Systems in focus

Guidance on occupational safety and health management systems

direction

09.1

IOSH publishes a two-tier range of free technical guidance. Our guidance literature is designed to support and inform members and motivate and influence health and safety stakeholders.

Direct info

Brief, focused information on health and safety topics, typically operation or sector-specific.

Direction

Strategic corporate guidance on health and safety issues.

Systems in focus – guidance on occupational safety and health management systems

The aim of this guide is to provide occupational safety and health (OSH) practitioners, managers, educators and others with a basic understanding of the role and development of OSH management systems. Starting with a brief introduction to the subject, the guide contains:

- general structure – main components, history, links with international regulatory regimes and integrated systems
- detailed structure – key elements of effective systems
- discussion – advantages and disadvantages, certification and getting started.

The guide also has reference and further reading sections.

Systems in focus can be downloaded from **www.iosh.co.uk/systems**. If you have any comments, please contact Dr Luise Vassie, Executive Director – Policy, at **luise.vassie@iosh.co.uk**.

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Changes in work

Developed countries are experiencing a shift of balance from manufacturing to service industries, new technologies, globalisation, flexible work practices and an ageing workforce. Meanwhile, many developing countries are shifting from rural to industrial and service activities. Both scenarios present changing work patterns and associated hazards. The multitude of work-related risks requires a systematic approach to occupational safety and health (OSH) management, and some of the principal management tools are occupational safety and health management systems (OSHMSs).

Management system developments

Organisations are being encouraged to adopt formal management systems through their supply chains, and to a lesser extent through legal pressures. Current systems include both generic approaches and sector-specific arrangements developed by trade bodies. The continued development and wider use of formal systems seems to be inevitable, particularly where corporate governance issues have a high priority.

Common features

Formal systems have at their core the elements of plan, do, check and act (PDCA) – embodying the principle of continual improvement. Although there are potential disadvantages to formal systems, such as increased paperwork, the benefits of developing arrangements that fully meet your organisation's needs make them worthwhile when they're properly implemented.

IOSH's position

IOSH recognises that work-related accidents and ill health can be prevented and wellbeing at work can be improved if organisations manage health and safety competently and apply the same or better standards as they do to other core business activities. We believe that the formal OSHMSs mentioned in this guidance, and others based on similar principles, provide a useful approach to achieving these goals.

Guidance

This document helps professional health and safety advisers to explore what OSHMSs can offer their own organisations and those that they advise. It has three specific aims:

- to support improvements in effective health and safety management
- to help organisations that want to introduce formal OSHMSs
- to encourage IOSH members to play a full part in these developments and in continually improving existing systems.

Structure of guidance

Adopting and implementing an OSHMS, and integrating it with other management systems, requires careful planning and management. This guidance outlines the basis of these systems, discusses some of their benefits and pitfalls, offers practical suggestions and explains how to implement and develop an effective OSHMS.

OSHMSs – an overview

The main components of an OSHMS include both policy – a 'mission statement' for health and safety that provides a mechanism for management control and accountability – and arrangements for implementation, monitoring (including audit) and continual improvement. Formalising these arrangements removes the potential arbitrariness of processes developed by a few individuals and helps to support a management culture that can involve the whole workforce.

OSHMSs have developed through national and international co-operation. Some were boosted by legal developments such as the European Union (EU) Framework Directive,[1] while others were created in response to industrial sector needs (eg *Responsible care*[2] in the chemical industry). With the publication of International Labour Organization (ILO) guidelines[3] in 2001, the international dimension came fully into focus. Today, the leading international standard is OHSAS 18001.[4]

This guidance is divided into three broad parts. Sections 2–5 cover the general structure of OSHMSs, including their history, links with international regulatory regimes and the issues involved in integrating them with other management systems and with business risk management. The detailed structure of an OSHMS and the key issues involved in implementing it are covered in section 6. Sections 7–9 provide information on the advantages and disadvantages of OSHMSs, the issue of third-party certification, and how to get started. The appendix contains a list of the main abbreviations used in this guidance.

2 The main components of OSH management systems

Whatever management model you use, it's likely to be based on the principle of plan, do, check and act (PDCA – also known as the 'Deming cycle').

Numerous types of management system are based upon this principle, notably health and safety (OHSAS 18001), quality management (the ISO 9000 series) and environmental management (the ISO 14000 series). You can gain significant benefits by integrating your organisation's approach to these areas – in other words, by adopting a holistic approach (see page 09).

Effective OSHMSs include the following elements:

- Policy – a statement of commitment and vision by the organisation, which creates a framework for accountability that is adopted and led by senior management.
- Planning – a plan for identifying hazards, assessing and controlling risks, and preparing for and responding to emergencies, as well as identifying legal and other standards that apply. The organisation should set long term OSH objectives and plan targets and actions to achieve them.
- Organising – a definition of the organisational structure, allocation of OSH responsibilities to employees linked to operational controls, and ways of ensuring competence, training and consultation.
- Workers' representatives* – a crucial resource that can make a valuable contribution to the organisation's overall response to risk and opportunities.
- Communicating – from basic information and work procedures to the details of the system itself, from managers to workers and *vice versa*.
- Consulting – whatever the flow of information, you need an effective way of tapping into the fund of knowledge and expertise held by your workforce, clients, suppliers and other stakeholders (eg regulators, trade unions and neighbours). Involving all these groups will also help you to shape your risk management programme.
- Implementing and operating – putting management processes and plans in place and carrying out the activities from risk assessment to audit – in other words, putting the OSHMS into practice.
- Measuring performance – from reactive data on the rates of work-related injuries, ill health, near misses (sometimes referred to as 'near hits') and other incidents, to active data on routine inspections, health and safety committee activities, training, risk assessments and so on (see IOSH's guidance on reporting performance[5]). Formal audits should evaluate the overall performance of the system.
- Corrective and preventive actions – a fundamental OSHMS component is a systematic approach to identifying opportunities for preventing accidents and ill health, including those that stem from investigating work-related injuries, ill health and incidents. Various techniques are used to identify and

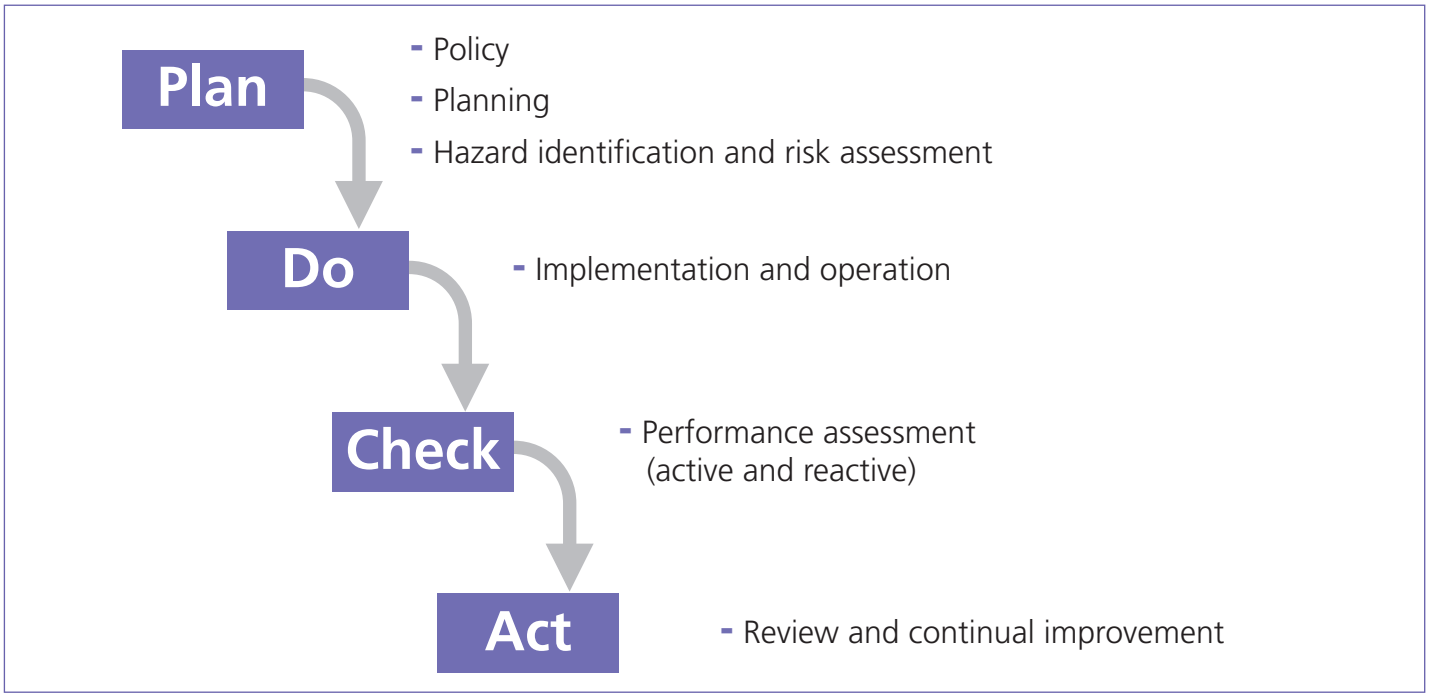

Figure 1: Plan–Do–Check–Act diagram

* We've used 'workers' representatives' in this guidance to mean any workers' safety representatives, regardless of whether they're appointed by a trade union or chosen in some other way.

correct weaknesses in the system and to find ways of preventing failures and harm.

- Management review – an evaluation of how appropriate the overall design and resourcing of the system are, as well as its objectives in the light of the performance achieved. This includes making sure that compliance with relevant legal and other requirements is periodically checked.
- Continual improvement – at the heart of the system is a fundamental commitment to manage health and safety risks proactively, so that accidents and ill health are reduced (effectiveness) and/or the system achieves the desired aims by using fewer resources (efficiency).

3 Typical systems – an overview

Many OSHMSs have been published over the past 25 years. Some reflect the interests of the sponsoring bodies. For example, the American Industrial Hygiene Association system places the industrial (occupational) hygienist at centre stage as the crucial competent person. Others, such as the International Safety Rating System, were developed so that commercial organisations could offer third party certification. Three generic OSHMSs reflect this history and illustrate the different emphases of current systems.

HSG65*

The UK Health and Safety Executive (HSE) published *Successful health and safety management* (HS(G)65) in 1991. This was characterised by five key elements:

- policy
- organising
- planning and implementation
- measuring performance
- audit and review.

It's based on the traditional PDCA principle, where the organisation's plans reflect the policy document and the implementation phase is dominated by risk assessment and application of controls. Checking includes a mixture of performance monitoring, auditing and corrective action.

The guidance intentionally reflected contemporary management processes and encouraged readers to harness them for health and safety programmes. However, at that time, the HSE was under pressure to restrict its activities to supporting and enforcing legal compliance. This led to a system in which legal compliance became embedded in organisational policy and, once achieved, the aim was largely to maintain the status quo. This compared unfavourably with systems that unambiguously focus on continual improvement, a fundamental weakness that was addressed in the second and current edition of HSG65.[6] This edition contains information on managing change and more advice on consultation, communication and continual improvement. HSG65 retains the special status of a management system developed by a regulatory agency, and it's familiar to many UK-based managers and OSH practitioners, particularly in larger organisations.

OHSAS 18001

OHSAS 18001[4] grew from a desire to create a system capable of assessment and certification, as a follow-on from BS 8800 (now revised and reissued as BS 18004:2008[7]).

HS(G)65 covered the implementation of an OSH policy, and implied that this would be quite straightforward once the policy had been adopted. OHSAS 18001, on the other hand, more fully reflects the problems of changing an organisation. Building on established

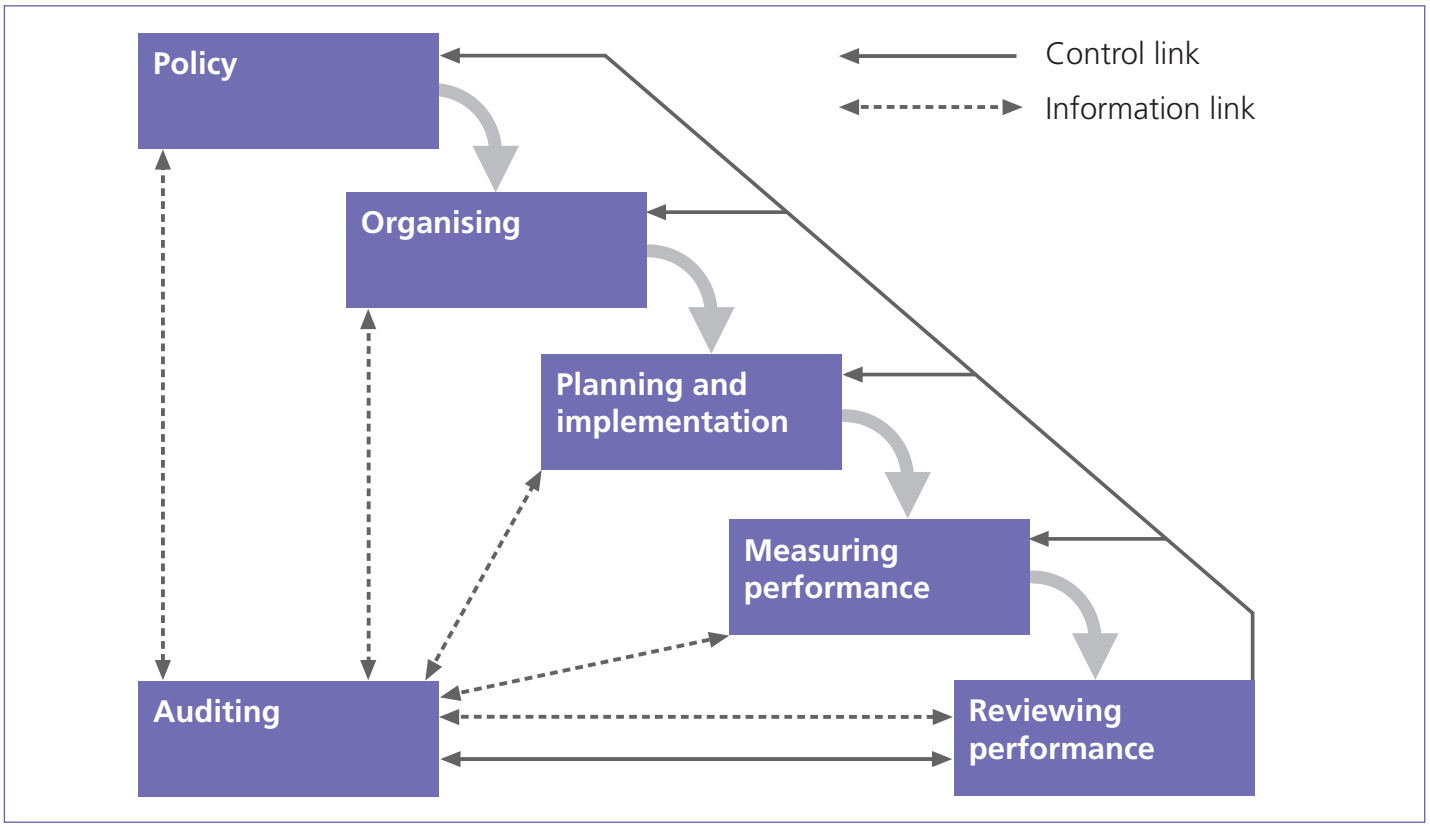

Figure 2: Flowchart based on HSG65

* HSG65 is currently (May 2011) under revision – see **www.hse.gov.uk/managing/index.htm** for more information.

environmental management systems in particular, OHSAS 18001 recognises the importance of planning and managing the changes that are likely to be needed as an OSHMS is introduced.

ILO OSHMS guidelines

The ILO is a tripartite United Nations agency that influences the development of labour laws across the globe. Its publications and guidance are authoritative and its 2001 Guidelines on occupational safety and health management systems[3] established an international model, following a detailed review of over 20 management systems worldwide. It reflects the globalisation of organisations and the increase in outsourcing and partnering – these changes demonstrate how systems need to evolve continually to reflect new business practices.

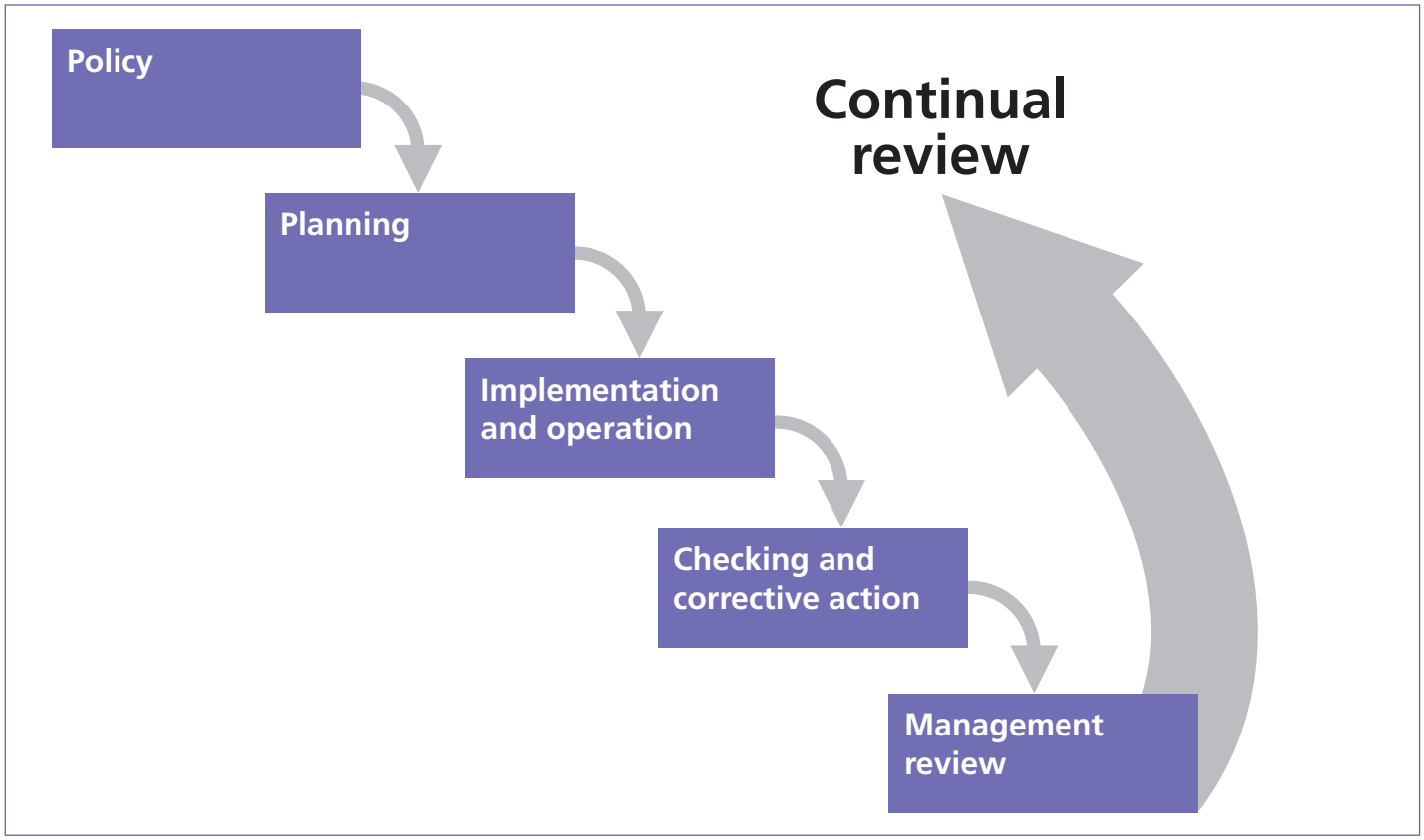

Figure 3: Flowchart based on OHSAS 18001

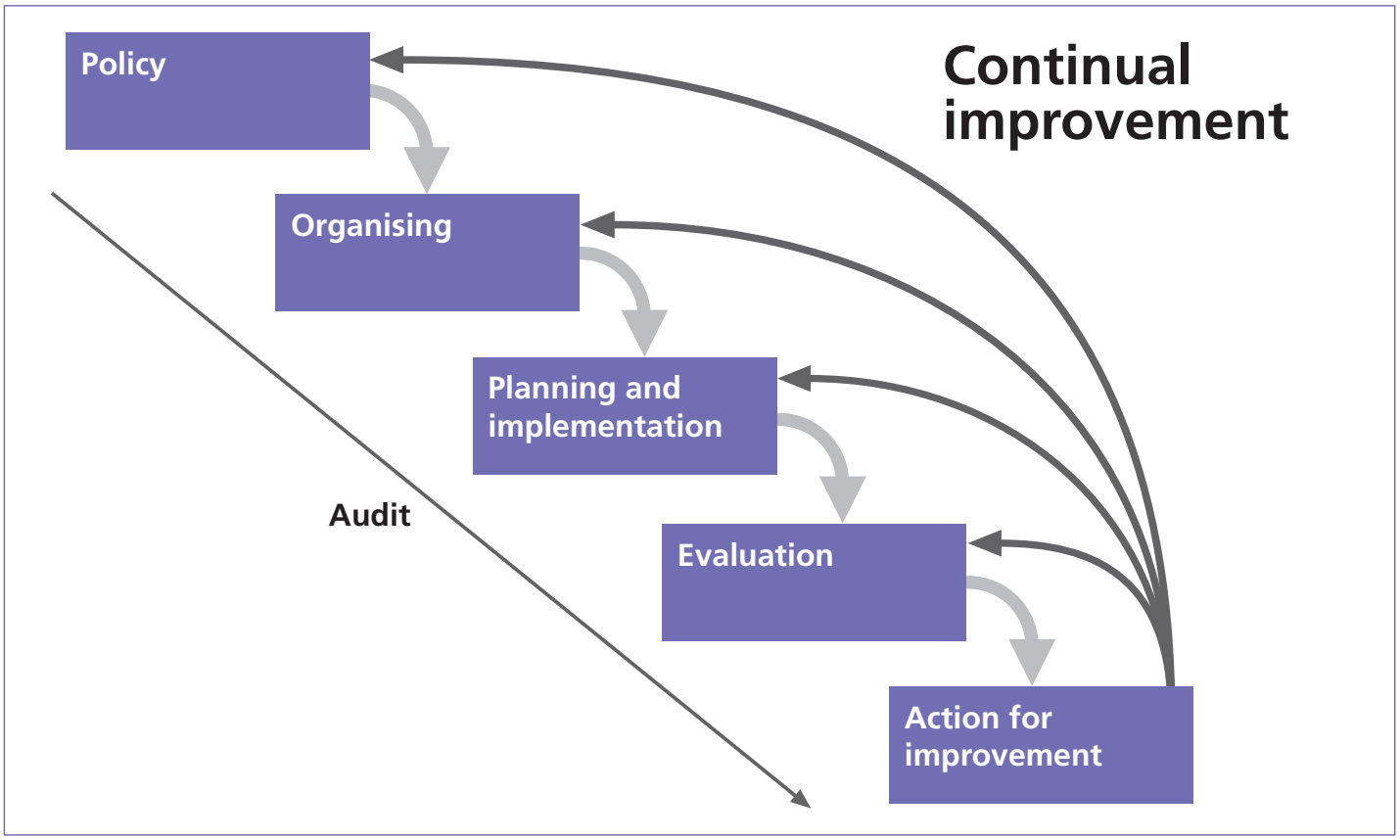

Figure 4: Flowchart based on ILO guidelines

4 Regulatory and industry standards – some global perspectives

A key factor in implementing a formal OSHMS is consideration of the legal framework that creates the operational context. In the EU, Australia and offshore regimes generally, regulation of major hazard industries via a 'safety case' approach is accompanied by an emphasis on effective management systems to complement and reinforce required high standards of technical safety. Also, the International Maritime Organization (IMO) now requires most categories of international shipping to use the International Safety Management (ISM) Code,[8] an OSHMS for marine operations.

Some countries, particularly in the Pacific Rim, require organisations to adopt OSHMSs with third-party auditing by government-approved auditors. In others, there have been moves to link internal OSHMS status with the enforcement inspection regime. For example, under the Voluntary Protection Program in the United States, organisations with systems approved through an extensive audit may be exempted from 'normal' Occupational Safety and Health Administration (OSHA) inspections. Proponents of this system claim that it allows employers to concentrate on systems of work rather than individual deficiencies (hazards and risks), but there's considerable debate over the merits or shortcomings of this approach.

There's also been a general worldwide movement away from prescriptive regulations – which have the advantage that employers are told explicitly what they have to do – to process requirements, with risk assessment as the key process (although many would argue that in the EU there's still a strong drive towards embedding detailed prescriptive requirements in Directives). Developing management systems is another step along the same road. The structure of a lot of national legislation reflects this. In the UK, for example, the Management of Health and Safety at Work Regulations 1999[9] require demonstrable management of OSH. In Canada, 'due diligence' defences have been successfully used by defendants with a formal OSHMS. In Norway since 1991, it's been mandatory for organisations to establish internal control systems to make sure that health and safety activities, including internal and external audit, are legally compliant, and to document them. Similarly, Swedish law requires systematic internal control of OSH. In India, following the Bhopal disaster, legislation in 1988 prescribed systematic management to prevent such events. The Chinese government has adopted the ILO's OSHMS guidelines and has used them to develop a certification framework. Australia and New Zealand have a well-developed national OSHMS standard,[10] but no plans to make its adoption mandatory. These are all examples of the extension of self-regulation.
Some management systems have been developed to meet the needs of specific sectors. For example:

- the chemical industry has developed *Responsible care*
- the shipping industry uses the IMO's ISM Code
- oil and gas producers have published comprehensive, global guidelines for a health, safety and environmental system for exploration and production activities.[11]

Looking ahead

There is increasing international certification to OHSAS 18001 and an increasing trend towards integrating PDCA management systems. The OHSAS Project Group surveys have found that between 2003 and 2007, the number of countries where OSHMS certification occurs has grown from 70 to 102 and the number of reported OHSAS 18001 (or equivalent) certificates from 3,898 to 31,512. These trends are driven by factors such as the increasingly international nature of business and supply chain requirements in general, supported by increasing recognition by enforcers that management systems – when run properly – can help to deliver improved legal compliance and OSH performance. In addition, the designers of management systems themselves are paying increasing attention to supply chains and dealing with OSH issues associated with products, not just with operations.

5 Should management systems be integrated?

IOSH's guidance, *Joined-up working – an introduction to integrated management systems*[12] covers:

- the case in favour of integrating management systems
- arguments for retaining largely independent systems
- organisational prerequisites for integration
- factors that should be considered when introducing an integrated management system (IMS)
- maintaining and developing an IMS.

IOSH's view is that "an effective IMS should be the preferred option for many, but not all". A well-planned IMS should be more efficient and capable of taking the best decisions in the face of various factors and uncertainties.

An integrated approach is also expected in business risk management (BRM), which is defined in IOSH guidance[13] as "the eradication or minimisation of the adverse effects of pure and speculative risks to which an organisation is exposed". Such risk includes health and safety, environmental and quality failures.

The requirement for corporate accountability based on a BRM approach is highlighted both globally by the Organisation for Economic Co-operation and Development and in the so-called 'Turnbull Report',[14] which requires companies listed on the UK stock market to identify, assess, record and manage their significant risks in a suitable manner. There must be systems for regularly reviewing these risks and adjusting their controls, together with statements in company annual reports that confirm the effectiveness of these systems.

Hence, the management of OSH, environmental or quality risks should not be treated in isolation, because of the impact that poor risk management can have on brand, reputation, business continuity and financial wellbeing. This is the fundamental reason why most organisations integrate their OSHMS with the systems used to manage environmental and/or quality risks. Integration allows risks to be prioritised overall, so that resources can be allocated to achieve maximum risk reduction and benefit. In non-integrated systems, on the other hand, resources are allocated to each risk area in isolation, and the resources allocated to each may not reflect that risk area's overall significance.

The process of integration presents distinct challenges to organisations. Those that are most likely to integrate their systems successfully will already use multiple channels of communication founded on trust, respect for the expertise of co-workers, and experience of and confidence in managing change.

However, while many of the generic elements of an IMS can be set up by non-specialists, it's vital that risk assessment processes are supported by people who are fully competent in the specific areas covered by the integrated system (quality, environment, health and safety, and so on). This is necessary both to avoid overlooking hazards and to make sure that controls intended to minimise risks reflect current good practice.

An IMS encompassing OSH, environmental and quality risks can be a major step in the direction of continual improvement. This drive for continual improvement in all areas of BRM – including OSHMSs – can be further enhanced by setting targets, establishing proactive key performance indicators and using performance appraisals to formalise responsibilities for all directors, managers and supervisors who contribute to the achievement of the organisation's goals, vision and mission. An effective IMS greatly enhances OSH management and leads to continual improvement in the level of performance.

6 The key features of an effective OSHMS

This section covers four essential elements of an OSHMS:

- continual improvement (and how to achieve it)
- system activities (high-level objectives and detailed OSHMS activities)
- stakeholder involvement (internal and external)
- auditing and verification (good practices in OSH auditing and auditor competence).

A good system?

If you want a simple diagnostic for 'is our OSHMS good?', then evaluate how effective it is at driving improvements in performance, rather than simply disciplining people to follow set procedures.

Continual improvement

Quality systems standards did not initially include continual improvement. This omission was corrected in ISO 9001: 2008,[15] but may be one reason for a widespread view that the primary output of quality management systems is paperwork, rather than real improvement in processes and products. In fact, continual improvement is vital if management systems are to be effective (in the sense that the results achieved are what's required) and efficient (in the sense that the resources used are sustainable in the long term). This is particularly true for organisations operating in a continually changing environment (see Table 1). It also explains why discussion about the need for an OSHMS often starts from the continual pressure to reduce accidents, incidents and ill health.

With continual improvement built into an OSHMS, opportunities to improve effectiveness and efficiency are systematically identified and action is taken. Often this can be done at low cost as part of the preparation for, or response to, other required changes.

However, 'improvement' need not imply greater complexity. If the OSHMS is simplified, it may become easier to understand and apply, yielding better overall results. Improvement may also be possible by broadening the scope of the system, for example by applying it to outsourced services, value chain interactions and new technical areas such as occupational road risk.

Continual improvement in an OSHMS can have four aspects:

- results that are better year on year, as measured by falling rates of injuries, ill health and damage
- steady or improved results that are achieved with fewer resources because the OSHMS itself improves and effort is better targeted
- results that move the culture of the whole organisation to a new state of effectiveness and efficiency, often described as 'breakthrough performance'
- improvements in the system itself, so that it's more comprehensive, easier to understand, or in other respects better than before.

Reporting up?

When launching a more systematic approach to health and safety, one improvement will be in reporting rates, ie staff and managers will declare a higher proportion of accidents and incidents. This leads to an apparently rising rate – which can look like failure. Prepare colleagues for this before you begin.

How to achieve continual improvement

Traditionally, the audit stages of the OSHMS are seen as the fount of all improvement wisdom, but this viewpoint unnecessarily restricts thinking about improvements in managing the workplace. There are other important sources of data, including statistics, benchmarking and industry or sector guidelines, as well as the people in the organisation.

People who operate systems are often a fertile source of improvement ideas – if they're encouraged to express them. Managers, team leaders, workers and their representatives – if they truly feel they 'own' the work processes and are actively monitoring them – usually have many ideas for improvement, to make processes both easier to operate

External changes	Internal changes
▪ New guidance, industry or national standards ▪ National targets, such as *Revitalising health and safety* (launched in 2000 in the UK)[16] – for more information see **www.hse.gov.uk/revitalising/statistics.htm** and **www.hse.gov.uk/statistics/history/progress.htm** ▪ New hazards, or new emphasis on old hazards, such as stress and asbestos ▪ Campaigns by regulators, trade unions, non-governmental organisations (NGOs), media ▪ New or revised legislation ▪ Supply chain (client) pressures	▪ New products, services or workplaces ▪ New working arrangements, such as a union agreement or home working ▪ Business reorganisation, such as outsourcing ▪ Business growth and change ▪ New work equipment, or changed contractors or suppliers ▪ New employees, or experienced employees leaving the organisation ▪ Merger or takeover

Table 1 Typical changes faced by an organisation

(efficient) and more likely to produce the desired results (effective). Involving the workforce, particularly through worker representatives, is crucial to achieving OSH improvements. One method that is effective is the creation of 'diagonal slice' groups – such as worker, team leader, engineer and manager – working as an improvement team. To achieve good OSH results, it's also essential that directors, managers, team leaders and the whole workforce see health and safety issues as their responsibility, not just the concern of the OSH professionals.

A process is needed to make sure that improvement ideas are gathered and evaluated (with feedback given to the originators), and that those that add value are suitably resourced, implemented and monitored. It's important that improvement suggestions support long term strategic goals. If they do, and they're swiftly implemented, the net effect of many small improvements can be dramatic. The process of creating improvement ideas can also be subject to formal management processes. For example:

- issues can be managed using 'SMARTT' improvement plans, ie specific, measurable, agreed, realistic, timetabled and tracked actions that are reported back to the 'owner' (accountable person or group) – which may be the safety committee, the local line manager or a director
- a task group can be set up to review a particular issue, such as workplace transport, with a brief to report back with recommendations for improvement to the owner of the issue.

System activities

Documenting your organisation's activities, whether on paper or electronically, is important and should be the basis for:

- training people with OSHMS responsibilities
- the OSHMS trainees' reference manual
- the audit standard.

High-level objectives

The OSHMS will incorporate detailed activities designed to achieve or support the following high-level objectives:

- clear policy-making with written commitment to good standards at the highest level in the organisation, supported by visible leadership, adequate resources, personal involvement, and regular monitoring and reviews of performance (which, for example, require the chief executive officer or managing director to ask probing questions during meetings and site visits, and all directors to participate in risk inspections or reviews)
- employment of competent staff, with adequate resources and time to train and develop them
- effective arrangements for involving and consulting key stakeholders such as employees (including developing partnership agreements with trade unions), customers, regulators and other statutory consultees, contractors, partners and neighbours, and also for sharing lessons across the organisation and more widely as appropriate
- making sure that materials, equipment and services bought outside the organisation are chosen according to appropriate OSH criteria as well as price.
- making sure that technical and operational records are available, updated and retained as necessary to meet business needs and regulatory requirements
- regular monitoring of all parts of the OSHMS by those responsible for business processes, work groups and work sites, to compare actual performance with expected results and goals
- a system for planned audits to verify how effective the OSHMS is in practice (see page 16)
- systems for identifying and reporting instances where the required standards aren't met, including external reporting where required
- investigation of the root causes of these non-conformances, with corrective actions applied to improve the OSHMS and prevent recurrences
- emergency systems, including plans and competent people to implement and respond to them, for containing and controlling serious system or business failures and minimising adverse effects.

'Step change' or 'continual'?

A 'step change' is often suggested, perhaps in response to external pressures for improvement. But the ability to achieve a step change in most organisations is limited – even when there are true step changes in inputs to a complex system, outputs alter much more slowly. Step changes in organisations often have unplanned and undesired effects. Even where a real step change is needed, an effective project to make it happen will consist of many small changes, each contributing to the overall plan and aligned with the overall objectives. Thus, a 'continual improvement' model is a good way to manage all types of change. This was recognised by Rolls-Royce plc when it initiated the 'One small step' programme for organisational transformation. It was summarised well by the Japanese industrialist, Soichiro Honda, who once said: "It is more benefit to the success of the business that 1,000 people take one step forward rather than one person taking 1,000 steps forward."

What is the system?

A description of a management system is not the system itself. Sometimes a manual is handed over with the comment 'this is our management system', when what should be said is 'this document describes and summarises what we do in practice – our management system'.

Detailed OSHMS activities

The OSHMS model you use (see page 22 for information on choosing the right one) should be adapted to meet the needs of your organisation. How the high-level requirements summarised above are broken down into activities and described in practice can depend on:

- the type of hazards managed by the system – are they well understood or new? Are external and/or internal stakeholders at risk? Do they have short or long term effects?
- the type of organisation – does it cover a single site or many? Is there much outsourcing or not? How many products and customers are involved?
- the range of technologies – how many technical disciplines and standards are there?
- legislative and other applicable standards – are they based on prescriptive laws and external operating standards or goal-setting?

Each of the OSHMS activities should be in the form of an auditable standard – in other words, a 'system' or 'process' that uses defined inputs to achieve defined output goals. Here are some examples:

- A current health and safety policy statement, signed by the responsible director, is readily available and used during the induction process for all employees and contractors.
- A register of relevant hazards is held by each work section, including summaries of key controls and any current improvement plans (risk assessments). This includes the likely consequences if control systems fail, such as single or multiple fatalities, small or large scale damage and short or long term ill health.
- All reported accidents are categorised by potential (not just actual) outcome and prioritised for investigation into root causes on the basis of this potential outcome. Suitable recommendations are made to prevent recurrence and are monitored to verify that they've been followed through.
- Contracts are awarded and managed with OSH performance among the key performance criteria.

Each of these describes goals to be achieved, but doesn't detail what actually happens in the workplace. The OSHMS activity description is 'goal-setting', minimising the need for revision whenever the organisation and its work processes change. Prescriptive detailed procedures, responsibilities, documents, training modules and so on are needed, but these operational-level documents don't usually form part of the OSHMS description. Operational-level procedures need to include the key element of accountability and must be sample audited to make sure that they define who's responsible for what and when (or how often), and what the expected outcome is. The monitoring and audit steps are used to check whether such supporting processes are available where needed, and whether they're effective, and to identify possible improvements.

It's increasingly apparent that effective OSHMSs cover human factors and don't assume a mechanistic approach to organisational and individual behaviour. For example, leadership and the effects of human reliability on the effectiveness of hazard controls are important issues to consider and monitor.

Tailor the system

It is vital to adapt the 'standard' OSHMS to the particular organisation. An OSHMS used by a large multinational organisation can have more than 200 'activities' – all of which are needed somewhere – although each small part of the organisation will implement only the subset relevant to its part of the organisation. A smaller single-site organisation might need substantially fewer activities to cover everything significant.

Stakeholder involvement

A range of individuals and groups are 'stakeholders' in the OSHMS – in other words, they may be affected by its results and therefore potentially interested in its content and effectiveness. They include people both inside and outside the organisation itself, as shown in Figure 5.

Internal stakeholders

Directors or trustees

Directors (including charity trustees and senior officers of public bodies, as specified in their policies and arrangements) are legally responsible for organisational performance. Traditionally, financial performance indicators are the only ones included in directors' annual reports, but measures of performance in other key areas, notably corporate social responsibility (CSR) – which includes health and safety, environmental and other issues – are increasingly used. UK accounting standards for organisations quoted on the London Stock Exchange (Turnbull[14]) and for registered charities (SORP[17]) require directors, trustees and senior officers to provide assurances that all significant risks, including health and safety risks, have been identified and that appropriate controls are in place. IOSH has published guidance for people responsible for reporting organisational health and safety performance, outlining how to include these data in annual reports.[5]

A prerequisite of good performance is that leaders of organisations consistently demonstrate that health and safety results are as important as other key business goals. This should be reflected in annual business targets. Similarly, OSH performance should form part of business agendas, formal and informal discussions with employees and so on.

If leaders display behaviour that demonstrates the high value they place on the health and safety of each person for whom they're responsible, and also accept personal responsibility for organisational performance, they'll be able to make a huge difference to the commitment to continual improvement. In the UK, the Institute of Directors and the HSE have produced a guide for directors and their equivalents.[18]

Reality check

Make sure that senior managers and directors visit accident sites and those affected by accidents, such as people who are hospitalised following an accident. This will help to make sure that senior staff don't become isolated from the realities of daily workplace hazards and the damaging effects to individuals of failures in the OSHMS. Conversations with workers' representatives can also act as a helpful 'reality check' for senior staff.

Figure 5: OSHMS stakeholders

The workforce

The workforce is a key stakeholder for a number of reasons:

- If OSH management is deficient, the workforce is usually the group most at risk from injury and ill health. This is a major focus for trade unions, both at individual workplaces and through national and international campaigning.
- Employees have first-hand experience of many workplace hazards and of how efficient and effective current controls are in practice. Employees are a prime source of ideas for continual improvement. But some hazards aren't easily identified, as their effects are long term or are realised so rarely that there's no workforce 'memory'. This means that it's essential to train relevant staff so that they're competent in practical hazard identification.
- Trade unions and workers' representatives generally have a wide knowledge of and strong commitment to health and safety, so are a significant resource for the OSHMS to incorporate and benefit from.
- Whatever formal systems and controls are used, the individual or small team performing a task has great influence over its outcomes. Legally and morally, each person has a duty of care to him or herself and to others who may be affected by acts or omissions. You can change the behaviour of individuals and groups by making sure that they understand the hazards identified by the local OSHMS, the controls in place and why these are judged to be sufficient.

Workers' representatives

Setting up a system of employee OSH representatives can act alongside promoting personal motivation to add value to the OSHMS. Such a system is often developed as part of the formal election of workers' representatives. In the EU and some other regulatory regimes, employee consultation is a legal requirement. Representatives contribute to the effectiveness of the OSHMS with their detailed knowledge of what happens at the 'sharp end'. They can:

- identify opportunities for improvement
- make sure that workplace inspections and monitoring are thorough
- check that planned improvements and changes are realistic
- help with root-cause investigations of failures
- act as a focus for employees' questions and concerns
- give access to external information about best practices via trade unions
- provide a valuable 'reality check' for senior managers and regulators, as representatives are typically confident in stating their views.

Workers' representatives need training to be effective; team leaders and supervisors also need training on how to work with representatives.

OSH professionals

OSH professionals form the main group of people who advocate the benefits of OSH systems. UK-based organisations have a legal requirement to "appoint one or more competent persons" to help them comply with relevant OSH legislation. Where more than one person is appointed, team work is important to make sure that the OSHMS is comprehensive, efficient and effective.

OSH professionals have a key role in advising others with responsibilities under the OSHMS, especially in knowing about hazards, their likely effects and current good practice for avoiding, minimising, controlling and mitigating them. For OSH professionals to be able to give advice, they must understand relevant legislation, standards, best practice, practical risk assessment methods, cost-effective controls and training provision. The OSH professional is also likely to liaise with external professionals, such as occupational hygiene consultants (who may, for example, monitor exposure to hazardous substances) and engineering inspectors (who may examine and test local exhaust ventilation and so on).

It's likely that an OSH professional will be appointed custodian of the OSHMS on behalf of the organisation, with a key role in its effective implementation and regular review. OSH professionals should also be able to make key contributions to audit processes and investigations of serious incidents such as injury, ill health or damage.

External stakeholders

Regulators

Regulators' actions reflect society's growing intolerance of organisations whose profits appear to be earned without due care for the health and safety of workers, customers or the public. Outside the UK and particularly in the Pacific Rim, it's becoming increasingly common for national legislation to require certification to a recognised national or international OSHMS standard, particularly for higher hazard industries such as construction. In the UK, areas regulated by safety cases (eg nuclear, onshore major hazards, pipelines, offshore, railways, gas supply) all require a summary of the OSHMS to be included in the safety case submitted by the operator to the regulator. In addition, some industries have adopted voluntary codes and standards that include a systematic approach to OSH management (see the examples on page 08).

Investors and insurers

Both investors and insurers are concerned about risk, particularly risk that isn't managed effectively. Whereas the Turnbull requirements (see page 09) are targeted at avoiding major losses, investors are increasingly requiring more positive reassurance that a business is well managed, and may take health and safety as a marker for performance in general. Insurers may decline certain types of risk unless they're convinced that the issues are

well managed. Evidence of a comprehensive and effective OSHMS can help directors respond to questions and concerns raised by both investors and insurers.

CSR lobby

In developed countries, there's now significant demand for CSR, including public corporate reporting. Both the Dow Jones and the FTSE operate investor listings linked to CSR results that include health and safety.

In addition, non-governmental organisations, investors and consumers[19] ask questions about OSH results, particularly of global organisations, if they suspect that activities are being 'exported' to locations where workplace OSH standards are lower than in the organisation's home country, thereby increasing profits at the expense of the workforce's health and safety. The ASSE and IOSH guidelines, *Global best practices in contractor safety*,[20] cover some of these issues and identify more than 60 aspects of good practice for both clients and contractors – these are applicable to workplace health as well as safety. Compliance with a recognised OSHMS standard is one of the recommended good practices.

Voluntary codes, such as the Global Reporting Initiative (GRI)[21] and Social Accountability 8000,[22] bring together the expectations of various stakeholders in this area, including the need for appropriate management systems and verification. In addition, there's a growing consensus that effective risk management needs to extend throughout an organisation's supply chain, to ensure security and thus sustainability (a development reflected in the ILO OSHMS guidelines).

Global bodies

The United Nations and its subsidiary bodies, such as the ILO, the World Health Organization (WHO) and the IMO, set standards, as does the GRI, based for example on the Universal Declaration of Human Rights. With globalisation, such standards assume higher profiles and responsible organisations must pay more attention to ensuring compliance. There is special focus on the protection of 'vulnerable groups' such as children, migrant workers and female workers. The ILO has published numerous codes on a wide variety of health and safety issues, seeking to set minimum standards of practice around the world.

Compliance with relevant ILO, IMO and WHO codes for workplace health and safety is often a requirement for operating in developing economies, in particular for projects funded by the World Bank or the International Monetary Fund. It can be expected that compliance with GRI guidelines will move, in due course, from voluntary towards mandatory status. Third-party verification of such compliance may also be expected, hence the link to OSHMSs.

Auditing and verification

Good practices in OSH auditing

Auditing is the sampling of a process by a competent person who's independent of the process. Auditors report on the effectiveness of the process, focusing on inputs, outputs and testing internal controls.
'Verification' has a similar meaning to 'audit', but where verification involves confirming conformity to an external, recognised standard and results in the issue of a compliance certificate, it is generally called 'certification'. ISO 19011[23] is a useful overall guide on how to set up and run a successful audit programme. It can be applied to virtually any PDCA management system; though it only covers environmental and quality systems, it can easily be adapted to apply to health and safety auditing and is in the process of being amended to incorporate this.
Typical audits cover three types of evidence:

- documentation – is it adequate? Does it reflect all OSH hazards of the organisation?
- interviews – to confirm that awareness, competence and resources are appropriate
- observation – to check that arrangements and standards described in the OSHMS are actually present in the workplace.

Audits have several key features:

- Auditors' independence gives credibility to the audit findings. Auditors should not have any personal accountability, or direct reporting relationships, in the group or area they're auditing.
- Auditors need a strong analytical ability but also well-developed 'people skills', so that they can collect reliable evidence quickly. The skills of a good accident investigator have a lot in common with those of a good auditor, and *vice versa*.
- Company procedures and local documents are sampled and evidence is collected to check that operational practice is consistent with documented practice. In other words, say what you do; do what you say you do; and prove it.
- Evidence is collected from corporate and local documents, interviews and inspections of workplaces. Auditors should choose some samples themselves, not just accept what is put before them.
- Because an audit is a sample, however well judged, it can never result in a 'perfect' view of the facts. Also, findings are valid only up to the time of the audit. When planning improvements, audit evidence, though very powerful, should be reviewed alongside other data on system performance.

Some small and medium-sized enterprises may not have a fully documented OSHMS, but will be able to demonstrate a clear understanding of hazards and effective controls.

Examples of good auditing practice

- Techniques to avoid conflict between the aims of the auditor and the perceptions of the auditee include:

Avoid paper mountains

In audits, don't overemphasise the need for comprehensive documentation – if evidence from interviews and work sites shows the system produces high quality results, would more or better paperwork add value?

- using a transparent performance standard as an agreed basis for audit (eg the organisation's own OSHMS activity descriptions or a published standard)
- making sure that audit reports aren't seen as the only source for continual improvement ideas
- including positive as well as negative findings in the final report
- discussing potential negative findings as the audit progresses, to give people the chance to produce additional evidence if provisional findings are incorrect.

- For large organisations, an overall audit plan is required so that all areas are covered in an agreed timescale. The initial plan may be hazard-based (areas with the highest potential for harm are audited first), later becoming risk-based (areas with least effective controls are checked more than those with proven effective controls).
- Any audit scoring system should encourage future improvements in preference to highlighting past successes. Discourage overemphasis on numerical scores and inter-group competition based on them; scores should be used as benchmarks for improvement.
- In the UK, the HSE's guidance, *Measuring health and safety performance*,[24] can be used both as an input to OSH audit methodology and as a source of ideas on quantifying audit results.
- As audit processes mature, include auditors from clients, contractors, trade unions or other partners to aid both transparency and the sharing of good practice. Consider the value of external certification as an additional source of improvement ideas.

Positive and practical?

A really effective audit system is one in which those being audited look forward to the process, expecting new and useful ideas for practical improvements. If they face audits with dread, the audit system needs to improve, not those being audited!

Advantages	Disadvantages
▪ Internal auditors know the organisation and where to look for evidence ▪ Internal auditors' reports have high internal credibility ▪ Because internal auditors audit their peers, their findings are more likely to be seen as realistic by auditees ▪ Auditing is an excellent developmental experience because employees learn in detail about other parts of the organisation ▪ Using internal auditors helps the transfer of good practices across the organisation because they identify opportunities for sharing	▪ External stakeholders may have suspicions about the independence of internal auditors ▪ Internal auditing takes resources away from normal work – for both training and planned audits ▪ Internal auditors can have a limited vision of improvement opportunities because of a lack of external benchmarks

Table 2 Advantages and disadvantages of internal audit

Advantages	Disadvantages
▪ External auditors have high credibility with external stakeholders ▪ External auditors provide strong benchmarking knowledge and can give access to external verification bodies and recognised certification where this adds value	▪ External auditors must earn respect for their findings within the organisation – initially, they are often viewed negatively ▪ External auditors don't know the organistion, so may ask for a lot of pre-audit documentation and take longer than internal auditors to complete their work ▪ External audits can be expensive

Table 3 Advantages and disadvantages of external audit

Auditor competence

Competence of auditors is a critical factor. Competence requires knowledge, skill, practical experience and suitable personal qualities, and must cover two areas: auditing methods and the processes being audited. It's often easier to supply the necessary breadth and depth of competence in a small audit team than in a single individual. A team approach also allows new or inexperienced auditors to be introduced to processes and organisations. When planning audits, you must decide whether to use auditors who are external to the organisation, or to use internal auditors who are independent of the areas to be audited.

Where formal certification is offered as a result of an audit, all auditors should meet recognised competence standards in OSH, such as those required of Chartered Members of IOSH. Their Continuing Professional Development (CPD) should also ensure that their auditing skills are current. However, where certification is not involved, and particularly where specialist areas are being audited, it may be enough for the leader to meet these standards, while other team members have an appropriate mix of OSH and audit competences. OSH professionals providing internal OSHMS audit services should meet similar standards to those of external auditors.

While part-time internal OSHMS auditors are unlikely to benefit from formal qualifications and CPD to the same extent, they should have basic training in both OSH and audit skills, which can be given through internal courses and experience.

Auditors' experience

Whatever their understanding of OSHMS models and theory, if an OSHMS auditor lacks current experience in practical OSH hazard identification, assessment and implementation of suitable controls in the type of organisation they're auditing, their report is unlikely to add much value.

7 Advantages and disadvantages of OSHMSs

Advantages

A system meeting your risk needs

An OSHMS can prioritise the planning, organising, control, monitoring and review of measures to protect people from work risks. It'll help you allocate the correct resources, achieving effectiveness and efficiency.

Occupational health focus

Significant occupational health risks can be assigned the correct level of importance and be properly resourced. This isn't always the case with ad hoc OSH processes, which depend largely on the experience of available OSH practitioners (including occupational hygienists) and the internal structures of the organisation. Also, employees generally have a greater understanding of safety risks than health risks. When implemented correctly, an OSHMS should address these issues and strike the right balance in controlling all risks.

OSH is as important as other business objectives

Many organisations struggle to give OSH objectives the same importance as other business objectives. At times, this failure threatens the survival of an organisation; at others, it can lead to prosecutions and other penalties. A correctly implemented OSHMS will make sure that appropriate OSH objectives are set by focusing on policy and the process of setting objectives and their delivery through the management programme.

OSH in relation to quality

British and international standards support the drive towards 'customer first' services, and as a result quality is high on the agenda. Quality isn't usually a legal requirement, but health, safety and (often) environmental performance are. The development of formal OSHMSs should make sure that sufficient importance is given to OSH performance, which typically has more impact on employees than on customers.

Legal compliance is easier to attain and prove

The development and extension of health and safety law, notably through 'new approach' Directives to help create a single European market, have led to additional legal requirements. Organisations can have difficulty keeping up to date with the requirements relevant to their sectors. An OSHMS helps identify relevant statutory provisions and creates a framework of procedures to make sure that the organisation consistently complies with the law.

Proving 'reasonably practicable'

In the UK and some other countries, you may have to prove that you've met 'practicable' and 'reasonably practicable' requirements in order to demonstrate legal compliance. When a balanced management system is implemented and risk management is systematically applied – based upon the proportionality of risk – it should be easier to prove compliance. For example, quality management systems (QMSs) have been used to prove due diligence for compliance with food safety law and to ensure product safety.

Helping system integration

Many organisations started with a QMS, then adopted an environmental management system and are now considering an OSHMS. The structures are similar, and adopting an OSHMS will mean that if, at a later date, you decide you need a holistic business risk management approach, integration should be straightforward.

Continual improvement

This process aims to improve some part of the OSHMS at any one time, rather than trying to improve all the elements in the system simultaneously. This structured and very practical approach allows the organisation to improve areas that aren't operating effectively or efficiently, using reviews and audits to identify systematically the opportunities for improvement.

Increasing the effectiveness of initiatives

The longevity of management and other health and safety-related initiatives in organisations varies. Many organisations use campaigns and awareness-raising programmes to improve knowledge and encourage participation in health and safety issues. An OSHMS requires continual improvement and this can increase the duration and effectiveness of management initiatives, allowing them to adapt and develop in line with policy commitments.

Visible commitment of 'top managers'

OSHMSs, like other management systems, formally require 'top management' to be involved in and committed to the system. This is carefully documented through setting policies and objectives and through regular reviews to check the results achieved. Once the objectives are set, senior managers must visibly demonstrate their commitment to achieving them. It's consistently argued that such commitment is essential for 'world-class' OSH results – an OSHMS demands it.

Regular audits

Audits present an opportunity for benchmarking (eg through creating audit teams with members from different departments or from outside the organisation) and identifying opportunities for improvement. External certification and assurance bodies – which audit against applicable standards – can help to identify non-compliances and necessary improvements.

Part of corporate governance

There's an ever-increasing requirement for directors to follow codes of practice and meet the standards expected in public life. Demonstrating that OSH controls are adequate is an important part of meeting this responsibility, and independent audit to externally set standards is an impartial way of achieving this. Regular management

review of audit reports and OSHMS results meets governance requirements for OSH risks.

Reassuring the enforcement authorities

Enforcement authorities require organisations to comply with applicable health and safety legislation. The formality and systematic approach to compliance required by an OSHMS encourages confidence in the organisation's internal approach. In the UK, for example, the HSE's HSG65 states: "If you do follow the guidance you will normally be doing enough to comply with the law."

A focus on OSH resources

An OSHMS requires resources to be allocated in all functions and at all levels throughout the organisation. A risk-based approach which ensures that the scale of a management system is proportionate to the risks and necessary control measures makes such resource allocation intrinsic to the whole organisation. This is, in part, what the Turnbull Report requires of London Stock Exchange-listed companies.

Emergency preparedness

OSHMSs should make sure that suitable resources are made available to respond to foreseeable emergencies. This may include provision for contacting outside agencies, including emergency services, and developing and communicating on- and offsite emergency plans. An OSHMS places such planning in a proper management context.

Managers have a 'finger on the pulse'

The OSHMS includes defect ('non-conformance') reporting, which directs managers' attention to opportunities for correcting problems and making improvements. Managers need to address health and safety issues effectively, no matter how busy they are. Alerting managers to problems and actions they can take or sanction continually reminds them of their critical health and safety role.

Systematic risk management

Perhaps the biggest challenge is to comply with the legislative need to plan, organise, control, monitor and review the preventive measures in place to control significant risks. An OSHMS creates a structured system for compliance with the requirements of both applicable legislative codes and industrial sector best practice.

Disadvantages

Bureaucracy (paperwork or electronic documents)

The need for a simple, effective system won't be met if the system generates excessive paperwork. You need to minimise the number of documents and records (in other words, streamline document control), but be careful in doing this.

Integration

Usually discussed as an advantage, integration depends on many factors, including internal politics. There's a risk of diluting health and safety effort or creating inequality between management of quality, health and safety, and environment. For example, an organisation in a high hazard industry may not benefit from system integration if it doesn't allow a focus on managing significant risks. Similarly, if existing management systems are inefficient, then adding health and safety to the mix will be counterproductive.

Time to implement

Designing and implementing an OSHMS can be very time-consuming. This may be exacerbated by overstating system requirements and documentation, by not matching the system to the organisation's health and safety risks, or by not incorporating existing OSH management processes but starting again from scratch.

Heavy demand on resources

A lot of resources are required to set up an OSHMS. Although this can be offset by the inclusion and involvement of employees, key managers and safety representatives, a realistic appraisal will still identify the need for significant management time, and implementing an OSHMS is likely to dominate the work of the OSH professionals involved. If some of the work is contracted out, take care to check that the results match the organisation's needs.

Human behaviour may not be fully addressed

Recent developments in determining reasons for health and safety errors place greater emphasis on the behaviour of workers and managers. This focus on the human factor can be lost if there's too much emphasis on the paperwork requirements of a formal OSHMS. For example, it's easy to overlook the need to monitor workplace behaviour and talk with and involve people. However, with attention to continual improvement, any issue – including human factors – can be addressed.

Certification and assurance bodies are still learning

There can be conflict when auditors' interpretations of health and safety are different from those of the sector or organisation being audited. Differences can often be resolved by referring to relevant guidance notes and authoritative information. This type of conflict can reflect the relative inexperience of external auditors in this work.

True independence?

OSHMS certification is relatively immature and underdeveloped. If external auditors are to be truly independent, they shouldn't have played any part in advising the organisation on how best to implement an OSHMS in the first place. Also, as has been learned with financial audits, it may be difficult to provide genuinely independent auditing if there's an existing relationship with the auditors or if service costs are a prime issue.

Barriers to change

Barriers to change are invariably erected in the way of new systems. Often there's a suspicion, at times well founded, that change is being made for its own sake and without business justification. Some organisations may be able to manage health and safety successfully by consistent and good management, without the need for a formal system.

Managers don't understand the systems

Typically, managers are not committed to the introduction of new systems. Managers require time, training and motivation to make sure they become advocates of the system and not enemies within. It's a mistake to think that OSHMSs are self-evidently 'a good thing'; they require effective communication to win people over.

Numerous audits

These days, stress is recognised as a workplace hazard that needs to be managed within the framework of the OSHMS. It should also be recognised that pressure to achieve certification for a new OSHMS can create its own stress on managers and employees alike. Don't overlook the need to provide support before and during audits.

Which OSHMS model?

Deciding which OSHMS to use can be confusing. The aim should be a system that is consistent with your organisation's needs and its management approach. While OHSAS 18001 aligns extremely well with ISO 14001[25] and other international PDCA standards, and is therefore useful for integration, the organisation, clients, enforcement authorities or government may better understand other systems based on standards or guidelines such as BS 18004, HSG65, ILO or an industry code. All systems need to be adapted to the specific needs and culture of the organisation or they won't be sustainable.

Is the written procedure safe and healthy?

In some countries there's a tendency to write down what's currently done and adopt that as the OSHMS. This can create a significant liability risk if the procedures haven't been checked to make sure they are in fact comprehensive (that they cover all hazards) and adequate (that the controls are effective in reducing risk). The liability exists in any event, but the OSHMS documentation then appears to validate it. A properly functioning OSHMS should make sure that these problems are identified and corrected.

8 OSHMS certification

The desire to gain certification of an OSHMS may come from internal stakeholders who need assurance that their organisation meets a verifiable standard, or who judge that certification will add value with clients or customers. However, it's more likely that pressures will come from external stakeholders, in particular prospective or existing clients, or regulators as part of national policy. In this case, certification is likely to move rapidly from being a 'preferred option' to become an 'entry condition', without which existing or potential business is lost.

This poses few problems provided the certification process is applied to a developed OSHMS, validating its effectiveness, or encouraging further improvements to meet the external standard. An OSHMS that is seen as just a tool for obtaining the required certification will be ineffective in its true purpose of continually reducing work-related accidents and ill health.

IOSH recognises OSHMS standards and certification processes as relatively new and still developing, and we suggest the following as 'good practices' in relation to OSHMS certification:

- Don't allow a business need for external certification of OSH standards and practices to get in the way of developing strong internal continual improvement processes, including internal audit.
- Make sure that an external certification audit isn't viewed solely as a pass/fail exercise, but as one step within an overall OSH continual improvement plan.
- Where external certification isn't a pressing business need, develop internal audit processes first.
- Where possible, base external audits primarily on evidence from internal audits. Consider adding external auditors to internal teams in preference to increasing the number of audits.
- Make sure that internal and external OSHMS auditors meet the IOSH competence standards (see page 17).

9 How to get started

The way forward for organisations developing their first formal OSHMS is to choose the system they wish to use as a basis, establish which arrangements are already in place, and then identify gaps between those and the requirements of the OSHMS.

Choosing a system

One way of choosing a system is to create a comparison table and score the systems you wish to consider to see which most closely meets your preferred specification – the more relevant features you tick, the better. The example in Table 4 includes comparisons between some of the main management systems mentioned in this guidance. However, if there's a preferred system for your particular industry, you may also want to include an industry-specific column. For instance, if your organisation is a contractor to the chemical industry, you could include Responsible care in this column. In addition to those features listed, there may be in-house and other factors to be considered, in which case you can add them to the table (for example, if your customers use a particular system, adopting the same system will enhance your compatibility).

Initial status review (gap analysis)

The gap analysis approach ensures that you don't waste effort on developing new systems when existing internal arrangements are working well. Even organisations which believe that they have nothing in place often find that there are long-established working practices that have never been formally recognised or documented.

A simple way of carrying out the initial status review is as a desktop exercise, with the draft safety management plan drawn as a flow diagram or matrix on a flipchart. It's important to consult and involve all parties in the organisation, including workers' representatives – ownership and success of the OSHMS is likely to be greater because of the interest developed in this way.

Remember – the most successful management systems aren't created at initial status review, but are developed through effective performance measurement, review and continual improvement. However, reporting the status review to senior managers or directors, and communicating the results to the workforce, can get this process under way at this early stage.

Making it happen

Most of the OSHMSs referred to in this document include extensive practical guidance in support of the main code or standard, usually in subsidiary publications (see further reading on IOSH's website at **www.iosh.co.uk/techguide**). However, there's no doubt that adapting a standard system for use in a particular organisation requires significant time and resources.

Organisations with experience of managing significant internal process or organisational change should find it relatively easy to introduce an OSHMS by using similar methods. Organisations without such experience may need to employ external change management advisers to help effective consultation and to ensure the involvement and commitment of all necessary parties.

Techniques to support effective implementation include:

- clear support and personal commitment from leaders in the organisation, including modelling of desired behaviour
- incorporating both OSHMS implementation and results in

Features	Management systems				
	HSG65	BS 18004	OHSAS 18001	ILO	Industry-specific (eg *Responsible care*)
Certifiable	✗	✗	✓	✗	✓
International	✗	✗	✓	✓	✗ (see note below)
Regulator support	✓	✓	✗ (some non-UK)	✓	✓
Tested (> 2 years old)	✓	✓	✓	✗	✓
Stakeholder recognition	✓	✓	✓	✓	✓
In-house factors (eg your customer uses this system)	✗	✗	✗	✗	✓

Note: *Responsible care* isn't classed here as 'international' because, while some countries do adopt a management systems approach to it, many don't.

Table 4 OSHMS comparison table for a UK-based contractor to the chemical industry

declared high-level business targets (eg '*x* per cent of sites are expected to complete their gap analysis by *y* and their initial roll-out by *z*'; 'priority improvements over the next year are to be areas *a*, *b*, *c*')
- seconding staff from across the organisation full-time to the development and implementation team
- customising the model system to suit the needs and culture of the organisation, and linking it to internal consultation processes
- developing benchmarking contacts with similar organisations that have experience of implementing similar systems
- trials in one or more selected areas before the OSHMS is launched more widely
- not taking too long trying to develop a 'perfect' system, but rather implementing something reasonable and learning how to do better via the internal audit, management review and continual improvement processes
- recognising and celebrating small successes on the route to a fully sustainable OSHMS.

Getting started

One large catering organisation appointed a mixed team of managers and workers to undertake an initial status review. The team undertook this exercise by identifying key elements of the existing processes, completing a brainstorming exercise to identify gaps within the system and then mapping this out in the form of a flow diagram.

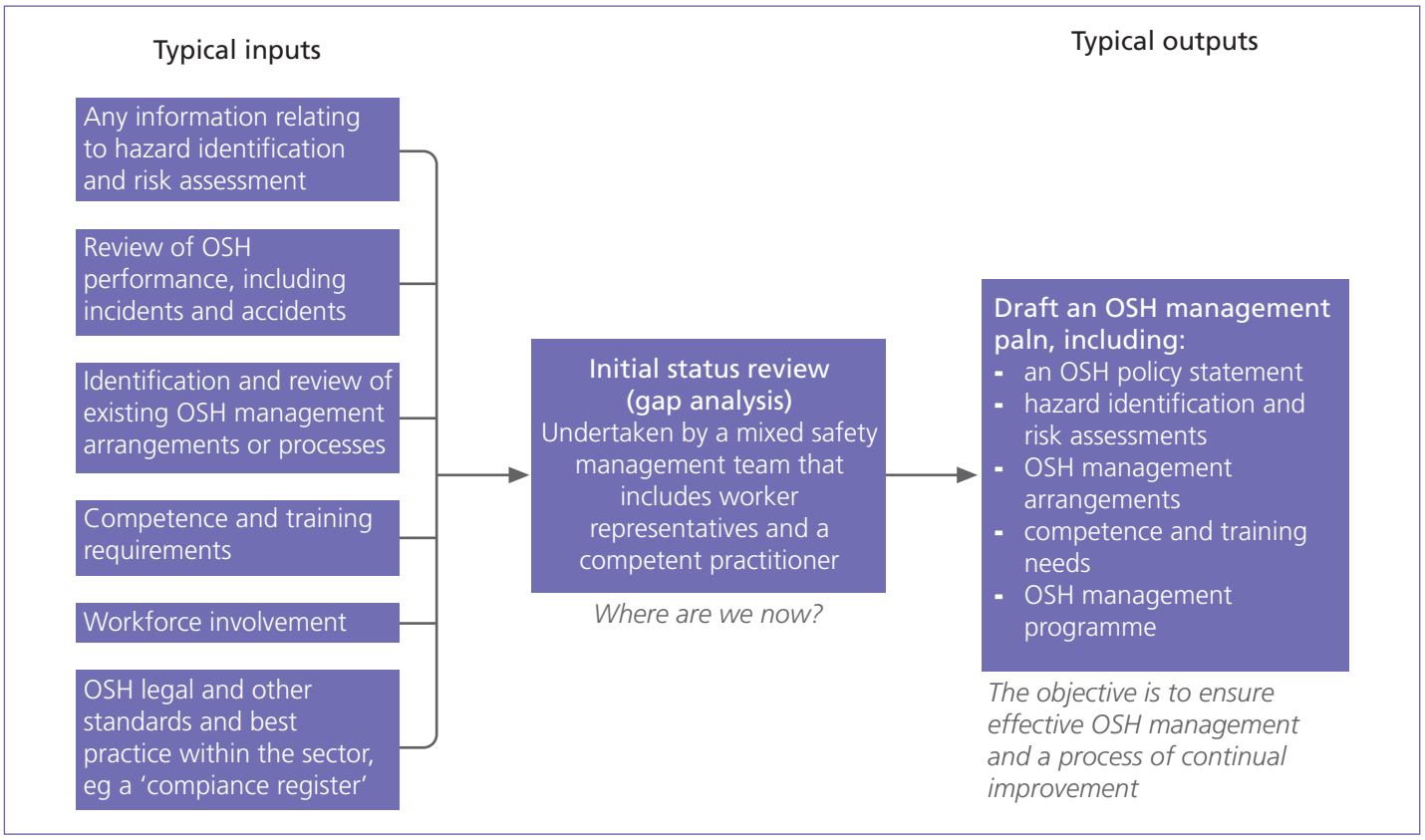

Figure 6: Process for developing an OSHMS

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Further reading

Auditing a safety and health management system: a safety and health audit tool for the healthcare sector. Health and Safety Authority, 2006. Available from **www.hsa.ie/eng/Publications_and_Forms/Publications/Occupational_Health/Auditing_Healthcare.pdf**.

The Health and Safety Authority (HSA) in the Republic of Ireland has produced this audit tool to assist in the continuous development and implementation of health and safety management systems for the healthcare sector. Eighteen different criteria for audit are described and followed by guidance. This tool is to be used in conjunction with the 2006 HSA guidance document for the healthcare sector, *How to develop and implement a safety and health management system*, available at **www.hsa.ie/eng/Publications_and_Forms/Publications/Occupational_Health/Guidance_Healthcare_Sector.pdf**.

Code of practice for risk management, BS 31100:2008. London: BSI, 2008.

This standard for risk management helps organisations to understand how to develop, implement and maintain effective risk management, thereby helping them achieve their objectives. It treats risk management as being as much about exploiting potential opportunities as preventing potential problems, and sees it as an essential part of good management. The standard establishes the principles and terminology and provides recommendations for the model, framework, process and implementation of risk management.

Development of working model of how human factors, safety management systems and wider organisational issues fit together. Research report RR 543:2007 prepared by White Queen Safety Strategies and Environmental Resources Management for HSE London. Available from **www.hse.gov.uk/research/rrpdf/rr543.pdf**.

This report describes a project to develop a working model linking human factors, safety management systems and organisational issues in the context of safety. While the focus is on chemical major hazards in particular, it is also intended to apply to health and safety in general.

Guidance for health and safety management systems interfacing. Step Change in Safety, 1999. Available from **http://stepchangeinsafety.net/stepchange**

This guidance addresses the issue of meshing OSHMSs used by separate organisations when they decide to work together – perhaps in a formal partnership, but more often as client and contractor or contractor and sub-contractor working at a particular location or on a project. The document includes two checklists, based on the HSG65 model but adaptable to others, which can be used to identify which interfaces have to be managed and whether there's clear understanding about who does what at each interface.

IMS: The framework – integrated management systems series, HB 10190:2001. London: BSI, 2001

This outlines a framework for managing the operational risks any organisation faces in its day-to-day business. The aim is to provide a structure by which an organisation can efficiently and effectively manage its operation through one system.

IMS: Implementing and operating – integrated management systems series, HB 10191:2002. London: BSI, 2002

This gives an approach for integrating the management of quality, OSH and environmental aspects within one management system. This 'how to do it' manual includes flowcharts, questionnaires and examples, and takes readers through the model outlined in *IMS: The framework*.

Managing health and safety – five steps to success, INDG275. Sudbury: HSE Books, 1998 (reprinted 2008). Available from **www.hse.gov.uk/pubns/indg275.pdf**

Aimed mainly at directors and managers, this short booklet summarises the key messages of HSG65, outlining good practice and the costs of getting it wrong. It describes five key steps: set policy; organise staff; plan and set standards; measure performance; and learn from experience (audit and review). There are questions following the descriptions to help readers assess how well their organisations are doing in each area.

Managing safety the systems way: BS 8800 to OHSAS 18001, HB 10180:2000. London: BSI, 2000

This is an easy-to-follow guide to implementing the new British Standard. The book has been revised and updated to incorporate the requirements of the new BS OHSAS 18001 and best practice. It takes a practical approach to tackling the various elements of an OSH management system for your business. It also explains how the system can be maintained as OSH evolves, responding to internal and external influences.

Occupational health and safety management systems – Guidelines for the implementation of OHSAS 18001: 2007, OHSAS 18002:2008. London: BSI, 2008

This Occupational Health and Safety Assessment Series (OHSAS) guideline provides generic advice on implementing OHSAS 18001 (a specification for an occupational safety and health management system), explaining its principles, intent, typical inputs and outputs, and processes. It includes a 'correspondence' table between OHSAS 18001:2007,

ISO 14001:2004 and ISO 9001:2008. It also features a table showing the correspondence between the clauses of the OHSAS documents and the clauses of the 2001 ILO-OSH guidelines.

Specification of common management system requirements as a framework for integration, PAS 99:2006. London: BSI, 2006

This Publicly Available Specification (PAS) was produced in response to the increased interest in an integrated approach to management systems and corporate governance. It contains a framework for implementing common requirements of management system standards or specifications in an integrated way. Adopting this PAS will simplify the implementation of multiple system standards and any associated conformity assessment. The reduction in duplication by combining two or more systems in this way has the potential to significantly reduce the overall size of the management system and improve system efficiency and effectiveness. It can apply to all sizes and types of organisation. PAS 99:2006 will be withdrawn when its content is published in, or as, a British Standard.

Strategies to promote safe behaviour as part of a health and safety management system. Prepared by the Keil Centre for HSE: Contract research report 430: 2002. Available from: **www.hse.gov.uk/research/crr_pdf/2002/crr02430.pdf**

This report promotes safe behaviour at work as a critical part of the management of health and safety, because behaviour is important in transforming systems and procedures into reality. Good systems on their own are not enough to ensure successful health and safety management; the key is how organisations 'live' their systems. This report covers:

- the theory underpinning strategies to promote safe behaviour
- the key elements of programmes in use to promote safe behaviour
- how to use behavioural strategies to promote critical health and safety behaviours
- how to integrate behavioural strategies into a health and safety management system.

The use of occupational safety and health management systems in the member states of the European Union: experiences at company level. European Agency for Safety and Health at Work, 2002. Available from **http://osha.europa.eu/en/publications/reports/307**.

The European Agency for Safety and Health at Work has published this report covering OSHMSs in the member states of the EU and the best approach to take. It identifies five key elements of effective OSHMSs: initiation (OSH input); formulation and implementation (OSH process); effects (OSH output); evaluation (OSH feedback); and improvement and integration (open system elements). It then looks at eleven companies across the EU that have introduced or improved their OSHMSs, indicating which of the key elements each particular case study highlights.

The report also comments on the strengths and weaknesses of the case study systems, noting that they tend to concentrate mainly on work-related accidents, but give less attention to work-related ill health. It also notes that some organisations attach a greater level of importance to health and safety than others and that there are weaknesses wherever communication or competence are inadequate.

Regarding strengths, as well as reducing accidents and lost-time in the larger organisations, it was felt that OSHMSs increased employee motivation and identification with their employers and also helped develop their competence.

Appendix: List of abbreviations

CPD
Continuing professional development – a means to ensure ongoing competence in a changing world

CSR
Corporate social responsibility – a system whereby organisations integrate social and environmental concerns into their business operations and interactions with stakeholders

GRI
Global Reporting Initiative – an international sustainability reporting institution that has developed guidelines for voluntary reporting on the economic, environmental and social performance of organisations

HSE
Health and Safety Executive – the UK OSH regulator

ILO
International Labour Organization – a United Nations agency, based in Geneva

IMO
International Maritime Organization – a United Nations agency, based in London

IOSH
Institution of Occupational Safety and Health

ISM
International Safety Management – a formal code requirement of the IMO that applies to most classes of large ship

ISO
International Organization for Standardization

NGO
Non-governmental organisation (eg voluntary, campaigning or professional body)

OSH
Occupational safety and health

OSHMS
Occupational safety and health management system

SMARTT
Specific, measurable, agreed, realistic, timetabled and tracked action – a method for managing action plans

WHO
World Health Organization – a United Nations agency, based in Geneva

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