deviation/exemption process, and documented and approved by a competent authority.

# Element 3 – Organisation, resources and capability

Being well prepared in terms of **organisation, resources and capability** underpins consistent delivery to meet company’s objectives and internal requirements and to address stakeholder expectations. This can be achieved by having the right equipment, processes and people in place, with the right skills at the right time. It is important to extend OMS consistency to contractors, who are a key resource when deployed to increase the organisation’s capability.

## Purpose

This Element ensures a company is clear about who does what, has everything needed in place, and that the necessary skills and experience are applied by:

- describing how the organisation is structured to deliver its planned objectives effectively and efficiently
- establishing relationships and verifying controls to maintain sufficient and effective supply of goods and services
- ensuring the capability of managers and workforce is supported by appropriate levels of competence, fitness and behaviour to work effectively and meet OMS Expectations.



## Expectations

- E3.1 Maintain an organisation with defined **responsibilities, accountabilities** and **authorities** to effectively implement the OMS and ensure **compliance** with legal and other requirements.
- 
- E3.2 Recruitment, deployment, career development, retention and succession plans are in place. Plans are supported by training programmes, with periodic review to meet objectives and applicable legal or other requirements.
- 
- E3.3 A **competence assurance** process exists to screen, select, train and conduct ongoing **assessment** of the qualifications, fitness-for-task, enabling behaviours, and supervisory needs and abilities of the **workforce** to meet specified job requirements.
- 
- E3.4 There is a system to allocate appropriate and sufficient internal and external resources to meet business objectives. The system includes development and management of the supply chain to take into account local content and indirect impacts.
- 
- E3.5 The organisation has mechanisms and programmes for joint participation and management consultation within the workforce. This supports involvement in areas including planning, **continuous improvement** and management of change (**MoC**).
-

E3.6 Where external resources are deployed, processes are in place to:

- evaluate, select and perform assurance of purchased goods and **services** to ensure defined specifications, requirements and acceptance criteria are met
- define the level of **monitoring** and **quality** assurance/control based on the **supplier** and **contractor** capability and risk of contracted activities, services or supplied goods
- ensure risks associated with activities carried out on behalf of, or in partnership with, the company are properly managed
- evaluate performance and provide feedback.





# Element 4 – Stakeholders and customers

Many **stakeholders** are affected by, and may need to be engaged with (or directly involved in), company activities. Both parties may gain short or long-term economic, social or environmental benefits from their relationship. The company needs to be able to manage the risks and opportunities that have potential to affect its stakeholders and **customers**.

## Purpose

To develop effective relationships with stakeholders and customers, including:

- forming open and sustainable relationships to address issues of mutual interest or concern across the lifecycle of activities and products
- confirming the company has identified and clearly communicated relevant risks that need to be understood, addressed and managed
- verifying that the company’s **products** and **services** meet the expectations of its customers in terms of **quality**, **performance** and technical support.

## Expectations

- E4.1 Stakeholders, including local communities, are identified and relationships established as an integral part of sustaining a responsible business presence throughout an activity’s **lifecycle**.
- 
- E4.2 Processes are in place to assess, manage and engage with customers and other stakeholders regarding lifecycle risks and opportunities associated with the company’s products, assets and activities. This includes **compliance** with regulatory requirements.
- 
- E4.3 Mechanisms exist to document, evaluate and address stakeholder and customer expectations and feedback, including concerns and grievances.
- 
- E4.4 Positive relationships are established with stakeholders and customers. There should be active two-way communication and engagement, seeking feedback on performance and responsiveness to their needs at any point in the **value chain**, including appropriate emergency response.



# Element 5 – Risk assessment and control

An OMS aims to generate benefit for a company and its stakeholders while controlling its **risks**. They include those with potential for injury and ill health, as well as security threats, environmental and social impacts, process safety incidents, and damage to assets, reputation and/or company value. It is often not possible to eliminate a risk entirely, so it is appropriate for companies to ascertain the level of **residual risk** acceptable to its business and stakeholders, while continuously improving controls wherever practical.

## Purpose

To effectively identify, assess and treat risks related to a company’s activities. Where eliminating risks is not feasible, **risk controls** (also referred to as **barriers**) are defined to reduce risks to an acceptable level. The approach should create a culture of risk awareness that supports decision-making at each level of the organisation, and where the workforce are informed and involved in review of risks and associated controls prior to undertaking activities.

To ensure identification, assessment and treatment of risk considers all potentially affected parties, including external stakeholders.



## Expectations

- E5.1 Processes and methods to manage risks to an acceptable level are in place to:
- establish operational, environmental and societal context; develop baseline information; and engage stakeholders before, and as input to, risk assessments
  - identify and document **hazards, effects, impacts, threats** and other **vulnerabilities**, and to assess the associated risks to determine **significant risks**
  - implement effective controls / barriers to eliminate or reduce risks
  - establish effective controls/barriers to prevent escalation, mitigate **consequences** and facilitate recovery.
- 
- E5.2 Document and communicate the risk management processes for significant risks, including **risk acceptance** approval at appropriate levels of the organisation, scheduled **reviews** and updating of **risk registers**.
- 
- E5.3 Temporary/permanent changes that affect the organisation, activities, assets, operations, products, plans or procedures are subject to a formal, risk-based **MoC** process, with approved timeframes and actions that are reviewed and tracked to completion.
- 
- E5.4 Maintain a **culture** of risk awareness to ensure vulnerabilities and **non-conformances** are recognised, including deviations from operating procedures or **weak signals** that provide indications of potentially increasing risk.

# Element 6 – Asset design and integrity

Assets need to meet or exceed applicable standards and function properly for a business activity to be productive and its risks to be managed. Asset design and integrity (including process safety) address significant risks of technical failure and/or human error by elimination or risk control measures.

## Purpose

To ensure assets are designed and constructed (or selected) to be suitable for their purpose/task. They should then be operated, inspected and maintained to achieve and sustain robust standards of integrity and performance throughout their lifecycle.

## Expectations

- E6.1 Baseline information and results of risk assessments are used as input to location, design or selection decisions.

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- E6.2 Criteria, specifications and standards for the design, construction/ selection, commissioning, modification and decommissioning of assets and their associated facilities, equipment and materials are defined to address risks and verify conformance throughout their lifecycle.

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- E6.3 Establish and maintain procedures to ensure assets, facilities and/or equipment are operated within defined design and operating limits at all times. Communicate this to staff that operate, maintain, inspect and manage them.

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- E6.4 Processes are in place to identify and manage critical risk controls/ barriers to prevent a major incident.

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- E6.5 There are processes to maintain, replace, test, inspect, calibrate, certify and verify performance of assets, facilities and equipment. These activities are performed at frequencies appropriate to the level of risk, and deviations from specified criteria are managed.

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- E6.6 Due diligence is applied when assets are acquired or divested.



# Element 7 – Plans and procedures

Plans and procedures comprise clearly defined requirements to ensure risks are suitably managed and objectives can be met. Plans are also developed to optimise performance and drive continuous improvement. They typically describe what needs to be done at a relatively high level and may refer to procedures for detailed instructions.

Depending on the issue, level of organisation and the audience (end-user) procedures describe in detail how things are to be done to ensure accuracy and consistency of approach when applying risk controls. They may include operating/maintenance procedures, action plans, work instructions or other job aids.

## Purpose

To establish how to prepare and document plans and procedures identified as necessary to manage an organisation’s risks and opportunities. Plans and procedures integrate the results of the risk assessments to prepare for executing work and implementing risk controls/barriers.

## Expectations

- E7.1 Plans and procedures are established, documented and maintained in accordance with identified legal and other requirements in line with the risk level defined by the organisation and the required risk controls.
- E7.2 Plans and procedures, including revisions, are subject to approval at an appropriate level of authority.
- E7.3 Plans and procedures are supported by guidance and training as appropriate to enable effective implementation by competent resources.
- E7.4 Processes are in place to ensure the latest version of an approved plan or procedure is available at point of use.
- E7.5 Contingency, emergency, crisis and continuity management plans, as well as required resources, are in place with regular tests and drills, including incorporation of lessons learned.



# Element 8 – Execution of activities

Safe, reliable and responsible execution of activities involves consistent **implementation** of the plans and procedures (Element 7), and intervention when a **risk control/barrier** proves ineffective or stated requirements are not being met. To consistently meet specified requirements, adequate resources (workforce and assets) will need to be appropriately prepared for the task (including supervision, competence and fitness-for-work), together with a culture of discipline.

## Purpose

It is essential that activities and associated risk controls are consistently executed with discipline by authorised and competent persons, as defined in the plans and procedures. Each step of the execution of activities should lead to the desired result and intervention should happen in a timely manner when required.

## Expectations

- E8.1 Processes are in place to prepare for activities and ensure operational readiness and **integrity** of systems before commencing work, and to confirm interfaces/handovers are established.

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- E8.2 When work is underway, processes are consistently applied to ensure **activities** and **tasks** are executed as prepared.

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- E8.3 Suitable and sufficient supervision exists to confirm each activity and/or task is executed in **compliance** with the plans and procedures and delivers the expected outcome.

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- E8.4 A **culture** is maintained whereby everyone understands their **responsibility** to “stop and Intervene” during an activity when a risk is not adequately controlled.

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- E8.5 Feedback on **performance** and behaviour is sought and acted upon. Good performance and positive behaviours are recognised, reinforced and rewarded. Processes should be in place to manage inadequate performance or unacceptable behaviour.



# Element 9 – Monitoring, reporting and learning

Successful implementation of an OMS depends on clearly understanding whether or not risk controls/barriers are functioning well and operations are delivering planned **performance**. This requires vigilant monitoring, accurate and complete reporting, and insightful analysis of the data reported to produce useful indicators and information for sharing and learning.

## Purpose

The aims are to:

- Monitor effectiveness of the OMS and act on reliable and accurate data from, for example, incidents, events, near misses, emissions, process excursions, status of actions, inspections, observations, grievances, surveys and non-conformances.
- Report data and information (e.g. leading and lagging **indicators**) that provide a clear understanding of performance to meet both company and stakeholder needs.
- Investigate events and analyse data and information to identify causes and suitable actions to address weaknesses and opportunities for improvement.
- Actively seek positive learning from activities, feedback, innovation and experience.
- Ensure immediate learnings and corrective actions are applied and communicated.



## Expectations

- 9.1 Processes are in place to **monitor**, measure, verify, validate and record characteristics of operations and products to ensure **implementation** and **compliance** with the OMS and achievement of its **objectives**.
- 9.2 **Incidents, events** and **non-conformances** (with actual and/or potential consequences) are reported, recorded and classified to defined criteria, and investigated to determine direct and underlying causes.
- 9.3 Processes exist to:
- learn from incidents, events and non-conformances from both internal and external sources
  - benefit from learning opportunities and good practices within the organisation, the oil and gas industry, and from other public sources
  - implement appropriate remedial actions (with application of MoC as appropriate) to address event causes, strengthen risk controls/barriers and prevent recurrence
  - verify closure of actions or plans.
- 9.4 Processes define and establish leading and lagging **key performance indicators** (KPIs) using measures designed to improve performance and behaviours. KPIs are regularly reviewed to ensure they provide meaningful information.
- 9.5 Monitored and reported data is reviewed to ensure quality in terms of consistency, accuracy and completeness.

# Element 10 – Assurance, review and improvement

It is essential that those with **accountability** for the OMS seek **assurance** on its **implementation** to deliver desired performance. They should assess the strengths and weaknesses of the system via regular **review** to determine actions for **continuous improvement**.

## Purpose

To systematically assess and review the OMS to ensure effectiveness, suitability and fitness-for-purpose is sustained and improvement plans are developed at each level of the organisation.

Key aims include:

- To provide assurance to management and other stakeholders that the OMS Expectations and related processes are properly understood, implemented and executed.
- To review the effectiveness and adequacy of the OMS in controlling **significant risks** associated with current and future activities.
- To embed improvement in the OMS from assurance findings, reviews, investigations of **incidents**, and from **events** (Element 9) and **weak signals** from any level of the organisation.



## Expectations

- E10.1 A documented, risk-based assurance process, including scheduled independent **audits**, is established. It evaluates **conformance** with Expectations; organisational capability; effectiveness of the OMS in meeting objectives, stakeholder and business needs; and also identify areas for improvement.
- E10.2 Consolidated and interpreted performance information is prepared for management review, internal and external **benchmarking** and stakeholder communications.
- E10.3 Data and performance KPIs are assessed to understand **risk control/barrier** weaknesses and identify opportunities for improvement.
- E10.4 Improvements based on assurance findings, lessons learned, and internal and external good practices are planned, communicated and embedded within the OMS to drive continuous improvement.
- E10.5 Managers formally review the effectiveness and fitness-for-purpose of the OMS. Identified improvement actions are planned and communicated, with implementation tracked to completion.

# Glossary

Terms in bold are defined in the glossary. Text in grey provides additional explanation or examples to support the definitions.

<b>Accountability</b>	<p>An individual’s formal acceptance of their obligation to justify decisions, actions or outcomes.</p> <hr/> <p>An accountable person (manager or worker) does not necessarily implement the action or decision, but they should organize the implementation and verify that the action has been carried out as required. OMS accountability includes system ownership. This may involve responsibilities related to policies, governance, systems, administration, implementation, performance monitoring and review at the asset, business or corporate level.</p>
<b>Acceptable</b>	See <b>risk acceptability</b>
<b>Activity</b>	<p>Defined work of an <b>asset, business</b> or <b>company</b> that results in specific, measurable outputs.</p> <hr/> <p>“Activities” in this guidance is a general term that may include individual tasks or groups of tasks, or it may define entire operations, initiatives or projects of the company. For the petroleum sector, example activities at the company level include oil and gas exploration, drilling, production, and processing, refining, and transport and marketing of products. Activities should also be considered for all periods of the asset or business lifecycle – for example, construction and decommissioning projects.</p>
<b>ALARP/ALARA</b>	<p>“As Low as Reasonably Practicable” (ALARP) is a commonly applied, judgement-based, principle to assess whether <b>risk controls/barriers</b> are sufficient. It recognises the concept of proportionality between costs and efforts expended, and <b>risk</b> reduction benefit. “As Low as (is) Reasonably Achievable” (ALARA) is based on similar principles to ensure the <b>residual risk</b> will be as low as reasonably practicable.</p> <hr/> <p>The principle recognises that it is generally not possible to eliminate risk entirely, but it aims to demonstrate that the risk of an activity has been reduced to a level acceptable to stakeholders. To reduce a risk to a level “as low as reasonably practicable” represents the point where the time, trouble, difficulty and cost of further reduction measures become unreasonably disproportionate to the additional risk reduction obtained. The UK HSE has produced extensive guidance on ALARP, including “Principles and guidelines to assist HSE in its judgements that duty-holders have reduced risk as low as reasonably practicable” <a href="http://www.hse.gov.uk/risk/theory/alarp1.htm">http://www.hse.gov.uk/risk/theory/alarp1.htm</a>. In the United States of America, ALARA is almost exclusively used in the field of radiation protection and is defined in Title 10, Section 20.1003 of the Code of Federal Regulations (10 CFR 20.1003).</p>
<b>Aspect</b>	<p>Identified part of an <b>organisation’s activities, products</b> or <b>services</b> that can interact with the environment, and with the potential to result in an impact.</p> <hr/> <p>Aspect is a commonly used term in relation to environmental risk and a defined term within the ISO 14000 series of standards.</p>
<b>Assessment</b>	<p>An evaluation or <b>audit</b> of an <b>activity</b> or <b>asset</b> to determine whether <b>performance objectives</b> have been achieved or OMS <b>expectations</b> correctly implemented.</p>



<b>Asset</b>	An identifiable <b>resource</b> with intrinsic financial value that is owned or controlled by the <b>company</b> and which provides benefits to its <b>stakeholders</b> .
	For the OMS, only tangible assets are relevant. A company may operate assets that are wholly owned or partly owned through joint ventures or other arrangements. Typically, an asset is a facility, or group of facilities, and may comprise land or sea acreage, buildings, plant, engineered structures, hardware or software, fixed or mobile equipment, vessels, aircraft and road vehicles, terminals, pipelines, offices or retail outlets.
<b>Assurance</b>	The cumulative outcome of <b>processes</b> , including <b>assessments, audits, performance reporting, benchmarking, reviews</b> and learning. The processes provide confidence and confirmation that an OMS (or any part of an OMS) is achieving its purpose and expected performance.
<b>Audit</b>	A formal, scheduled <b>evaluation</b> of an <b>activity</b> or <b>asset</b> with pre-determined <b>objectives</b> , criteria and protocols to test <b>compliance</b> against OMS expectations, implementation and/or <b>performance</b> .
	Audits vary in extent of independence and impartiality. This depends on whether the assessment is performed locally within an activity or asset based on “self-assessment”; by auditors appointed internally from other parts of the organisation; or by third party auditors who are external to the company (imposed, invited).
<b>Authority</b>	A person with appropriate <b>competence</b> who is formally granted the power to make judgements and take decisions on technical or <b>resource</b> issues within a defined scope.
<b>Barrier</b>	A <b>risk control</b> that seeks to prevent unintended <b>events</b> from occurring, or prevent escalation of <b>events</b> into <b>incidents</b> with harmful <b>consequences</b> .
	For process safety, further reference to barriers can be found in OGP Reports No. 415 and No. 456.
<b>BAT/BATNEEC</b>	“Best Available Techniques” (BAT) and “Best Available Techniques Not Entailing Excessive Costs” (BATNEEC) are based on commonly applied, judgement-based principles to assess whether <b>risk controls/barriers</b> are sufficient to manage an environmental <b>impact</b> .
	BATNEEC was introduced with the European 1984 Air Framework Directive and is only one example of commonly applied, criteria-based approaches to manage environmental risk towards acceptable levels. Principles are generally regulatory-based and include Best Available Control Technology (BACT), introduced by the US EPA, or Best Available Technology (BAT), introduced in Europe by OSPAR.
<b>Benchmarking</b>	A <b>process</b> of assessing relative <b>performance</b> against a group of peers.
<b>Board</b>	A body of elected or appointed individuals who jointly govern the <b>activities</b> of the <b>company</b> .
	The board is normally the highest authority for management of the company. The authority is conferred on the board by the shareholders or owners of the company who set articles constituting the responsibilities, rules and limitations within which the board operates.

<b>Business</b>	<p>A collection of <b>assets</b> with similar or related <b>activities</b> that form a managed part of the <b>company’s organisation</b>.</p> <hr/> <p>Types of business included in the scope of this guidance include exploration, production and development businesses (often referred to as “upstream”); and oil refining, petrochemical, gas processing, logistics and retail businesses (often referred to as downstream).</p>
<b>Capability</b>	<p>The collective expertise and capacity of the <b>workforce</b> to perform <b>activities</b> within an <b>asset, business or company</b>.</p>
<b>Company</b>	<p>A public, private or national legal entity comprising a <b>business</b> or group of businesses, including consolidated affiliates/subsidiaries.</p>
<b>Competence/ Competent</b>	<p>The combination of skills, experience and knowledge of a <b>manager</b> or member of the <b>workforce</b> that has been confirmed through <b>assessment</b>.</p> <hr/> <p>Competence is assessed for an individual in a post that has a clearly defined profile setting out the job requirements. Competence is regularly re-assessed with a frequency determined by the criticality of the role.</p>
<b>Compliance</b>	<p>Confirmation that a defined requirement has been met.</p> <hr/> <p>Requirements may be defined within policies, regulations, laws, management systems, specifications, rules, codes, standards, processes or procedures.</p>
<b>Conformance</b>	<p>Evaluation of how well something such as an <b>activity, action, asset, project or product</b> adheres to defined requirements.</p> <hr/> <p>Requirements may be defined within policies, regulations, laws, management systems, specifications, rules, codes, standards, processes or procedures.</p>
<b>Consequence</b>	<p>A quantitative or qualitative measure of an adverse or beneficial outcome from an <b>activity</b>.</p> <hr/> <p>Consequences could include harm to people, impact on the environment, effects on health, societal impacts, non-conformance to quality standard, security breaches, damage to property <i>etc.</i> Consequences may be “actual”, resulting from an outcome such as an incident or exposure, or they may be “potential”, based on an outcome that could have occurred for the same activity but with a variation in circumstances.</p>
<b>Continuous improvement</b>	<p>An ongoing effort to achieve better OMS <b>performance</b> by application of a systematic <b>process of planning</b> future <b>activity</b> based on results and feedback from prior <b>plans</b>.</p>
<b>Contract(s)</b>	<p>An agreement between two parties by which both are bound in law.</p>
<b>Contractor</b>	<p>An individual or <b>organisation</b> performing work for the <b>company</b>, following verbal or written agreement.</p> <hr/> <p>“Sub-contractor” is synonymous with “contractor” as applied in this document, so includes an individual or company performing work under contract to either the company or another contractor for the benefit of the company.</p>

<b>Corporate</b>	<p>The highest management level within a company’s organisation.</p> <p>The corporate level includes executive management and functional departments with support responsible for activities specific to operating the whole company.</p>
<b>Critical</b>	<p>A term used to categorise or classify <b>activities, processes, facilities, equipment, components and jobs</b> where associated <b>risk</b> in the absence of controls is beyond the <b>acceptable</b> level, including <b>risk of major incidents</b>.</p>
<b>Culture</b>	<p>The product of individual and <b>company</b> values, attitudes, competencies and patterns of behaviour within its <b>organisation</b>.</p> <p>The culture of an organisation reflects its commitment and approach to effective risk and operating management.</p>
<b>Customer</b>	<p>A <b>stakeholder</b> who is the purchaser or recipient of a <b>service</b> or <b>product</b> from the <b>Company</b>, either directly or indirectly.</p>
<b>Due diligence</b>	<p>A series of investigative steps providing <b>assurance</b> that reasonable precaution has been taken to manage <b>risks</b> related to an <b>asset</b> or <b>activity</b>. In the oil and gas industry, due diligence processes are commonly applied before acquisitions or divestments of assets.</p>
<b>Effect</b>	<p>A discernible change on people, flora or fauna resulting from workplace, environmental, social or economic conditions, exposures or other circumstances.</p> <p>The terms effect and impact are similar. Impact is typically used when the outcome relates to a specific environmental aspect of an activity. Effect is often used in terms of health or social outcomes that may result from multiple sources of the change.</p>
<b>Element</b>	<p>A sub-division of the OMS Framework that groups the OMS Expectations under a generic purpose.</p> <p>Company systems can be structured using different or additional Elements to align with their management approach, organisation and activities.</p>
<b>Employee</b>	<p>An individual on the payroll of a <b>company</b>, including <b>corporate</b> and <b>management</b> personnel.</p> <p>An individual employed under a short-term or part-time contract is considered an employee provided they are paid directly by the company.</p>
<b>Event</b>	<p>An unintended or uncontrolled outcome of an <b>operating activity</b> that has, or could have, contributed to harmful <b>consequences</b> to people, property or the environment.</p>
<b>Expectation</b>	<p>In this report, an Expectation is a statement within an OMS <b>Element</b> that describes an anticipated outcome of OMS <b>implementation</b>.</p> <p>Expectations are auditable for the purpose of OMS review. A company’s OMS should clarify whether an expectation is a current requirement, a performance objective or a future aspiration.</p>

<b>Facility</b>	Part or all of a tangible <b>asset</b> that comprises single or multiple-engineered structures and equipment to execute an <b>activity</b> at a specific location.
<b>Fundamental</b>	In this report, a Fundamental is a characteristic of an <b>operating management system</b> that is essential to the effectiveness of every part of the <b>system</b> .
<b>Hazard</b>	An object, physical effect or condition with the potential to harm people, the environment or property.
<b>Impact</b>	An outcome affecting people, the environment or property, whether adverse or beneficial, resulting from an <b>asset</b> or <b>project’s activities, products</b> or <b>services</b> .
<b>Implementation</b>	The execution from initiation to completion of a <b>planned activity, action, process</b> or <b>practice</b> to meet an <b>objective</b> .
<b>Incident</b>	An <b>event</b> or chain of <b>events</b> that has resulted in harmful <b>consequences</b> , such as injuries, illnesses, property damage or environmental <b>impact</b> .
<b>Indicator</b>	Information or data that provides evidence of a <b>company’s OMS performance</b> , including the strength of <b>risk controls/ barriers</b> and progress against <b>objectives</b> .
<b>Integrity</b>	The consistent design, construction and maintenance of <b>assets</b> and <b>activities</b> to achieve safe and reliable <b>operations</b> and <b>products</b> .
<b>Job</b>	An <b>operating activity</b> or any distinct <b>task</b> within it.
<b>Key performance indicator</b>	A term used when an <b>indicator</b> has been established by a <b>company</b> for consistent application and aggregation at all levels of the <b>organisation</b> , and for periodic <b>performance review</b> by <b>managers</b> at these levels.
<b>Leader</b>	Any <b>workforce</b> member who influences or directs the actions of others.
<b>Lifecycle</b>	Multiple and consecutive business phases that span the entire period of an <b>asset</b> or <b>project’s activities</b> from conception to closure.  Typically, oil and gas businesses experience lifecycle phases that include: technology research to access to new resources through exploration; the design and construction of facilities; start-ups, normal operations and shutdowns; the transportation of hydrocarbons to market as oil, gas or refined products; and when facilities are decommissioned at end of life.
<b>Likelihood</b>	The probability of a specified outcome ( <b>consequence</b> ) of an <b>activity</b> actually or potentially occurring.
<b>Location</b>	A geographical site, area, country or region where an <b>activity</b> is taking place or an <b>asset</b> is situated.

<b>Major incident</b>	<p>An <b>incident</b> that has resulted in multiple fatalities and/or serious damage, possibly beyond the <b>asset</b> itself.</p>
	<p>Typically initiated by a hazardous release, but may also result from major structural failure or loss of stability that has caused serious damage to an asset. The definition is intended to incorporate terms such as “major accident” as defined by UK HSE).</p>
<b>Management</b>	<p>The formal control and direction of <b>activities</b> within an <b>organisation</b> (also <b>managed</b>).</p>
	<p>Management is carried out under a company’s governance by the board who appoint one person – the managing director (MD) or chief executive officer (CEO) or equivalent – to have the accountability and authority for operating decisions within the company within a defined scope and limitations. The MD or CEO delegates parts of their accountability and authority to the managers of the organisation. The MD or CEO is normally accountable for assuring the board that systems of internal control are in place, including the OMS or other equivalent.</p>
<b>Management system</b>	<p>A systematic and documented framework of processes used by the <b>managers</b> and the <b>workforce</b> at all levels in a <b>company’s organisation</b> to <b>plan</b>, direct and execute <b>activities</b>.</p>
	<p>structured and documented set of interdependent practices, process and procedures used by the managers and the workforce at every level in a company to plan, direct and execute activities.</p>
<b>Manager</b>	<p>An <b>employee</b> of a <b>company</b> with a specific role in the <b>organisation</b> who is <b>accountable</b> for control and direction of an <b>activity</b> and the workers executing the <b>activity</b>.</p>
<b>MoC</b>	<p>The management of change (MoC) process identifies <b>risks</b> arising from changes. It manages these risks before and during execution of the changes, thus ensuring they do not inadvertently increase risk from existing or new conditions, hazards, impacts, exposures or threats.</p>
	<p>MoC can apply to process changes (hardware or process conditions), procedural changes and organisational changes. The process includes steps for review and authorization prior to implementation, as well as steps to ensure that the change is communicated and pertinent documents are kept up to date.</p>
<b>Monitor</b>	<p>The observation, tracking or measurement of <b>activities</b> resulting in recorded data or information for <b>assessment</b> of <b>operating</b> conditions, status or <b>performance</b>.</p>
<b>Non-conformance</b>	<p>An unacceptable deviation or a failure against internally or externally defined specifications or requirements related to a <b>product</b>, service or <b>process</b>.</p>
	<p>Specifications or requirements may be defined internally through the management systems, standards and other requirements of the company; or externally, typically by regulatory bodies, customers or other stakeholders. A non-conformance normally results in the need for corrective action.</p>

<b>Objective</b>	A statement of intent to accomplish a specified outcome.
	Objectives should be specific, measureable, achievable, relevant and time-bound (SMART). Targets are objectives with a specific numerical intent and fixed timescale for completion.
<b>Offset</b>	Measureable outcomes resulting from actions designed to compensate for significant residual impacts arising from project development and persisting after appropriate prevention and mitigation measures have been taken.
	Adapted from the definition of “Biodiversity offsets” in <i>Business and Biodiversity Offsets Programme (BBOP) Glossary</i> , 2nd ed. Washington, D.C.: BBOP, 2012. Available from <a href="http://www.forest-trends.org">http://www.forest-trends.org</a>
<b>Operating</b>	The design, implementation and control of activities that convert resources into products and services to fulfil a company’s business strategy. The word ‘operating’ refers to the entire lifecycle of a company’s activities and products.
	An OMS should cover all types of business activity. The word “operating” refers to the entire business lifecycle: from technology research to access to new resources through exploration; during design and construction of facilities; through start-ups, normal operations and shutdowns; when hydrocarbons are transported and brought to market as oil, gas or refined products; or when facilities are decommissioned at end of life.
<b>Operations</b>	A general term for any <b>activities</b> or <b>assets</b> where <b>operating</b> occurs.
<b>Optimization</b>	Application of OMS <b>processes</b> to improve <b>activities</b> as an enabler of higher output or efficiency versus input.
	While an OMS is primarily considered as a framework to manage risk, an objective of OMS is also to improve the benefits for stakeholders, including the commercial success of the company.
<b>Organisation</b>	An unambiguous and structured description of how a <b>company</b> is sub-divided and managed for the purpose of <b>operating</b> .
	The organisation is typically depicted as a series of inter-related charts. They comprise a hierarchy of divisions, sections, departments and other terms to indicate how the company’s assets and workforce are grouped and to identify the manager with accountability for each part of the organisation. Organisation of companies varies greatly and can be complex, but in this guidance it is assumed that the structure broadly comprises corporate, business and asset levels.
<b>Partner/ partnership</b>	A <b>third party</b> that has agreed to cooperate with a <b>company</b> to advance their mutual interests.
	A partnership may be based on a commercial agreement between two companies (such as a joint venture) or it may be based on sharing of inputs towards a non-financial societal or environmental objective.
<b>Performance</b>	Within the context of the OMS, the effectiveness of accomplishing <b>activities</b> measured against communicated <b>policies, standards, objectives</b> and <b>expectations</b> .
	Performance may be assessed quantitatively (e.g. using KPIs) or qualitatively, based on the informed judgement of others, such as managers, leaders, members of the workforce or stakeholders. Performance assessment may be applied at different levels of the organisation, including individuals or teams, or assets or the entire company.

<b>Plan/planned</b>	A set of intended actions, including timescales and <b>resources</b> , required to achieve an <b>objective</b> .
<b>Policies</b>	High-level statements that define general principles or rules about how a <b>company operates</b> .  Policies generally outline commitments and limitations applied to the company overall and are supported by other documents, such as codes of conduct for individuals or standards related to activities.
<b>Practice</b>	A conventional or commonly applied method or approach that has been demonstrated to achieve one or more described outcomes.  A practice is generally not as prescriptively defined as a process and may offer flexibility or is generic in terms of method, approach and outcome.
<b>Procedure</b>	A documented sequential description of the requirements to successfully accomplish a designated <b>task</b> or <b>activity</b> .
<b>Process</b>	A defined series of repeatable <b>tasks</b> , methods or actions to systematically achieve a purpose or specific <b>objective</b> .
<b>Product</b>	An oil and gas-derived material output from the <b>company's activities</b> for supply by the <b>company</b> to its <b>customers</b> .
<b>Project</b>	A <b>planned activity</b> undertaken within a limited or fixed duration to achieve a specific <b>objective</b> , often involving design and construction to create or develop an <b>asset</b> .
<b>Quality</b>	A relative judgement on whether the features and characteristics of something – such as a <b>product, service, asset, activity</b> or <b>project</b> – meet stated needs or requirements.
<b>Residual risk</b>	The amount of assessed risk that remains after <b>risk controls/ barriers</b> have been fully implemented to reduce and mitigate a risk.
<b>Resource</b>	Commodity, service, <b>workforce</b> or <b>asset</b> that is sourced or supplied to meet the needs of <b>activities</b> to generate <b>products</b> .
<b>Responsibility</b>	A clearly described requirement of an individual's <b>job</b> .
<b>Review</b>	A <b>process</b> of understanding reported outcomes and <b>assessments of activities</b> with the purpose of learning how to improve <b>performance</b> .  An insightful review takes into account a range of different inputs and signals by identifying and understanding change in reported KPIs, management observations, productivity, workforce feedback, audit findings, culture surveys, employee retention, external learnings and many other factors. Effective reviews involve managers with sufficient accountability and authority to put learning into action.
<b>Risk</b>	The product of the chance that a specific adverse <b>event</b> will occur and the severity of the <b>consequences of the event</b> .

<b>Risk acceptability</b>	In this report, a <b>business judgement process</b> that enables <b>management</b> decisions to be taken at an appropriate level in the <b>organisation</b> . Decisions should be based on pre-determined criteria to characterise <b>risks</b> that acknowledge the level of <b>residual risk</b> of a <b>threat, impact</b> or <b>consequence</b> .
<b>Risk acceptance</b>	A position taken by the <b>company</b> and/or its <b>stakeholders</b> that an action or <b>activity</b> should continue after consideration of any residual risk.
<b>Risk assessment</b>	A <b>process</b> that provides a consistent and comparable evaluation of the relative level of different <b>risks</b> introduced by <b>company activities</b> .
<b>Risk control</b>	A <b>barrier</b> implemented within an <b>activity</b> designed to eliminate or mitigate a <b>risk</b> or range of <b>risks</b> .  A risk control may take the form of “hard” barriers based on engineered, physical solutions to prevent or avoid a risk, or “soft” barriers relying on compliance with operating plans, procedures and competence of the workforce. Normally, multiple risk controls or “layers of protection” are implemented to achieve risk acceptance.
<b>Risk register</b>	A complete list of risks for a company, business, asset or project.  Each risk in the register is normally briefly described and then, using a common process, characterised in terms of factors such as potential consequences, likelihood, priority or ranking, risk controls/barriers, residual risk type/classification, actions underway, review date and owner.
<b>Services</b>	Provision of purchased support to a business activity by a contracted individual or organisation.  A service is an intangible commodity in that it involves supply of beneficial and consumable resources (often technical support) to a client company, but does not normally involve the supply of physical products or goods.
<b>Significant risk</b>	A risk that has been assessed as requiring risk controls/barriers to reduce that risk to an acceptable level.  It is an important judgement for a company to determine which risks are considered “significant”. This may be based on its process and criteria for risk acceptability. Significant risks may also have assessment and/or controls defined and/or required through regulatory compliance.
<b>Stakeholders</b>	People who affect, or who are affected by, the <b>operating activities, products, services</b> and/or <b>assets</b> of the <b>company</b> .  Stakeholders include employees, customers, communities, contractors, suppliers, shareholders, partners, governments, regulators, the general public, advocacy groups, industry associations and non-governmental organisations.
<b>Standard</b>	Documented requirements, rules or instructions that support <b>company policies</b> in relation to specific <b>activities</b> or to address specific <b>risks, threats</b> or <b>impacts</b> .
<b>Supplier</b>	An <b>organisation</b> paid by the <b>company</b> under <b>contract</b> to provide goods, <b>services</b> or other <b>resources</b> .



<b>System</b>	<p>A set of interacting or interdependent elements forming an integrated <b>process</b> to manage an <b>activity</b>.</p> <hr/> <p>The OMS is termed a “framework”. It provides a structure to organize all a company’s operating systems and other sub-systems, such as procedures. The OMS Framework applies to all levels of an organisation, but each level may add additional systems and sub-systems to manage risks specific to its activities, creating a “local” or “asset” OMS.</p>
<b>Task</b>	<p>Specified work undertaken by the <b>workforce</b> that is part of an <b>activity</b>.</p> <hr/> <p>Tasks are often specified as part of job requirements or as part of a procedure or plan.</p>
<b>Third party</b>	<p>An individual or <b>organisation</b> with no <b>business</b> relation with the <b>company</b>.</p>
<b>Threat</b>	<p>A security <b>vulnerability/risk</b> resulting from an informed intent (such as terrorism) to inflict harm or loss.</p> <hr/> <p>Threats are controlled through protective countermeasures (barriers) to minimise vulnerability and risk exposure.</p>
<b>Value chain</b>	<p>Interlinked <b>activities</b> of the <b>company, suppliers, customers</b> and other stakeholders that convert inputs into beneficial outputs (<i>i.e.</i> products).</p> <hr/> <p>Mapping a company’s value chain can support understanding of risks and help set boundaries when considering impacts of activities. For an oil and gas company, the value chain refers to the full lifecycle of its products, including the processes of extraction, production, refining, marketing, consumption and disposal/recycling. Stakeholders in the input side of the value chain include suppliers and contractors – the “supply chain”. Stakeholders in the output side include the “customer chain”, which may include resellers, retailers and consumers.</p>
<b>Vulnerability</b>	<p>An object, condition or circumstance with the potential for an adverse, harmful or damaging outcome.</p> <hr/> <p>Vulnerability is a general expression for more specific terms such as a hazard, effect, impact or threat related to activities, assets or projects.</p>
<b>Weak signal</b>	<p>A concept referring to the <b>process</b> of scanning for discontinuities, observations or pieces of data that may provide early warnings or signs of change.</p> <hr/> <p>In an OMS context, weak signals can provide early indicators of potential safety, health, environmental, social or security issues, including unforeseen risks, control weaknesses or a degradation in performance.</p>
<b>Worker</b>	<p>An <b>employee</b> or <b>contractor</b> contributing to the overall capability of the <b>company</b>.</p>
<b>Workforce</b>	<p>A collective term for the human <b>resources</b> of the <b>company</b>, including all <b>employees</b> and <b>contractors</b>, and all <b>managers</b> and <b>workers</b>.</p>

# Abbreviations and acronyms

ALARP	As Low as Reasonably Practicable
API	American Petroleum Institute
BAT	Best Available Techniques
BATNEEC	Best Available Techniques not Entailing Excessive Costs
CCPS	Centre for Chemical Process Safety
HSE	Health, Safety & Environment
IPIECA	Global oil and gas industry association for environmental and social issues
ISO	International Organization for Standardization
KPI	Key performance indicator
MoC	Management of change
OGP	International Association of Oil and Gas Producers
OHSAS	Occupational Health and Safety Assessment Specification
OMS	Operating management system
PDCA	Plan-Do-Check-Act
PSO	Policies, standards and objectives

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