

Joined-up working

An introduction to integrated management systems



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

Joined-up working – an introduction to integrated management systems

This IOSH guide on integrating management systems for health and safety, environment and quality outlines the potential advantages and disadvantages of integrated management systems and provides a practical guide for IOSH members, employers, regulators and standard-setting bodies. It updates and replaces the previous editions and complements the free IOSH guides *Systems in focus* (a guide to health and safety management systems), *Making a difference – a basic guide to environmental management for OSH practitioners* and *Promoting a positive culture*.

Although the majority of IOSH members are based in the UK, many, including those in Hong Kong, Asia, the Republic of Ireland, the Middle East, the Caribbean and elsewhere, advise organisations with non-UK interests. We try to develop guidance that is applicable to all.

We welcome all comments aimed at improving the quality of our guidance, including details of non-UK references and good practices. If you have any comments or questions about this guide, please contact Research and Information Services at IOSH:

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1 Introduction

Modern organisations find that they're increasingly required to take a systematic and proactive approach to managing health and safety, environmental and quality risks. One way to help them succeed in this is to design and implement clear, robust management systems, as shown in Figure 1.

Integrating separate management systems for health and safety, environment and quality can offer substantial improvements in business efficiency and quality of products and services, as well as in health and safety and environmental performance. If you've developed separate systems, you may be considering whether two or more of them could be brought together to form an integrated management system (IMS). If you're setting up a new organisation, you may want to consider integration from the start. For a historical perspective on IMSs, see page 11.

In this guide, we cover five issues that are important if you're considering integrating your occupational safety and health management system with other management systems:

- 1 the case in favour of integrating management systems
- 2 arguments for retaining largely independent systems
- 3 what you need in your organisation for integration to work
- 4 factors you should consider when introducing an IMS
- 5 maintaining and developing an IMS.

These issues are also relevant if your organisation is looking to develop management systems where existing arrangements are rudimentary, or if it currently has only a quality system in place.

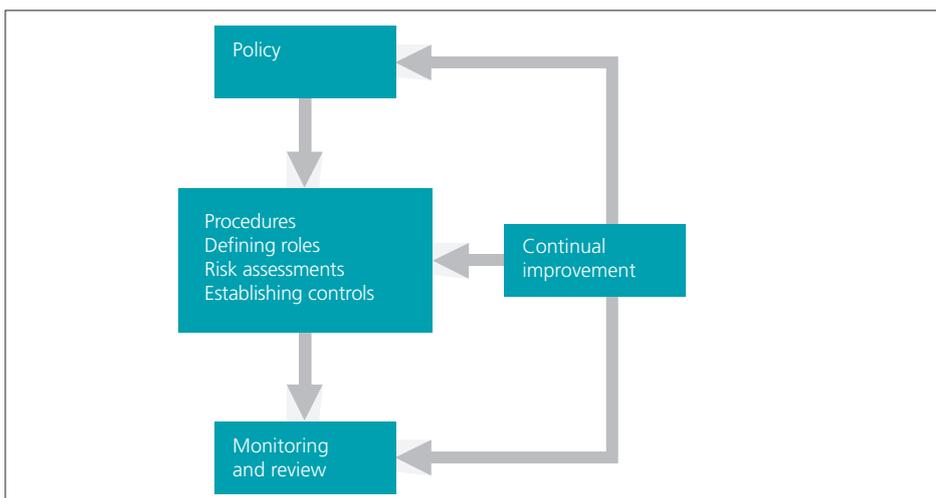


Figure 1: Basic systematic risk management

2 Integrated management

This guide approaches integration from the perspective of health and safety management and not from an environment or quality viewpoint. While it focuses on the integration of health and safety, environment and quality, some organisations may want to integrate health and safety only with environment, and others may wish to add topics such as fire protection, product safety, information systems, security and even risk management in its broadest sense. All the management systems considered here are subsets of an all-embracing risk management system.

When we talk about integrating systems, we're referring to the co-ordination of elements such as organisational structures, strategic decision-making, resource allocation, and the processes of auditing and reviewing performance. Certain elements of an IMS – such as work procedures that acknowledge health and safety, environment and quality management requirements – should already be in place in most organisations. For example, you may already have emergency plans to deal with the accidental release of flammable and/or toxic chemicals that may have an impact on employees, the public and the environment.

From a superficial viewpoint, the case for an IMS appears overwhelming: it should lead to less duplication of effort and to the development of procedures

that take into account the needs of each discipline. It should also allow expertise to be shared between specialisms. One of the key goals of managing health and safety, environment and quality is essentially the same in each case: achieving designated performance standards in situations where lapses may be rare but serious. The management processes are also in principle the same, and are based on Deming's cycle of Plan–Do–Check–Act (Figure 2).

These processes typically involve some form of hazard identification and risk assessment, and choosing controls that may have technical, behavioural, organisational and procedural elements. Organisations with an effective IMS can perform optimally when challenged by disparate risks and multiple uncertainties.

In practice, while the potential benefits of integration are attractive, the process of integration is far from straightforward. Your staff may be sceptical about the benefits of formal, documented management systems and may fear that integration will increase the complexity of systems that they already see as over-bureaucratic. Furthermore, tensions may appear between specialists in different disciplines, with experts in one discipline underestimating the challenges of others.

It's important to note that some of the factors that may lead to benefits may

also carry penalties. Moreover, it's possible that potential benefits will not be realised in practice. Clearly, you'll only achieve system improvements if you plan thoroughly and explicitly address the disadvantages. For example, you should consider the circumstances in which an IMS could lead to inappropriate allocation of resources. While many organisations see integration as generally beneficial, it's important not to achieve these benefits at the expense of the structure and resourcing of health and safety management.

This guide presents these issues from both sides of the argument – leading in some cases to a deliberate repetition of closely related points. An effective IMS should be the preferred option for many, but not all.

A well-planned IMS should be more efficient, and should lead to optimal decisions in the face of a range of uncertainties. The process of integration presents distinctive challenges for different organisations.

The organisations that are most likely to integrate their systems successfully will already have developed multiple channels of communication founded on trust, respect for the expertise of colleagues, experience and confidence in the management of change. They will also have an organisational strategic risk management approach. (Figure 3).

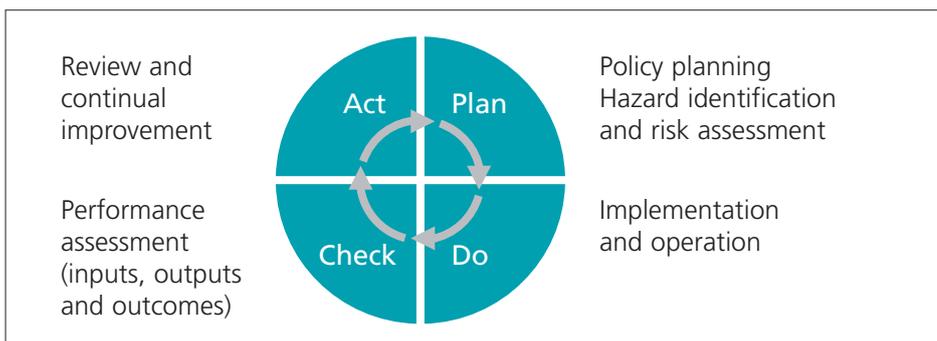
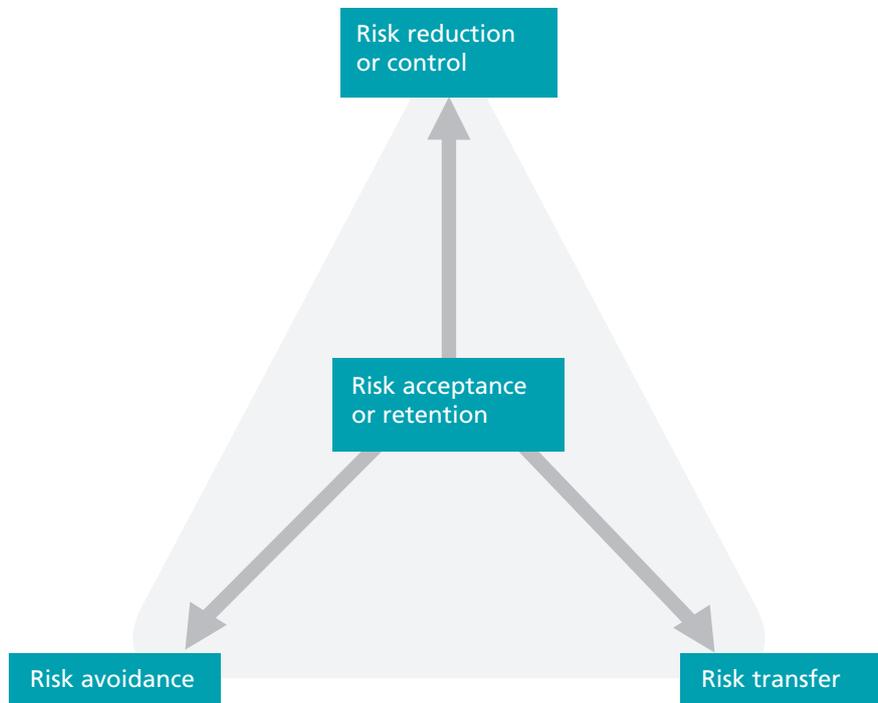


Figure 2: The Plan–Do–Check–Act cycle



- **Risk avoidance** involves the conscious decision to avoid a particular risk by discontinuing the operation that produces the risk.
- **Risk reduction** involves managing risk by following a programme designed to protect the organisation from losses caused by the identified risks. This kind of risk management programme should include:
 - occupational safety, health and hygiene controls and precautions
 - physical control measures
 - legal compliance
 - environmental protection
 - damage control
 - transport risk management
 - fire prevention and control
 - security and anti-fraud measures
 - information systems protection
 - personnel and competence retention
- **Risk transfer** involves the legal assignment of the costs of certain potential losses from one party to another. The most common way of doing this is by insurance, but other forms of contractual risk transfer include sales contracts and employing third parties, eg contractors.
 - product or service safety and quality assurance
 - public safety and liability
 - business continuity.
- **Risk retention** involves accepting the risk within the organisation, with any loss caused by poor risk management being dealt with reactively and totally financed from within. Risk retention can either be intended – when the organisation is fully aware of the risk it's accepting – or unintended. This is a default position that applies when the organisation hasn't fully understood, identified or controlled the risks.

Figure 3: Principal risk management strategies

3 IMS: for and against

When planning your approach to risk management, you should determine the need for, and practicality of, integrating your management systems for health and safety, environmental performance and quality, and where appropriate, other areas such as product safety, information systems and security. An IMS offers you the opportunity to improve your business effectiveness, as well as your health and safety and environmental performance, among other things. However, the process of creating, maintaining and developing an IMS isn't easy. There are many challenges that you must address before making a decision to integrate, while planning integration, and when developing and maintaining an IMS.

If you don't consider these matters, you may make decisions that don't fit your organisation's needs or competences. At best you may fail to reap the benefits of an IMS. Organisations with a positive culture are most likely to introduce an IMS that promotes streamlined procedures and inclusive and effective decision-making. You should consider the following matters when deciding whether or not to integrate, in whole or in part, your systems for health and safety, environmental and quality management. You may need to evaluate carefully the impact of many of the issues identified, perhaps using formal techniques, such as cost-benefit analysis and business risk appraisal.

The case for integration

There are several factors that favour the case for integration.

- The objectives and processes of all management systems are essentially the same (see Figures 1, 2, 4 and 5).
- A well-planned IMS is likely to operate more cost-effectively than separate systems, and allow decision-making that best addresses the overall needs of your organisation.
- Integration should reduce duplication, for example in personnel, meetings, record-keeping software, audits and paperwork.
- Integration should reduce the risk that resolving problems in one discipline will create new ones in another.
- An IMS offers the prospect of more rewarding career opportunities for specialists in each discipline. However, additional training will be required for those given new responsibilities.
- If you already have a quality management system in place, it may be worth using that as the starting point for your IMS, and adding health and safety and environment to it.
- IMS reviews can help ensure each element develops at the same rate. In contrast, independent systems could develop at different rates, leading to incompatibility.
- It's easier to bring together expertise in each discipline to address specific issues. This would promote the exchange of fruitful initiatives (eg employee and supply chain surveys) and techniques (eg risk assessment and problem-solving methodologies) between the disciplines. Moreover, all the

specialists, working together, are likely to arrive at optimum solutions that take fully into account the needs of each discipline.

- It may be easier to link the IMS with management arrangements for other purposes, eg product safety, information systems and security – in cases where these aren't already part of an IMS.
- An IMS should minimise distortions in resource allocations in separate systems associated with:
 - a determination to retain current priorities, despite contrary evidence
 - personnel responsible for one management system being more effective champions of their discipline
 - variations in the immediacy and precision of feedback – for example, quality assurance feedback is usually rapid and statistically reliable, whereas there may be a time delay of several years before an organisation has statistically significant evidence of the effectiveness of a health and safety initiative.
- A positive culture and strengths in one function may usefully be carried over to the others.

The diagrams on page 06 illustrate just how similar environmental and health and safety management systems are. In the OHSAS 18001 and ISO 14001 system diagrams (Figure 4), the only difference is the subject title of the respective policies. In Figure 5, we can see more detailed arrangements, showing that the only difference occurs at the risk assessment and impact evaluation stage of each system.

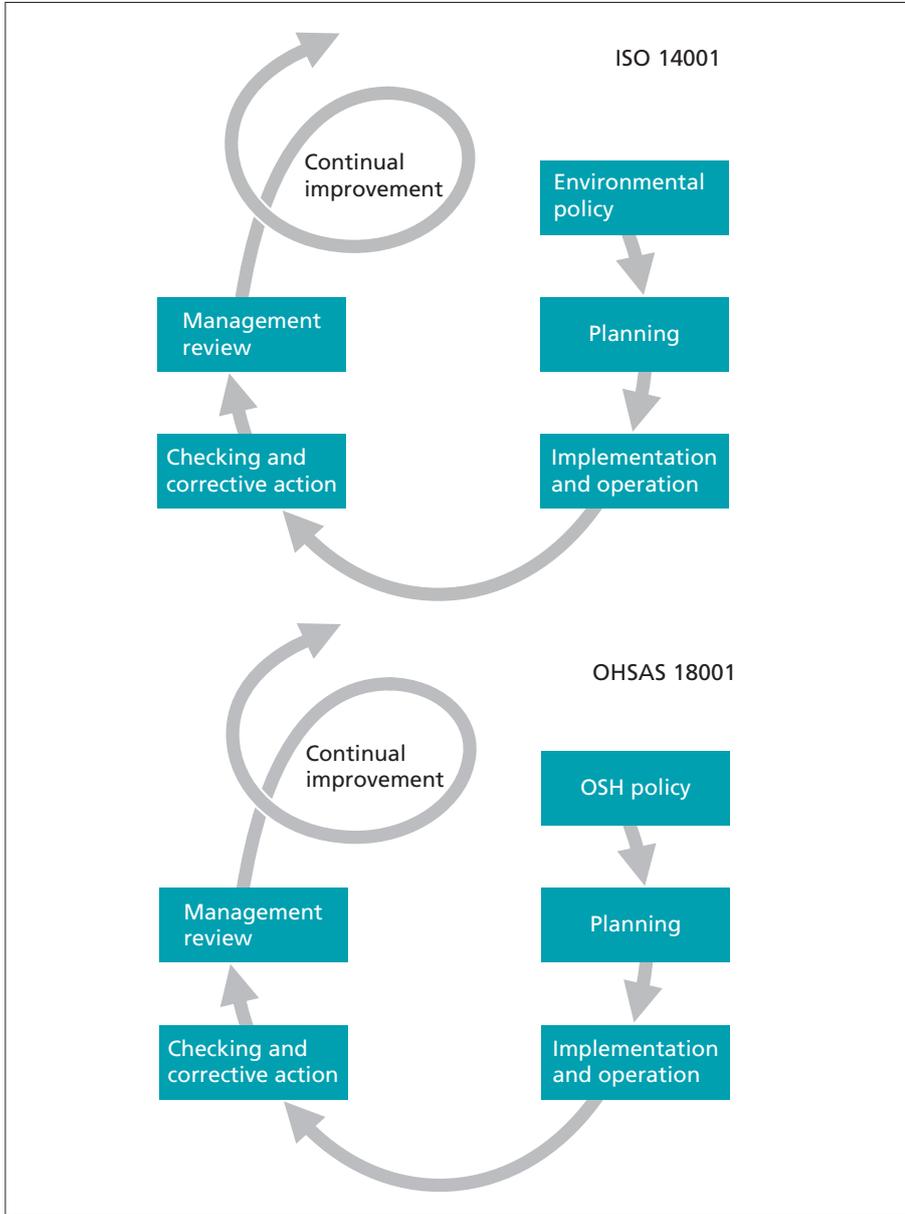


Figure 4: OHSAS 18001 and ISO 14001 models

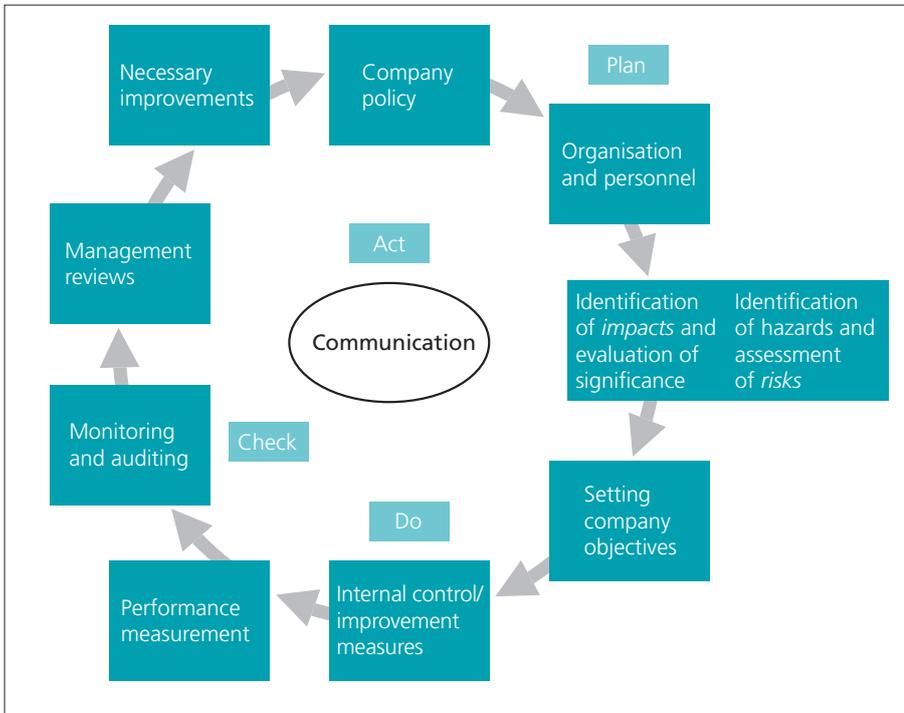


Figure 5: Health, safety and environmental management

The case for retaining largely independent systems

There are several potential reasons for keeping your systems largely independent of each other.

- The existing systems may simply work well. Integrating them could threaten the structure and consistency of current arrangements that have the support of everyone involved.
- Relevant specialists can continue to concentrate solely on their core area of expertise and so you may not need to provide more specialist training.
- An IMS can become over-centralised and over-complex, and lack the capacity to consider local needs and constraints enough. Employers and employees who are sceptical of what they see as excessive bureaucracy in their existing management systems may fear this could worsen under integration.
- While you're planning and implementing an integrated system, the organisation may be vulnerable. Existing procedures may lapse, or be found wanting, at the moment when key personnel are focusing attention on the development of new systems.
- System requirements may vary across the topics covered. For instance, you may need a simple quality system, but a more complex

health and safety or environmental management system. In this case, the IMS could introduce unreasonable bureaucracy into quality management (for example, in an organisation that manufactures a simple product to a customer specification, but uses dangerous machinery and creates toxic waste). By way of contrast, a computer software company would need a highly sophisticated quality management system, but comparatively simple health and safety and environmental management systems. Once again, it may not be appropriate to integrate in these circumstances.

- There may be distortions in the structure of the IMS components because:
 - BS EN ISO environment and quality management standards are internationally recognised and certificatable, but the OHSAS 18001 *Occupational health and safety management systems – specification*, though certificatable, is not internationally recognised
 - health and safety and environmental management are often underpinned by law, while quality management system requirements are largely determined by what the customer requires.

- You may not want to alter existing health and safety, environment and quality reporting lines and/or board-level accountabilities, which an IMS might require. Also, if a specialist is given seniority over areas outside their competence, more competent peers and subordinates may feel resentment.
- It's possible that rivalries about the relative importance of disciplines and resource allocation may damage the collective operation of an integrated system.
- regulators and single-topic auditors may have difficulty evaluating their part of the IMS when it's (quite properly) interwoven with other parts of the system outside their competence. In contrast, auditing all elements of an IMS at the same time requires an audit team competent in all aspects of the system and may be time-consuming and demanding for the auditee.
- A negative culture or flaws in one system area may unwittingly be carried over to the others.

Note: a well-designed and implemented IMS should be able to overcome most of these problems.

4 The prerequisites for integration

Before you finally decide to establish an IMS, you need to complete the following groundwork.

- Review the overall business case for an IMS.
- Review the adequacy of existing arrangements and the future needs of each management system which would form part of the IMS.
- Identify, for each element of the IMS, the key competences required in the people who will design and continually improve the IMS structure and contents, and in those who will implement and operate it.
- Decide on the phasing and extent of integration. It's possible, for example, to start to integrate at the policy and strategic planning levels, and also at 'sharp end' operational procedures and systems. However, you may wish to maintain separate procedures in the short term for specific tasks, such as energy conservation, quality control techniques, and statistical analysis of health and safety performance data. You'll need to determine how best to use existing health and safety, environment and quality management departments within an integrated system.
- Consult widely throughout the organisation. Many employees will have extra work to do to implement an IMS and their participation and support is essential.
- Obtain the enthusiastic support of top management for the IMS, and their commitment that appropriate resources will be made available.
- Study the recommendations of any relevant industry-specific IMS standards, and consider whether you need to take external advice.
- Decide on the measurable criteria that you'll use to monitor and review the effectiveness of the IMS, and complete a baseline survey so that you can readily assess future changes. Such criteria should be linked to the business case for an IMS.

5 Introducing, developing and maintaining integration

Once you've decided in principle to integrate your management systems, the next step is to make some decisions about what you want your IMS to look like and how you'll introduce it as smoothly as possible.

- Choose an overall IMS model. If you adopt the BS EN ISO 9000 series approach, take care, because it's the least generic of the standards, and doesn't include explicit consideration of risk assessment. Some organisations have developed quality systems that follow too slavishly the sequences of topics given in earlier versions of that standard.
- Consider how to retain the integrity and effectiveness of your existing systems while you develop and implement the new IMS.
- Ask yourself whether you need to pilot parts of the IMS to confirm that they're effective before you introduce it.
- Investigate what organisational change management processes and skills you need to introduce the IMS smoothly.

- Decide how you're going to analyse training needs and delivery to ensure adequate competence.
- Plan how you'll introduce a continuing programme designed to retain the commitment of everyone involved.

Once you've laid the foundations of your IMS, you need to make sure that:

- the impact of changes in standards, regulations or good practice in one element of the IMS has a positive, or at least a neutral, effect on other elements of the system
- you're in a position to respond constructively, eg via emergency preparedness, to a potentially significant failure (internal or external) affecting one or more parts of the system
- you have an efficient and robust document management and communication process to help support continual improvement of the combined system.

6 The holistic approach – how IMS came about

In the past, many organisations managed health and safety, environmental performance and quality reactively – they took few preventive measures until something went wrong. Subsequent action was limited to preventing that specific undesired event happening again. The contemporary view is that organisations should take a proactive approach – they should identify and control risks before they lead to an undesired event. Such an approach is in principle more effective, but also more challenging. To be successful, this approach demands the design and implementation of robust management systems that incorporate, among other things, clear policies, procedures for planning and implementing risk assessments and controls, and suitable arrangements for monitoring and reviewing performance, leading to continual improvement.

The 1990s saw the increasing use of Total Quality Management as an integrated approach to business management. This was driven by customer service values and continuous improvement, rather than simply the prevention of loss. This approach was promoted in the Health and Safety Executive's original 1991 guidance on health and safety management (HS(G)65). Then, in 1997, the European Foundation for Quality Management (EFQM) produced a benchmark for organisations to assess their progress towards business excellence.

There are approved standards for both quality and environmental management (the BS EN ISO 9000 series and 14000 series respectively) and guides for occupational safety and health management. These standards

and guides have compatible structures and similar system requirements. The chemical and maritime sectors have also published criteria and guidance for integrated management systems. Additionally, the British Standards Institution (BSI) has recognised the case for introducing an IMS standard and has produced framework guides, and the EFQM also publishes an integrated business model and offers audits against it.

The majority of IMS models consider only quality, health and safety and environment, but for some organisations security and information systems management is equally, or more, important – so wider integration may be desirable. In such cases there are relevant standards which can be included in the IMS, such as the security and IT standard ISO 17799. In 2006, the BSI developed a publicly available specification (PAS 99) of common management system requirements as a framework for integration.

There are a number of holistic risk management standards and guides, such as:

- the Australia/New Zealand risk management standard, AS/NZS 4360:1999
- the New Zealand standard 'Risk management for local government', SNZ HB 4360:2000
- the UK Audit Commission's 'Worth the risk – improving risk management in local government'
- A risk management standard published in the UK by the IRM, ALARM and AIRMIC.

Also, the International Organization for Standardization has proposed a new international risk management

standard (non-certificated), called 'General guidelines for principles and implementation of risk management'. Risk management standards and guides promote the concept that specific risks should not be treated in isolation, but considered in context and in terms of their relationships with and dependence on each other, as part of an overall organisational risk profile. Holistic risk management supports decision making and resource allocation at both strategic and operational levels and aims to eradicate or minimise the adverse effects of pure and speculative risks that organisations are exposed to.

Stakeholders are increasingly demanding that organisations demonstrate effective corporate governance and management of significant risks. This has led to a greater emphasis on public reporting of performance. There are several reporting standards, including:

- the Global Reporting Initiative guidelines on sustainability reporting
- the 'Turnbull Report', adopted by the London Stock Exchange as reporting guidance for FTSE-listed companies
- SORP, a statement of recommended practice for charities
- the operating and financial review guidance by the Accounting Standards Board for GB quoted companies.

All these guides require organisations to report publicly on how well they are managing their significant business and sustainability risks. An independently certificated or verified IMS can help to demonstrate to stakeholders that an effective, holistic risk management system is in place.

Further reading

- Accounting Standards Board. *Reporting Standard 1: Operating and Financial Review*. ASB Publications, 2005. www.frc.org.uk/asb/publications/it31_p241.html.
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