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NEBOSH

International Diploma in Occupational Health and Safety

- Unit course notes
- Exam question and answer booklet
- Mock exam
- Unit DNI guidance

**SAMPLE
COURSE
MATERIALS**

NEBOSH

International Diploma in Occupational Health and Safety

UNIT IA: International management of health and safety

IA1

Principles of health and safety management



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On completion of this element, candidates should be able to:

- ▶ **Explain** the moral, legal and economic reasons for the effective management of health and safety.
- ▶ **Outline** the societal factors which influence an organisation's health and safety standards and priorities.
- ▶ **Outline** the uses of, and the reasons for, introducing a health and safety management system.
- ▶ **Explain** the principles and content of an effective health and safety management system including the reasons for integration with other management systems.

Moral, legal and economic reasons for effective management of health and safety

Society exerts pressure through three overlapping and interacting spheres of influence, as shown in Figure 1.1.

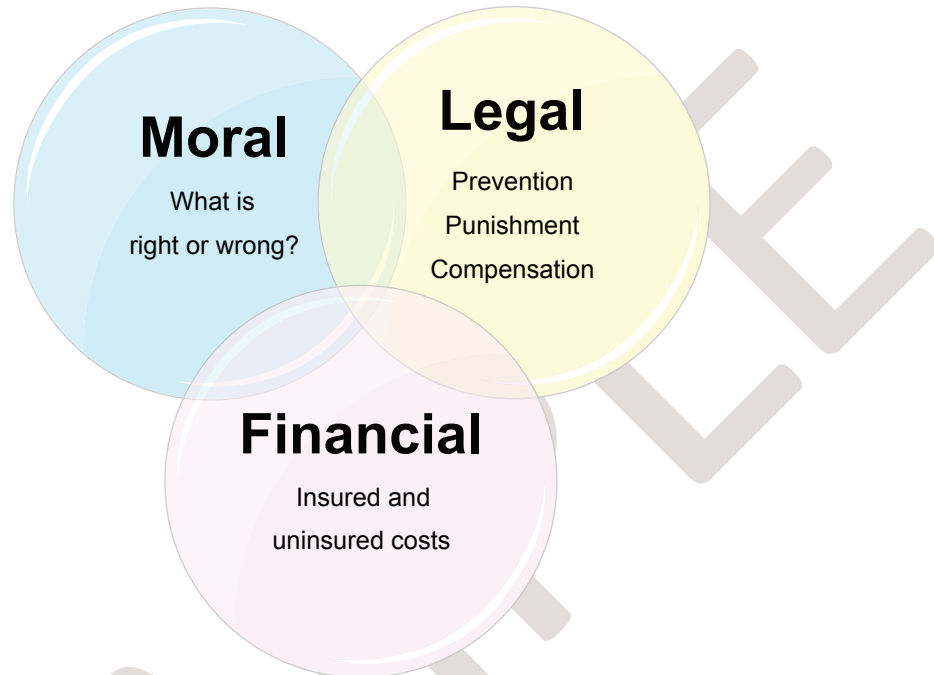


Figure 1.1: Moral, legal and financial drivers

Moral

Morals are the codes of conduct, or rules of behaviour imposed by a society regarding what is right and wrong.

For people to be killed, or seriously injured, or to suffer illness as a consequence of work is clearly wrong.

The increasing globalisation of business has led the [World Health Organization](#) (WHO) to expressed concern that:

... in order to reduce costs, industries with their accompanying occupational hazards are being relocated to developing countries – home to 75% of the global workforce.

Both the WHO and the [International Labour Organization](#) (ILO) have warned that globalisation will considerably increase the number of work-related diseases and injuries in the 21st century.

Current estimates are that 2.3 million people die annually as a consequence of their work. This breaks down into around 350 000 fatal accidents (approximately 1 000 each day) and almost two million fatal illnesses (around 5 400 each day) with 900 000 caused by exposure to hazardous substances.

There are also over 310 million non-fatal work-related accidents (requiring at least 4 days work absence) each year.

The main causes of occupational mortality are shown in Figure 1.2.

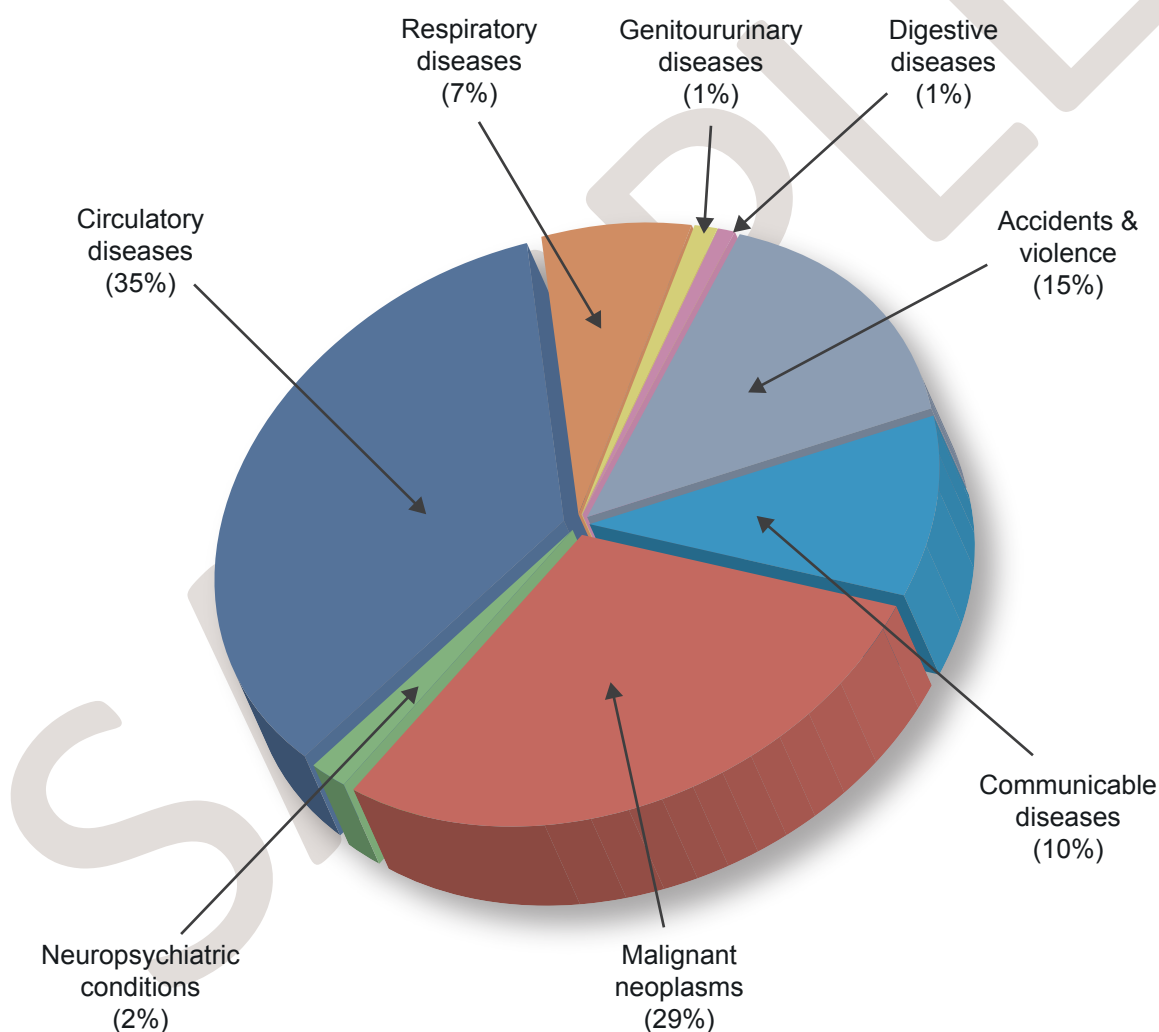
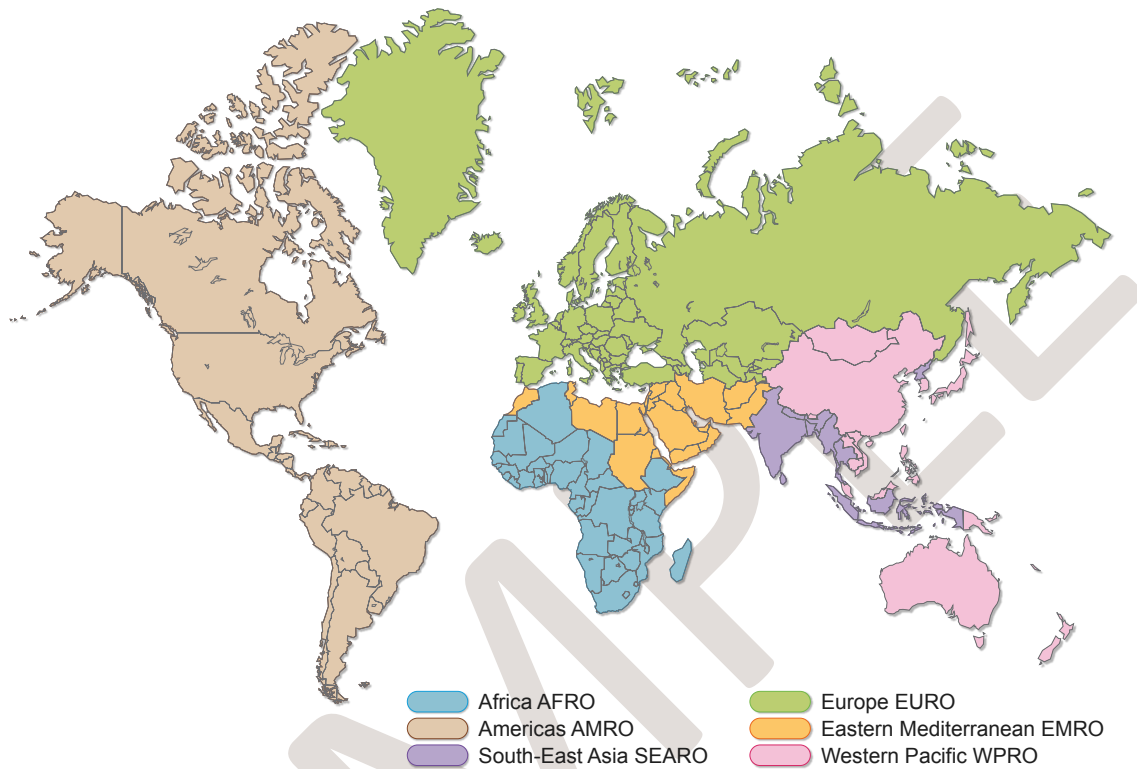


Figure 1.2: Causes of work-related mortality

The global economic cost of occupational accidents and diseases represent 4% of the global Gross Domestic Product (GDP) with a range of 1.8% to 6% by country.

As mentioned earlier the burden is not shared equally, developing countries suffer much higher rates of serious and fatal occupational injuries and illnesses.

The WHO model of regional groupings is shown in Figure 1.3 and Figure 1.4 shows the numbers of fatal accidents and occupational diseases by region.



-Figure 1.3: WHO regional groupings

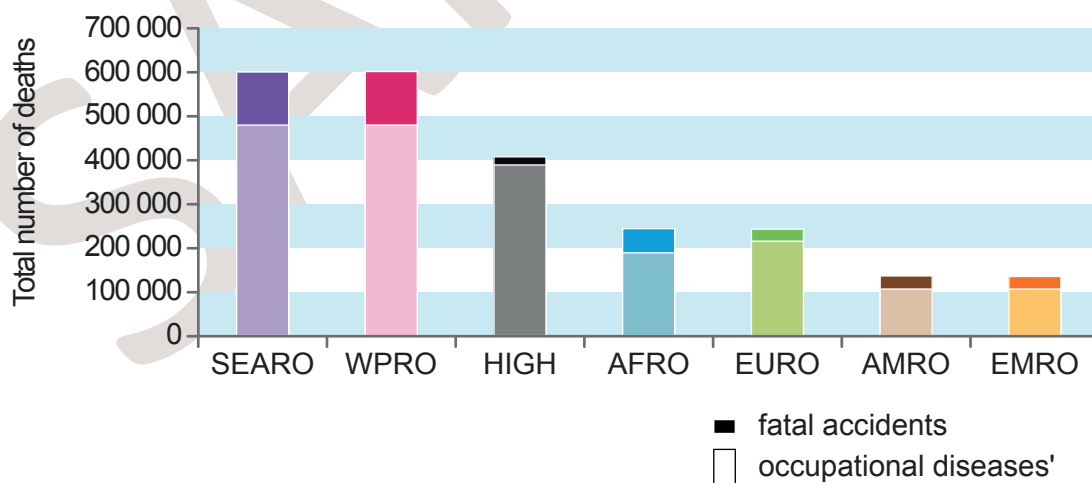


Figure 1.4: Global work-related mortality by region

Direct comparisons of accident rates between countries can be difficult due to the various levels of sophistication of reporting systems, different definitions and cultural variables. Table 1.1 is based on 2001 research and makes a number of major assumptions and extrapolations for India and China due to the lack of available data.

Country	Estimated number Of fatal accidents	Fatality rate (per 100 000 workers)	Non-fatal accidents >3 day absence (average estimate)	Accident rate (per 100 000 workers)
UK	236	0.8	180 456	639
USA	6 643	4.9	5 069 963	3 753
India	40 133	10.0	30 627 865	7 609
Poland	1 463	10.3	1 116 420	7 858
Kuwait	138	11.1	104 955	8 442
China	90 295	12.3	68 909 715	9 392
South Africa	1 908	16.8	1 455 861	12 843
Indonesia	16 931	18.6	12 921 000	14 229
Brazil	14 895	19.7	11 366 973	15 063
Nigeria	9 392	20.1*	7 167 362	15 312*

* Based on 1998 estimates. No data available on total employment in Nigeria for 2001.

Table 1.1: Comparisons of accident statistics by country



WEB LINKS

World Health Organization (WHO)

www.who.int/en

International Labour Organization (ILO) – Safety and health at work

www.ilo.org/global/topics/safety-and-health-at-work/lang--en/index.htm

ILO Introductory Report: *Global Trends and Challenges on Occupational Safety and Health 2011*

www.ilo.org/wcmsp5/groups/public/@ed_protect/@protrav/@safework/documents/publication/wcms_162662.pdf

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Legal

There are two systems of law that influence the management of health and safety.

The **criminal law** establishes a set of rules for acceptable behaviour. If the necessary standards are not met the enforcement agencies may take preventive and/or punitive action.

Preventive actions may involve the service of legal notices to stop activities posing a risk of serious injury (known as prohibition notices in the UK) or requiring improvements to achieve legal compliance (known as improvement notices in the UK).

Punitive action involves prosecuting offenders for breaking the rules.

The **civil law** allows an injured person to sue a third party for compensation for their injury or loss, if the injury was caused through the third party's negligence. Civil action may also obtain an injunction to stop a continuation or recurrence of harmful behaviour.

Principle of self-regulation

Trans-national corporations (also known as multi-national or international corporations) proliferated from the 1960s onwards, and it is now common for large commercial organisations to operate in different countries. This has presented challenges for national governments and the international community in regulating the behaviour of such companies.

By the 1980s many national governments were looking to attract foreign investment and a reduction in state 'interference' in commercial activities (deregulation) became common.

In the modern world self-regulation through corporate social responsibility (CSR) initiatives (see notes on globalisation and CSR in Element IA1.2) has become increasingly important.

Self-regulation is the controlling of a process or activity by the organisations that are involved in it, rather than by a government or its agencies. For such approaches to be effective in the industrial / commercial context, it is imperative that all businesses in the sector co-operate with each other for the purpose of achieving the objectives of the code or scheme.

In sectors where self-regulation has been reasonably successful (notably the nuclear power and chemical industries) there tends to be a strong natural coincidence between the public and private interest in establishing self-regulation. In these sectors there also tends to be a 'community of shared fate', whereby poor performance on the part of one member may jeopardise the interests of the entire industry.

In principle, self-regulation is more sensitive to market conditions and able to respond with greater speed, flexibility and efficiency than government regulation. However, in practice it often fails to fulfil its theoretical promise and commonly serves the industry rather than the public interest.

Examples of improvements in safety performance of government intervention and state regulation include:

- ▶ In the **UK** in 1965 the introduction of **Power Press Regulations** to replace a voluntary code of practice saw a dramatic reduction in the numbers of reported injuries.
- ▶ In the **USA** the introduction and enforcement of the **Federal Coal Mine Safety Act** in 1952 and the **Federal Coal Mine Health and Safety Act** in 1969 led to a sharp drop in coal mining fatalities.
- ▶ In **Australia** in the 1960s and 1970s asbestos miners and workers manufacturing asbestos-containing building materials were 'wilfully' exposed to lethal levels of asbestos dust before **state regulation began in the late 1970s**.

Co-regulation compared to self-regulation

As there is considerable evidence for the serious shortcomings of 'pure' self-regulation, the public policy debate is increasingly about how, and in what circumstances, it may be possible to design effective **co-regulation**, involving varying degrees of interaction with government regulation. Examples include:

The California Co-operative Compliance Programme which featured a job site labour-management safety committee that assumed many of the regulator's (OSHA) responsibilities for conducting inspections and investigating complaints, with OSHA stopping routine compliance inspections and adopting a 'monitoring' role. Accident rates at the seven participating sites (large construction projects) dropped significantly as a result of the programme.

The New Zealand Department of Labour approach involves the regulator using the law to stimulate modes of self-regulation within business, with government inspectors requiring industry to put in place safety management systems and then scrutinising their effectiveness.

The UK's Robens Report (which led to the creation of the Health and Safety at Work etc. Act 1974) advocated a goal-based approach to health and safety regulation and also expressed the need for a *more effectively self-regulating system*. It was hoped at the time that this would grow out of an increased atmosphere of communication and co-operation between employer and employees, capitalising on the role of the UK's Trade Unions.

In reality a hybrid approach developed in the UK with the Health and Safety Executive (HSE) taking the lead in the publication of guidance and advice, leaving much of industry in a position of following their lead rather than taking the initiative. The approach has generally been successful with rates of workplace fatalities, injuries and illnesses decreasing.

The Lofstedt Review (2011) is the latest UK Government commissioned review of health and safety regulation. Its purpose was to:

Consider the opportunities for reducing the burden of health and safety legislation on UK businesses whilst maintaining the progress made in improving health and safety outcomes.

SAMM

Financial

Accidents clearly cost money as a consequence of injured people, damaged plant and machinery and wasted product.

Globally the ILO estimates that the losses incurred as a result of compensation, lost working time, interruption of production, training and retraining, medical expenses, social assistance, etc., account for approximately 5% of the global gross national product (GNP).

The ILO acknowledges that best estimates may well underestimate the true economic and social costs because of the under-reporting of occupational accidents and the failure to recognize the work-related origins of certain diseases.

The pie chart at Figure 1.5 breaks down the costs by disease and injury type.

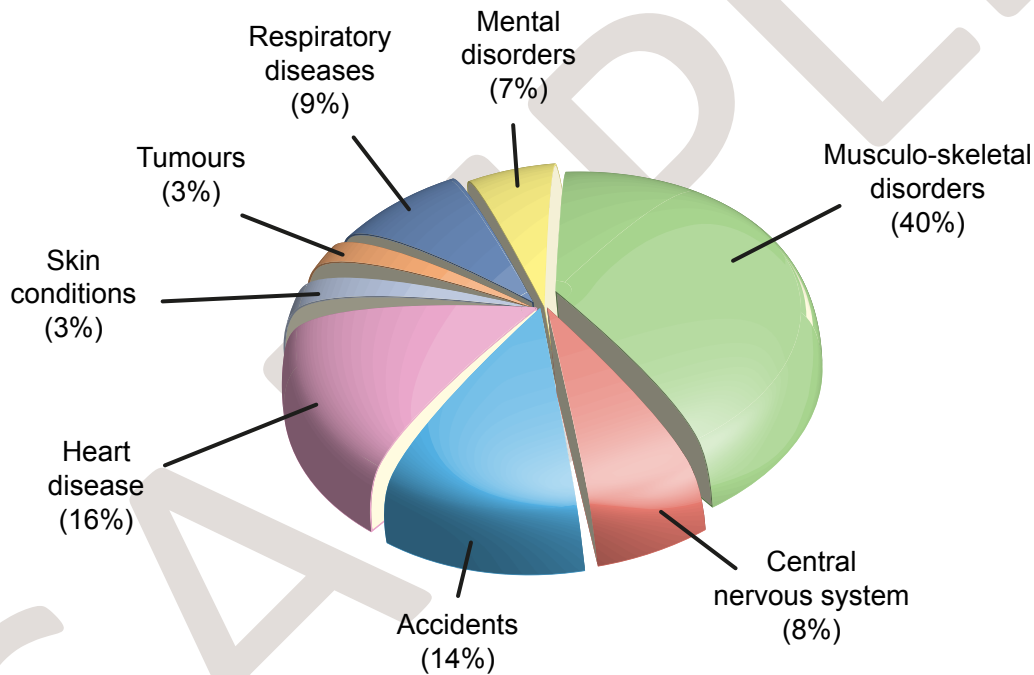


Figure 1.5: Costs of accidents and ill-health by disease and injury type

In the UK in 2013/14 the Health and Safety Executive (HSE) estimated that occupational injuries and illnesses cost £14.3 billion if the total costs to individuals, employers and society are considered.

In the USA, the [Occupational Safety and Health Administration](#) (OSHA) currently estimates the total cost of occupational injuries, illnesses and death at \$170 billion.

The costs of highly visible accidents involving large scale loss of life or major property damage as a result of fire and explosion are often determined by official inquiries.

- ▶ The BP Texas City fire and explosion in 2005 cost over \$21 million in fines, \$2 billion in civil claims, and \$1 billion in reinstating the site.
- ▶ The Buncefield oil refinery fire in 2005 is believed to be the most expensive accident in UK history with a total cost of over £1 billion, including £9.5 million in fines.

The ILO has estimated the annual economic cost of major industrial accidents at approximately US\$5 billion.

Smaller accidents have proved much more difficult to cost as relatively few companies have systems in place to quantify them.

In the UK, over thirty years ago the Confederation of British Industry (CBI) gave evidence to the Robens Committee on Health and Safety at Work, stating:

At the company level, if a readily applied and simple formula could be devised by which the financial loss caused by accidents and diseases could be measured, it would make a valuable contribution towards reducing industrial accidents and occupational ill-health.

In 1989 the UK's Health and Safety Executive (HSE) began a series of five case studies with organisations from different industrial sectors with the aim of developing a means accurately identifying the full cost of accidents. The study findings were published 1993 in a HSE guidance booklet [*The Costs of Accidents at Work \(HSG96\)*](#), which is no longer available from the HSE.

The five participating / projects were: a construction project, a creamery, an independent transport company working with the creamery, a North Sea oil platform, and an NHS hospital. All had a history of average, or better than average health and safety performance.

The study used a definition of 'accident' covering a broad range of losses including: injury and ill-health, damage to property, plant, materials and the environment, and the loss of business opportunity.

All personal injury accidents were included, as were all other losses above a minimum reportable level which was set at the minimum unit of product or its financial equivalent. The study accounted separately for financial and opportunity costs.

- ▶ **Financial costs** are the basic costs incurred to return the situation to what it was before an accident happened. This covers both material and labour costs.
- ▶ **Opportunity costs** (or lost opportunity costs) include those incurred through people stood idle or being unproductive as a result of dealing with the consequences of an accident, and energy costs from plant running idle and buildings being lit and heated.

The key findings of the study are presented in Table 1.2. The following should be considered in interpreting the findings:

- 1 No major or catastrophic losses were experienced during the study.
- 2 No prosecutions or significant civil claims were undertaken during the study.
- 3 There was probably under reporting as a result of the minimum level of loss criteria for reporting.
- 4 The financial values quoted are actual 1990 figures and have not been adjusted for inflation.

Business	Total loss	Annualised loss	Representing
Construction	£245 075	£700 000	8.5% of tender price
Creamery	£243 834	£975 336	1.4% of operating costs
Transport	£48 928	£195 712	1.8% of operating costs company 37% of profits
Oil platform	£940 921	£3 763 684	14.2% of potential output
Hospital	£99 285	£397 140	5% of annual running costs

Table 1.2: Calculated losses for each organisation

The HSE provided guidance in 2002 in *Reduce Risks – Cut Costs (INDG355)*, which identified three methods for quickly and crudely estimating uninsured costs of accidents.

- ▶ The uninsured costs of an accident are approximately 10 times the insurance premiums paid.
- ▶ Uninsured losses from accidents in smaller firms add up to £315 per employee per year.
- ▶ The average uninsured cost of an accident causing absence from work is approximately £2 100.



As every business and every incident are different the only accurate way of determining costs is to measure them. The HSE has devised an *Incident Cost Calculator* (see Table 1.3) for the purpose.

Incident Cost Calculator

Date and time of incident	
Description	
Person(s) involved	

Dealing with Incident (immediate action)

Examples	Time Spent	Cost (£)
First aid treatment		
Taking injured person to hospital / home		
Making the area safe		
Fire fighting		
Immediate staff downtime (work stopped)		
Other		

Investigation

Examples	Time Spent	Cost (£)
Staff time to investigate and report		
Meetings to discuss incident		
Time spent with HSE / LA enforcement officer		
Consultants fees		
Other		

Table 1.3: Incident cost calculator (1 of 3)

Getting Back to Business

Examples	Time Spent	Cost (£)
Assessing / rescheduling work activities		
Recovering work / production		
Cleaning / waste disposal		
Product reworking		
Repairing damage		
Hiring or purchasing tools, plant, equipment etc.		
Other		

Business Costs

Examples	Time Spent	Cost (£)
Salary costs of injured person off work		
Salary costs of replacement workers		
Lost work time		
Overtime costs		
Recruitment costs for new staff		
Contract penalties		
Cancelled and lost orders		
Other		

Action to Safeguard Future Business

Examples	Time Spent	Cost (£)
Reassuring customers		
Providing alternative sources of supply for customers		
Other		

Table 1.3: Incident cost calculator (2 of 3)

Sanctions and Penalties

Examples	Time Spent	Cost (£)
Compensation claim payments		
Solicitors fees and legal expenses		
Staff time dealing with legal case		
Fines and costs due to criminal proceedings		
Increase in insurance premiums		
Other		

Other

Examples	Time Spent	Cost (£)

Total

--	--	--

Table 1.3: Incident cost calculator (3 of 3)

Making the costs of accidents explicit and drawing the information to the attention of management may not be sufficient on its own to motivate managers to consider health and safety factors as part of their business decision making processes.

The calculations of health and safety costs are unlikely to help unless the response to the following variables is positive:

- ▶ The significance of health and safety costs relative to other cost categories or company turnover in the company.
- ▶ The level of direct influence management action has over health and safety costs.
- ▶ The lag between management action and the effect on health and safety costs (so that managers can see the benefits of their actions).
- ▶ Management access to information about the effects of management initiatives on health and safety costs.

Insured and uninsured costs

As we have said, guidance from the UK's HSE on the real costs of accidents at work indicates that the uninsured costs of an accident may be more than 10 times the insurance premiums paid. Figure 1.6 shows examples of accident costs that would not be covered by employers' liability insurance.

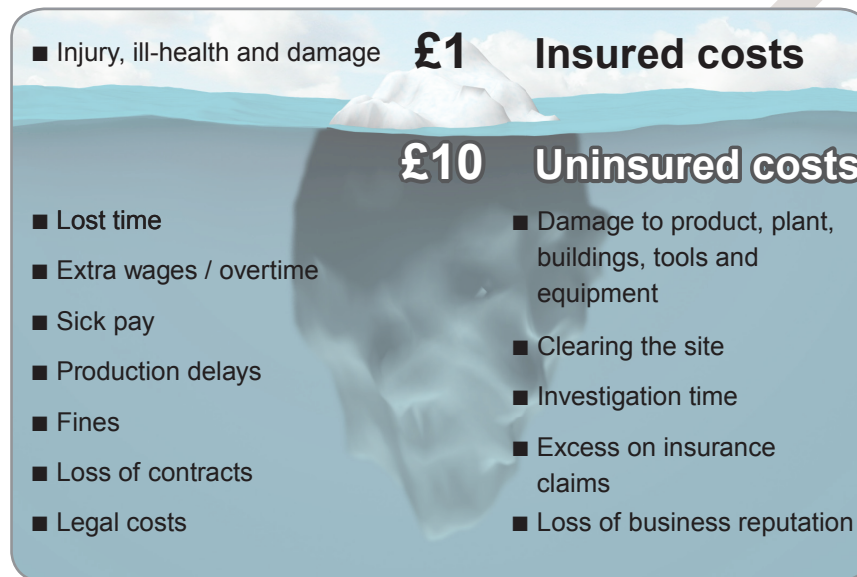


Figure 1.6: Insured and uninsured accident costs

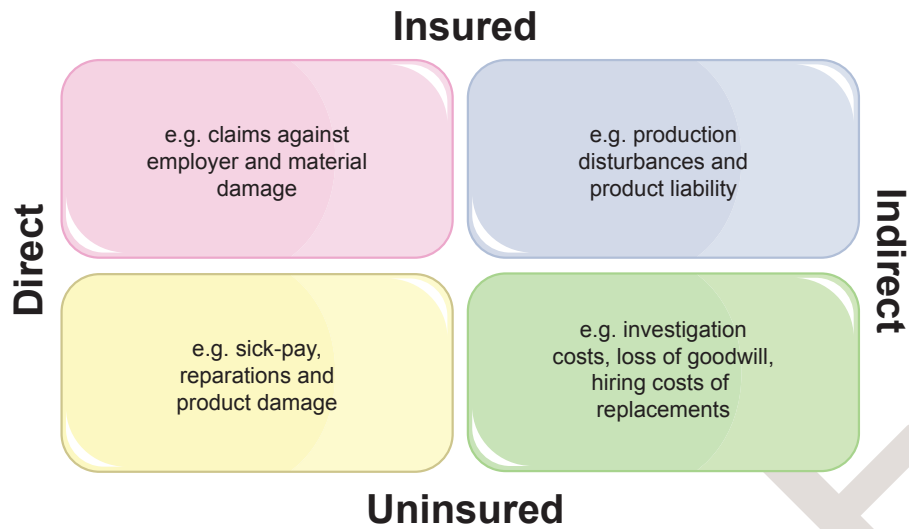


Figure 1.7: Insured / uninsured costs and direct / indirect costs

Workers compensation

Workers injured, or made ill at work will seek compensation either through a **workers compensation scheme** or through the **common law of tort (negligence or breach of duty of care)**.

The key difference between the approaches is whether or not there is a need to show that someone is to blame for the injury or illness. Workers compensation schemes are 'no blame' schemes, whereas actions in common law are 'blame' based.

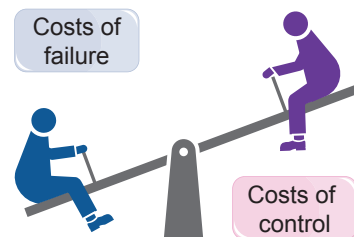
Costs and benefits of health and safety management

If you think safety's expensive, try an accident is an often cited maxim which was brought back to the fore by Sir Stelios Haji-Iaonnou in his 2004 interview on BBC Radio 4s 'On the Ropes.'

Stelios also reflected that *it takes years to build a reputation, but it can be destroyed overnight.*

Health and safety costs can be classified broadly into two overall categories:

The costs of control – these are the costs associated with risk assessment and the development and implementation of a health and safety management system to manage preventive and protective measures. These costs tend to be relatively stable.



The costs of failure – the consequences of occupational accidents or work related illnesses can lead to an increase in existing costs as well as a potential reduction in income. These costs will vary with the type and number of consequences.

Cost-Benefit Analysis (CBA) has been used to evaluate the costs and benefits of investment into health and safety management systems. CBA takes account of both private and external costs and benefits and attempts to measure them in monetary terms. A project (development of safety management system) is only worth undertaking if the discounted benefits outweigh the discounted costs.

Applying cost-benefit analysis to health and safety management systems can be difficult because of the challenges of quantifying costs monetarily and potentially long delays between action being taken and the benefits becoming apparent.

Few, if any, leading companies have reached the point where the investment in their health and safety management system is not delivering a net benefit.

The Troodos shipping company tanker M/T Haven (formerly Amoco Milford Haven) exploded, caught fire and sank off the coast of Genoa, Italy in 1991, killing six Cypriot crew members and leaking 50 000 tonnes of crude oil into the Mediterranean. Stelios (and his father) faced manslaughter charges in Italy before eventually being cleared in the Italian Supreme Court.

Cost Benefit Analysis (CBA)

- (1) Identify all costs and benefits on the basis of opportunity cost.
- (2) Convert all costs into monetary value.
- (3) Conduct a sensitivity analysis – i.e. consider the likelihood of the cost or benefit occurring.
- (4) Discount for the timing of the costs and benefits – a £1,000 benefit now is worth more than £1,000 benefit in ten years time.



WEB LINKS

Occupational Safety and Health Administration (OSHA) – USA

www.osha.gov

The cost of accidents at work (HSG96), 1996 – Health and Safety Executive (HSE) – UK

astutis-resources.com/public/HSG96.pdf

Reduce Risks – Cut Costs (INDG355), 2002 – Health and Safety Executive (HSE) – UK

astutis-resources.com/public/HSE_ReduceRisksCutCosts_INDG355.pdf

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Health and safety policies and arrangements

The safety policy requirement is intended to make employers think carefully about the nature of the hazards in the workplace, and about what precautions are necessary to make the workplace safe and healthy for their employees.

The policy statement (statement of intent) is also intended to increase employees' awareness of the employer's policy and arrangements for safety.

The **statement** should set out the employer's aims and objectives for improving health and safety at work and the organisation and arrangements in force for achieving those objectives.

Organisation means people and their responsibilities, and **arrangements** means systems and procedures.

As working conditions continually change and new hazards arise and control measures alter, employers are required to keep their policy up to date.

Revisions are necessary if systems, procedures or responsible persons change. Any revisions to the statement must also be brought to the notice of employees.

A health and safety policy, as required by the Health and Safety at Work Act (HASAWA), contains three distinct sections:

- 1 Statement of intent (policy statement) – **What**
- 2 Organisation (people and their responsibilities) – **Who**
- 3 Arrangements (systems and procedures) – **How**

(1) Statement of intent

The original guidance (L1, withdrawn) to HASAWA suggests that the purpose of the safety policy statement is to set out the employer's aims and objectives for improving health and safety at work after a careful consideration of the nature of the workplace hazards and the appropriate controls.

HSG65 considers that the written statement of policy should be shaped by the general intentions, the approach and objectives (or vision), and the criteria and principles upon which it bases its action.

OHSAS 18001 requires top management to formally express the organisation's overall intentions and direction for health and safety performance in the health and safety policy, which should also provide a framework for action and for the setting of health and safety objectives.

The safety policy statement should, as a minimum, include commitments to:

- ▶ the prevention of occupational injuries and ill-health
- ▶ compliance with applicable legal requirements, and other relevant standards
- ▶ continual improvement in health and safety management and performance
- ▶ provide a framework for setting and reviewing health and safety objectives.

Better safety policy statements will attempt to capture the basic philosophy for the management of health and safety and explain its importance relative to other organisational objectives, for example:

Prevention is not only better, but cheaper than cure. There is no necessary conflict between humanitarianism and commercial considerations. Profits and safety are not in competition. On the contrary, safety is good business.

The identification, assessment and control of health and safety and other risks is a managerial responsibility and of equal importance to production and quality.

In addition the health and safety policy should be:

- ▶ appropriate to the nature and scale of the organisation's health and safety risks
- ▶ documented, implemented and maintained
- ▶ signed by the chief executive officer / managing director and dated
- ▶ communicated to all persons working under the control of the organisation
- ▶ available to all other interested parties
- ▶ periodically reviewed to ensure that it remains relevant and appropriate to the organisation.

(2) Organisation

Every employee in an organisation has legal and operational responsibilities to contribute towards the effective management of health and safety.

Leadership is the key to building an effective health and safety management system and developing a positive safety culture, and a top down approach is essential.

A senior board member should take direct responsibility for championing and coordinating the efforts. All directors and senior managers should actively support the development of the safety management system and be visible in practically demonstrating their commitment.

Managers at all levels should communicate the key values of the policy through their actions and all operational staff should 'buy in' to the importance of health and safety management in the organisation.

In terms of practical allocation of roles and responsibilities it may be easier to recognise that everyone employed by the organisation is an employee and therefore has the same basic responsibilities. Additional responsibilities are added as a result of seniority in the management structure, or as a consequence of being appointed to a role with specific safety responsibilities.

All employees

All employees have to:

- ▶ take reasonable care of their own health and safety and the health and safety of others who may be affected by their work
- ▶ properly use and not interfere with anything provided to safeguard their health and safety
- ▶ cooperate with supervisors and managers on health and safety matters
- ▶ report all health and safety concerns to an appropriate person.

Supervisors and managers

In addition to the basic employee's responsibilities, supervisors and managers may well have responsibility for specific groups of workers or specific parts of the workplace. Additional responsibilities may include ensuring that:

- ▶ risk assessments are current and effective
- ▶ employees are working in accordance with safe systems of work

- ▶ the workplace is kept clean and tidy and free of obstructions
- ▶ adequate supplies of personal protective equipment (PPE) are available
- ▶ accidents and near misses are reported and properly investigated.

Directors / senior management team

The senior management team is responsible for:

- ▶ establishing effective 'downward' communication systems and management structures
- ▶ considering health and safety implications of all business decisions
- ▶ setting targets for improving the health and safety performance
- ▶ regularly reviewing the health and safety performance at board level
- ▶ making provision for adequate resources, including competent health and safety advice.

Roles with specific health and safety responsibilities

Health and safety advisor / manager

The role needs to be clearly defined particularly regarding its advisory and management responsibilities. This may vary greatly depending on the size of the organisation and its hazard profile. Examples of typical responsibilities include:

- ▶ advising the board or senior management on strategic health and safety issues
- ▶ formulating and developing specific aspects of the health and safety management system, e.g. the practical arrangements for risk assessment
- ▶ day-to-day implementation and monitoring of policy and plans including accident and incident investigation, reporting and analysis
- ▶ reviewing performance and auditing of the health and safety management system.

First-aider

First-aider's specific duties may include:

- ▶ provision of first aid treatment to employees
- ▶ recording of all treatment given
- ▶ liaison with emergency services
- ▶ maintenance of first aid kit / first aid room.

Fire warden / marshal

A fire warden may be allocated a range of duties relating to periodic checks of fire precautions or actions in case of fire, such as:

- ▶ sweeping an allocated area, encouraging people to leave via the nearest fire escape route and proceed to the assembly point
- ▶ turning off equipment and closing doors and windows as they go
- ▶ informing the person in charge of the evacuation that their area is clear.

To enable effective performance management it is important that allocated responsibilities are clearly defined, understood and accepted, and able to be monitored objectively.

People with specific responsibilities for health and safety should be held accountable. This may involve the use of existing personnel systems such as:

- ▶ individual job descriptions containing references to health and safety responsibilities
- ▶ performance review and appraisal systems measuring and rewarding individual performance in health and safety activities
- ▶ disciplinary procedures for acting upon serious failures in health and safety performance.

(3) Arrangements

The breadth and depth of the systems and procedures contained in the arrangements section should be proportionate to the size of the organisation and its hazard profile. A typical arrangements section should include procedures for the effective planning, organising, control, monitoring and review of the following:

1 Health and safety risk management.

- Identification of hazards and risk.
- Specifying preventive and protective measures.
- Action planning with priorities and responsibilities.
- Periodic review.

2 Consultation with employees.

- Trade union safety representatives and safety committees.
- Representatives of Employee Safety.
- Other arrangements for consultation.

3 Safe plant and equipment.

- Purchasing of new equipment.
- Preventative maintenance.
- Defect reporting.

4 Safe handling and use of substances.

- Purchasing of hazardous substances.
- Undertaking COSHH assessments.
- Informing employees.
- Reviewing assessments.

5 Information, instruction and supervision.

- Provision of relevant health and safety information.
- Supervision and training of new recruits and young workers.

6 Competency for tasks and training.

- Induction training.
- Job specific training.
- Training records.

7 Accidents, first aid and work related ill-health.

- Undertaking health surveillance.
- Health surveillance records.
- First aid equipment stored.
- Appointed person / first-aider.
- Record keeping and reporting under RIDDOR.

8 Monitoring.

- Proactive monitoring of work conditions and working practices.
- Investigation of accidents and work related sickness.

9 Emergency procedures

- Fire risk assessments.
- Checks of escape routes, fire extinguishers and alarms.
- Evacuation drills.



EXAM QUESTIONS

- (a) **Outline** the purpose of the 'organisation' and 'arrangements' sections (4 marks) of a health and safety policy.
- (b) **Outline** why it is important that all workers are aware of their roles and responsibilities for health and safety in an organisation. (8 marks)
- (c) **Identify** the issues that could be included in the 'arrangements' section (8 marks) of an organisation's health and safety policy.

Answers from the examiner's feedback are on **page 2** of the
Unit IA: *Exam questions and answers* PDF



SAMPLE

Overview of ILO-OSH

Figure 1.12 below shows the structure of a health and safety management system designed in accordance with ILO-OSH (2001) *Guidelines on Occupational Safety and Health Management Systems*.

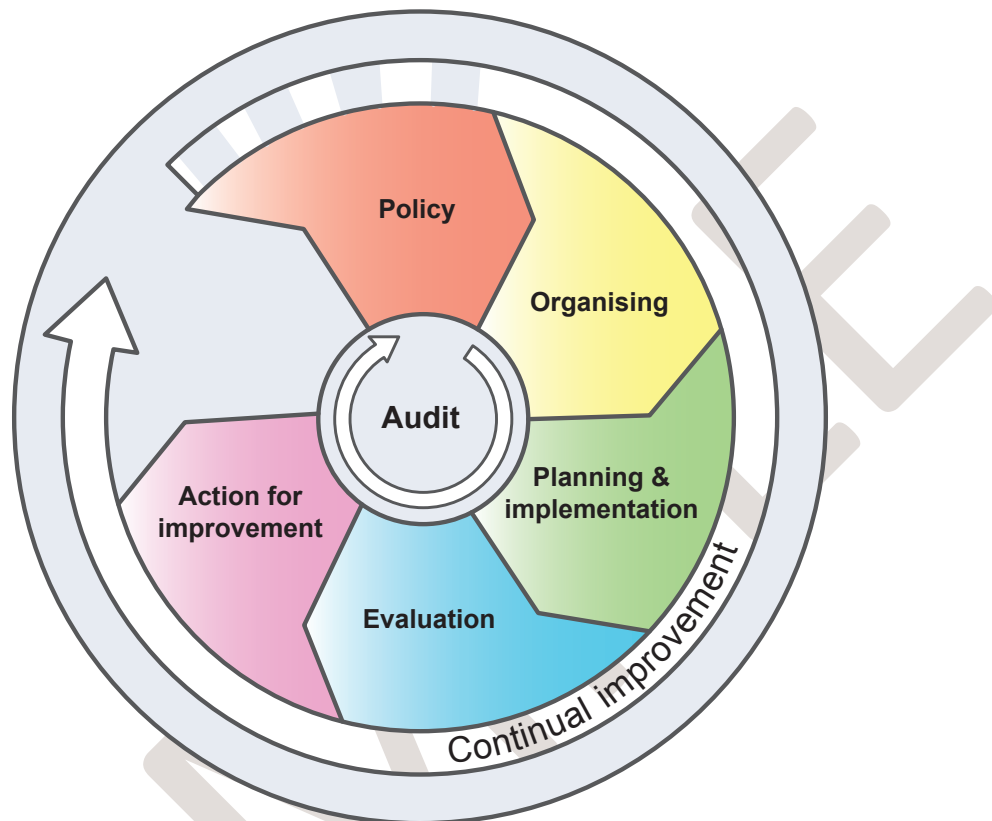


Figure 1.12: The key elements of ILO-OSH 2001

Policy

The employer, following consultation with workers and their representatives, should set out in writing their safety policy, which should be:

- ▶ specific to the organisation and appropriate to its size and the nature of its activities
- ▶ concise, clearly written, dated and made effective by the signature or endorsement of the employer or the most senior accountable person in the organisation
- ▶ communicated and readily accessible to all persons at their place of work
- ▶ reviewed for continuing suitability
- ▶ made available to relevant external interested parties, as appropriate.

The policy should include, as a minimum, the following key principles and objectives and organisational commitments:

- ▶ protecting the safety and health of all members of the organisation by preventing work-related injuries, ill-health, diseases and incidents
- ▶ complying with relevant national laws and regulations, voluntary programmes, collective agreements on occupational safety and health (OSH) and other requirements to which the organisation subscribes
- ▶ ensuring that workers and their representatives are consulted and encouraged to participate actively in all elements of the OSH management system
- ▶ continually improving the performance of the OSH management system.

The OSH management system should be compatible with or integrated in other management systems in the organisation.

Organising

The employer has overall responsibility for the protection of workers' safety and health, and should provide leadership for OSH activities in the organisation.

The employer and senior management should allocate responsibility, accountability and authority for the development, implementation and performance of the OSH management system and the achievement of the relevant OSH objectives.

Structures and processes should be established to:

- ▶ ensure that line-management responsibility for OSH is known and accepted at all levels
- ▶ define and communicate the responsibility, accountability and authority of persons who identify, evaluate or control OSH hazards and risks
- ▶ provide effective supervision, as necessary, to help ensure the protection of workers' safety and health
- ▶ promote cooperation and communication with, and the participation of, workers and their representatives
- ▶ fulfil the principles of OSH management systems contained in relevant national guidelines, or other programmes, to which the organisation subscribes
- ▶ establish and implement a clear OSH policy and measurable objectives
- ▶ establish effective arrangements to identify and eliminate or control work-related hazards and risks, and to promote health at work
- ▶ establish prevention and health promotion programmes.

Planning and implementing

The starting point of the planning phase is an evaluation (or initial review), by a competent person, of any existing management system and arrangements.

The initial review should:

- ▶ identify all current legislation, guidelines, and other requirements to which the organisation subscribes
- ▶ identify, anticipate and assess hazards and risks to safety and health arising from the existing or proposed work environment and work organisation
- ▶ determine whether planned or existing controls are adequate to eliminate hazards or control risks
- ▶ analyse the data provided from workers' health surveillance.

The outcome of the review provides a baseline from which an effective OHS management system (OHSMS) that assures legal compliance and continual improvement can be developed.

The planning, development, and implementation of the OSHMS should address the following components:

- ▶ setting objectives
- ▶ hazard prevention and control
- ▶ management of change
- ▶ emergency prevention, preparedness and response
- ▶ procurement
- ▶ contracting.

Evaluation

Monitoring should provide:

- ▶ feedback on OSH performance
- ▶ information to determine whether the day-to-day arrangements for hazard and risk identification, prevention and control are in place and operating effectively
- ▶ the basis for decisions about improvement in hazard identification and risk control, and the OSH management system.

Active monitoring should include:

- ▶ monitoring of the achievement of specific plans, performance criteria and objectives
- ▶ the systematic inspection of work systems, premises, plant and equipment
- ▶ surveillance of the working environment, including work organisation
- ▶ surveillance of workers' health, where appropriate, through suitable medical monitoring and follow-up
- ▶ compliance with applicable legislation, agreements and other commitments on OSH to which the organisation subscribes.

Reactive monitoring should include the identification, reporting and investigation of:

- ▶ work-related injuries, ill-health, diseases and incidents
- ▶ other losses, such as damage to property
- ▶ deficient safety and health performance, and OSHMS failures
- ▶ workers' rehabilitation and health-restoration programmes.

Arrangements for conducting **periodic audits** should be established to determine whether the OSH management system and its elements are **in place, adequate, and effective** in protecting the safety and health of workers and preventing incidents.

Management reviews should be undertaken at various levels in the organisation, including board level. Performance should be assessed by:

- ▶ internal reference to key performance indicators
- ▶ external comparison with the performance of business competitors and best practice, irrespective of employment sector.

Action for improvement

Arrangements should be established and maintained for **preventive and corrective actions** arising from the monitoring and reviewing stages.

These arrangements should include:

- ▶ identifying and analysing the root causes of any non-conformities
- ▶ undertaking, and checking the effectiveness of, any necessary corrective and preventive actions.

SAMPLE

Overview of OHSAS 18001

Figure 1.13 shows the structure of a health and safety management system designed in accordance with the standard, **OHSAS 18001** – *Occupational Health and Safety Management Systems*. A brief outline of the recommendations follows.

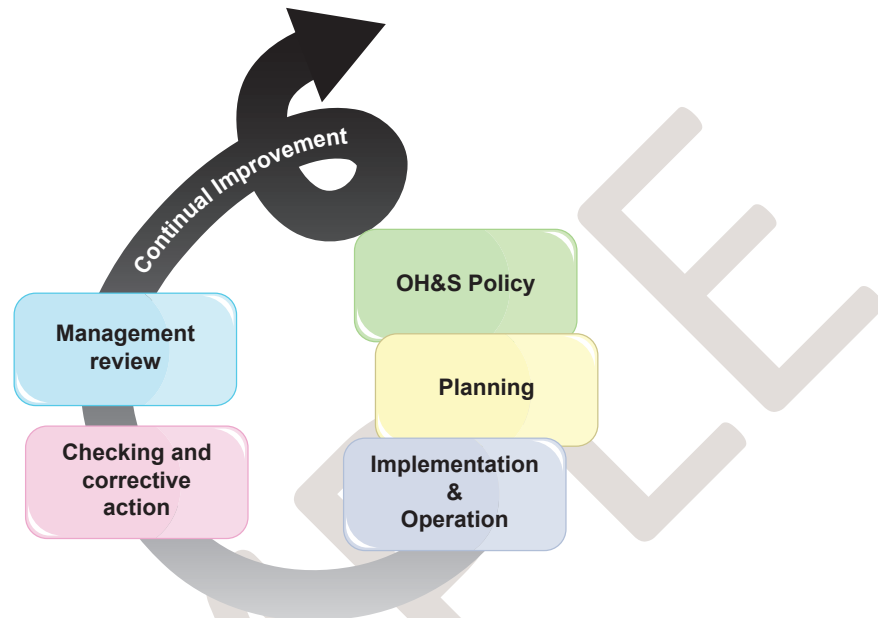


Figure 1.13: OHSAS 18001 – requirements for health and safety management systems

Policy

The health and safety policy should establish the overall sense of direction and set the principles of action for the organisation.

It should also demonstrate the formal commitment of the organisation's top management towards good health and safety management, and set objectives for levels of responsibility and performance required throughout the organisation.

The policy should be appropriate to the nature and scale of the organisation and its hazard profile. In order to be appropriate, the policy should as a minimum, include statements about the commitment of the organisation to:

- ▶ the prevention of injury and ill-health
- ▶ continual improvement in health and safety management
- ▶ continual improvement in health and safety performance
- ▶ compliance with applicable legal requirements
- ▶ compliance with other requirements to which the organisation subscribes.

The policy should also be:

- ▶ signed and dated by the Managing Director / Chief Executive / or equivalent
- ▶ communicated effectively to all staff and other stakeholders
- ▶ periodically reviewed
- ▶ documented, if five or more people are employed.

Planning

The processes of hazard identification and risk assessment will need to be applied to determine the controls that are necessary to reduce the risks of incidents.

The overall purpose of the risk assessment process is to recognize and understand the hazards that might arise in the course of the organisation's activities and to ensure that the risks to people arising from these hazards are assessed, prioritized and controlled to a level that is acceptable.

Implementation and operation

Resources, roles and responsibilities

Roles, responsibilities and accountabilities should be defined and allocated, to facilitate effective health and safety management, and the details should be documented and communicated.

Competence, training and awareness

Any person performing tasks that can impact on health and safety should be competent by way of appropriate education, training or experience, and evidence of competence should be recorded.

Communication, participation and consultation

Effective communication and consultation processes should be used to gather employee support for the health and safety policy and objectives and to encourage employee participation in good health and safety practices.

Documentation and document control

Sufficient up-to-date documentation is required to ensure that the health and safety management system can be adequately understood and effectively and efficiently operated.

All documents required for the operation of the health and safety management system and the performance of the organisation's health and safety activities should be identified and controlled.

Operational control

Effective operational controls are required to manage the assessed risks and to assure compliance with applicable legal and other requirements. Examples of specific controls required include:

- ▶ controls related to purchased goods, equipment and services
- ▶ controls related to contractors and other visitors to the workplace.

Emergency preparedness and response

Suitable procedures are required for the identification of the potential for emergency situations and responding to such emergency situations.

Checking and corrective action

Performance measuring and monitoring

A systematic approach for measuring and monitoring health and safety performance on a regular basis is an integral part of an organisation's overall management system. Proactive (or active) and reactive measures are required. **Note:** There is more on active and reactive measures in **Element IA4**.

Non-conformity, corrective action and preventive action

Procedures are required to identify actual and potential nonconformities, make corrections and take appropriate corrective and preventive action. The aim is to prevent problems before they occur.

A 'non-conformity' is a non-fulfilment of a requirement stated in relation to the OHSAS 18001 management system or in terms of health and safety performance.

Management review

Management reviews should focus on the overall performance of the health and safety management system with regard to:

- ▶ **Suitability** ... is the system appropriate to the organisation's size and risk profile?
- ▶ **Adequacy** ... is the system fully addressing the organisation's health and safety policy and objectives?
- ▶ **Effectiveness** ... is it accomplishing the desired results?

Pros and cons of OHSAS 18001

OHSAS 18001 was originally produced in 1999, by BSI, as a specification for a health and safety management system. As a specification it is a prescriptive set of requirements that need to be fulfilled to meet the standard and is straightforward to audit against.

BS OHSAS 18001:2007 was substantially revised and is now termed a health and safety management system standard. The HSE had substantial input into the revision, which was also subject to separate international consultation. It now aligns quite closely with HSG65, ISO 14001, and ILO OSH (the International Labour Organization standard for SMS).

The standard does not provide guidance on how to build or apply the management system and incorporates relatively few aspects of health and safety culture. Guidance is contained in the accompanying publication BS OHSAS 18002:2009.

OHSAS 18001 might be considered to have a number of benefits in that:

- ▶ Companies can be registered to OHSAS 18001 by an independent, third party, certification body.
- ▶ Its compatibility with ISO 14001 and ISO 9001 is helpful in developing an integrated management system.
- ▶ It is internationally recognised.
- ▶ It provides precise standards for benchmarking and commitment to continual improvement.

However the model might be considered too prescriptive, bureaucratic and time consuming for smaller organisations and the costs of change may also outweigh the benefits.



WEB LINKS

Guidelines on occupational safety and health management systems -ILO-OSH, 2001
www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS_PUBL_9221116344_EN/lang--en/index.htm

Occupational Health and Safety Management Systems – Requirements OHSAS 18001, 2007
www.bsigroup.com/en-GB/ohsas-18001-occupational-health-and-safety



EXAM QUESTIONS

- (a) **Outline** the requirements for the development of and key objectives (11 marks) within the policy section of a health and safety management system such as that detailed in the ILO-OSH-2001 Guidelines on Occupational Health and Safety Management Systems.
- (b) (i) **Describe** how the effectiveness of a health and safety (6 marks) management system could be measured.
- (ii) **Giving** an example in **EACH** case, **outline** the format in which (3 marks) the data gathered on health and safety performance could be presented clearly in a company annual report.

Answers from the examiner's feedback are on **page 3** of the Unit IA: *Exam questions and answers* PDF



EXAM QUESTIONS

An organisation is proposing to move from a health and safety management system based on the International Labour Organization ILO OSH 2001 model to one that aligns itself with BS OHSAS 18001.

Outline the possible advantages **AND** disadvantages of such a change. (10 marks)

Answers from the examiner's feedback are on **page 5** of the Unit IA: *Exam questions and answers* PDF



Integration of quality, environmental, and health and safety management systems

An Integrated Management System (IMS) is a management system which integrates all components of a business into one coherent system so as to enable the achievement of its purpose and mission

Integrated means combined, putting all the internal management practices into a holistic system with seamless boundaries between processes.

There are many international management standards that could be integrated, notably:

- ▶ ISO 9001 (Quality Management).
- ▶ ISO 14001 (Environmental Management).
- ▶ OHSAS 18001 / ISO 45001 (Occupational Health and Safety).
- ▶ ISO / IEC 27001 (Information Security).
- ▶ ISO 22000 (Food Safety).
- ▶ ISO / IEC 20000 (IT Service Management).

Integration of health and safety, environmental and quality systems

The integration of health and safety, environmental and quality systems (ISO 9001 / ISO 14001 / OHSAS 18001) is a challenge that faces many practitioners, working in larger, more complex organisations.

Quality and environmental management systems

Quality is defined within **ISO 9001** as the degree to which a set of inherent characteristics (or distinguishing features of a product or service) fulfils requirements (i.e. a need or expectation - be it stated, generally implied or obligatory).

ISO 14001 is intended to provide organisations with the elements of an effective environmental management system. This is done through the identification of significant environmental aspects and impacts where:

- ▶ An **Environmental aspect** is defined as an element of an organisation's activities or products or services that can interact with the environment. A significant environmental aspect has or can have a significant environmental impact.
- ▶ An **Environmental impact** is any change to the environment whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects.

The standards (ISO 9001, ISO 14001 and OHSAS 18001 / ISO45001) relate to business processes, rather than products or services so have many common components. However they have different targets:

- ▶ The Quality Management System (QMS) should be focussed on meeting the needs of the customer.
- ▶ The Environmental Management System (EMS) the needs of a broad range of stakeholders and the regulators.
- ▶ The Health and Safety management system (HSMS) should primarily address the needs of employees and others affected.

Before considering integrating management systems careful consideration should be given to the organisations current management structures and styles, and how effectively and efficiently the organisation is managed in a general sense.

Consideration should also be given to:

- ▶ The extent to which integration should occur.
- ▶ The levels of competence necessary for implementation and operation of the Integrated Management System (IMS).
- ▶ Legal and other regulatory requirements which must continue to be met during the transition.

There are no national or international standards for integrated management systems, although the International Standards Organisation (ISO) has expressed its desire for integration in management system design.

The British Standards Institution (BSI) has published a publicly available specification (PAS 99:2012 Integrated Management Systems) of common requirements for management systems that can be used as a framework for an integrated management system.

PAS 99 takes account of the common requirements for management systems standards outlined in ISO Guide 72 2001 'Guidelines for the justification and development of management system standards'. Note that this standard was superseded by ISO Guide 83 'High level structure and identical text for management system standards and common core management system terms and definitions', which has since become annex SL. PAS 99 will eventually be reworked against the new 'high level structure'

Annexe SL

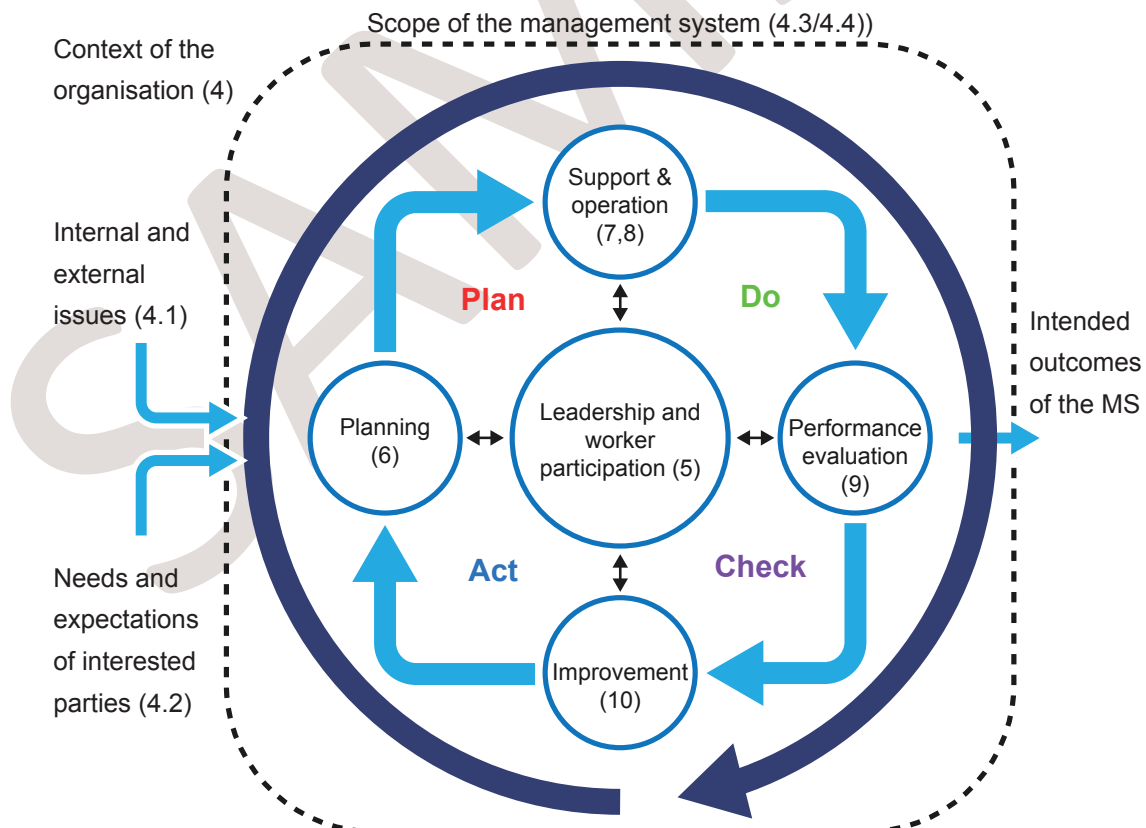
Annexe SL gives ISO the framework to create any generic management system through the adoption of a new 'high level structure' with a common clause sequence, common text and common terminology.

Note:

The SL is a sequential reference and does not mean anything.

The framework, as shown in Figure 1.14, is designed around a plan – do – check – act cycle, designed to be appropriate for a given organisation, and with leadership and worker participation identified as integral to success.

The common high level structure is intended to improve the alignment of all International Standards for management systems, making the alignment or integration of system elements for the management of quality, environmental, security, or finance more straightforward.



Note: The numbers given in brackets refer to the clause numbers in the standard.

Figure 1.14: Annexe SL management system framework

The main requirements of the common clauses are summarised in Table 1.5.

Clause		Content
1	Scope	Sets out the intended outcomes of the management system. The outcomes are industry specific and should be aligned with the context of the organisation (clause 4).
2	Normative references	Provides details of the reference standards or publications relevant to the particular standard.
3	Terms and definitions	Details terms and definition applicable to the specific standard in addition to any formal related terms and definitions standard.
4	Context of the organisation	<p>Determines why the organisation is here. Requires the organisation to identify:</p> <ul style="list-style-type: none"> ▶ internal and external issues that can impact on its intended outcomes ▶ all interested parties and their requirements ▶ the scope and the boundaries of the management system. <p>(all in line with the business objectives)</p>
5	Leadership	<p>Top management is required to:</p> <ul style="list-style-type: none"> ▶ integrate the requirements of the management system into the organisation's core business process ▶ ensure the management system achieves its intended outcomes ▶ allocate the necessary resources ▶ communicate the importance of the management system ▶ heighten employee awareness and involvement.
6	Planning	<p>Brings risk-based thinking to the front.</p> <p>Once the organisation has highlighted risks and opportunities in clause 4, it needs to stipulate how these will be addressed through planning.</p> <p>The planning phase looks at the what, who, how and when of addressing the risks.</p>

Table 1.5: Annexe SL – common clauses (1 of 2)

Clause		Content
7	Support	Organisations have to look at the support needed to meet their goals and objectives. There are five specified sub-clauses addressing requirements for: resources, competence, awareness, communication and documented information.
8	Operation	The bulk of the management system requirements lies within Clause 8. It addresses both in-house and outsourced processes including criteria to control these processes, as well as ways to manage planned and unintended change.
9	Performance evaluation	Organisations need to: <ul style="list-style-type: none"> ▶ determine what, how and when things are to be monitored, measured, analysed and evaluated ▶ conduct internal audits to ensure the management system conforms to the requirements of the organisation as well as the management standard ▶ conduct management reviews to determine whether the management system is suitable, adequate and effective.
10	Improvement	Looks at ways to address non-conformities and corrective action and ways of developing strategies for improvement on a continual basis.

Table 1.5: Annexe SL – common clauses (2 of 2)

The benefits and limitations of integration of quality, environmental and health and safety management systems

The pros and cons of integrated systems as opposed to stand-alone systems have been discussed by the BSI in PAS 99, and by both iosh and the IIRSM in technical guides to integrated management systems.

Benefits of integration

- ▶ **Reduced costs** – by avoiding duplication in internal audits, document control, training and administration.
- ▶ **Time savings** – by having only one management review.
- ▶ **A holistic approach to managing business risks** – considering all the consequences of any action, including how they affect each other and their associated risks.
- ▶ **Reduced duplication and bureaucracy** – a single set of processes coordinating the requirements of each specific standard.
- ▶ **Less conflict between systems** – avoiding separate ‘empires’ and making responsibilities clear from the outset.
- ▶ **Improved internal and external communications** – a common set of objectives can help cultivate a team approach, a common culture and improved communication.
- ▶ **Enhanced business focus** – a unified system focussed on the strategic objectives of the business contributes to the overall continual improvement of the organisation.
- ▶ **Improved staff morale and motivation** – linking roles and responsibilities to objectives, makes change and new initiatives easier to implement.
- ▶ **Opportunities for professional development** and job enrichment as professionals from one discipline pick up skills in related disciplines.
- ▶ **Optimised internal and external audits** – minimising the number of audits required and maximising the number of people involved.

The integration of management systems is an organisationally specific proposal. A decision on the appropriateness of integration needs to be made on the foundation of a complete understanding of key business processes of the specific organisation.

Benefits of retaining separate systems

In some organisations it may be more appropriate to retain separate systems. The benefits from retaining separate systems could include:

- ▶ Providing a more flexible approach tailored to business needs in terms of system complexity and operating philosophy (e.g. Safety standards must meet minimum legal requirements whereas quality standards can be set internally). The need for a more complex system in one element may not be mirrored by a similar need in the other two elements).
- ▶ If the existing systems are working well the change could adversely affect the level of control.
- ▶ An integrated system may become overly centralised and bureaucratic, managers and workers may be sceptical of excessive bureaucracy.
- ▶ Professional rivalries and different opinions as to the relative importance of disciplines and the allocation of resources may be counter productive.
- ▶ Separate systems might be clearer for external stakeholders or regulators to understand and work with.
- ▶ They may encourage a more detailed and focused approach to auditing and standards.



WEB LINKS

Quality Management standard – ISO 9001

www.bsigroup.com/en-GB/iso-9001-quality-management

Environmental Management standard – ISO 14001

www.bsigroup.com/en-GB/iso-14001-environmental-management

PAS 99 – Publically Available Specification for Integrated Management

www.bsigroup.com/en-GB/pas-99-integrated-management



EXAM QUESTIONS

Outline the benefits of:

- (a) an integrated health and safety, environmental and quality management system (10 marks)
- (b) separate health and safety, environmental and quality management systems. (10 marks)

Answers from the examiner's feedback are on **page 4** of the Unit
IA: *Exam questions and answers* PDF



SAMPLE

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NEBOSH

International Diploma in Occupational Health and Safety

Unit IA: Managing health and safety

Exam questions and answers

from January 2010 to July 2017

NEBOSH Examiners' reports*

Unit IA: Managing health and safety

Element IA1 – Principles of health and safety management

exam question

- (a) **Outline** the purpose of the 'organisation' and 'arrangements' sections of a health and safety policy. **4 marks**
- (b) **Outline** why it is important that all workers are aware of their roles and responsibilities for health and safety in an organisation. **8 marks**
- (c) **Identify** the issues that could be included in the 'arrangements' section of an organisation's health and safety policy. **8 marks**

answer expected by examiners

- (a) The purpose of the organisation section of a health and safety policy is to identify health and safety responsibilities within the company and ensure effective delegation and reporting lines. The purpose of the section on arrangements is to set out in detail the specific systems and procedures that aim to assist in the implementation of the general policy.
- (b) Making all people in an organisation aware of their roles for health and safety will assist in defining their individual responsibilities and will indicate the commitment and leadership of senior management. A clear delegation of duties will assist in sharing out the health and safety workload, will ensure contributions from different levels and jobs, will help to set up clear lines of reporting and communication and will assist in defining individual competencies and training needs particularly for specific roles such as first aid and fire. Finally, making individuals aware of their own roles and responsibilities can increase their motivation and help to improve morale throughout the organisation.
- (c) Relevant issues include:
- ✓ safe systems of work such as permit to work procedures
 - ✓ arrangements for carrying out risk assessments
 - ✓ controlling exposure to specific hazards for example noise, radiation and manual handling
 - ✓ monitoring standards of health and safety in the organisation by means of safety tours, inspections and audits
 - ✓ the use of personal protective equipment such as harnesses and RPE
 - ✓ arrangements for reporting accidents and unsafe conditions
 - ✓ procedures for controlling and supervising contractors and visitors
 - ✓ arrangements for maintenance whether routine or planned preventative
 - ✓ welfare arrangements such as the provision of washing facilities
 - ✓ procedures for dealing with emergencies such as fire, flooding and bomb threats
 - ✓ the provision of safety training
 - ✓ arrangements for consultation with the workforce through safety representatives or safety committees
 - ✓ environmental control including noise monitoring and the disposal of waste.

Unit IA: Managing health and safety

Element IA1 – Principles of health and safety management

exam question

- (a) **Outline** the requirements for the development of and key objectives within the policy section of a health and safety management system such as that detailed in the ILO- OSH-2001 Guidelines on Occupational Health and Safety Management Systems. **11 marks**
- (b) (i) **Describe** how the effectiveness of a health and safety management system could be measured. **6 marks**
- (ii) **Giving** an example in **EACH** case, **outline** the format in which the data gathered on health and safety performance could be presented clearly in a company annual report. **3 marks**

answer expected by examiners

- (a) The policy section of a health and safety management system should, following consultation with workers and their representatives, set out in writing a policy which should be specific to the organisation, appropriate to its size and the nature of its activities and be concise, clearly written and dated and made effective by the signature or endorsement of the employer or the most senior accountable person in the organisation. The policy should be communicated and made readily accessible to all persons at their place of work, reviewed for continuing suitability and revised when seen to be necessary. Additionally it should be made available to relevant external interested parties as appropriate. The key objectives of the policy should be to protect the safety and health of all members of the organisation by preventing work related injuries, ill-health, diseases and incidents and these would be achieved by complying with relevant occupational health and safety national laws and regulations, voluntary programmes, collective agreements on occupational safety and health and other requirements to which the organisation subscribes. Achievement of the objectives would also be aided by ensuring that workers and their representatives are consulted and encouraged to participate actively in all elements of the organisation's occupational safety and health management system with the aim of securing a continual improvement in the standard of the system.
- (b) (i) The effectiveness of a health and safety management system might be measured both by proactive and reactive measures. Proactive measures of performance involve carrying out activities such as safety inspections, tours and audits while reactive measures embrace amongst others the investigation of accidents and cases of ill-health and the preparation of incident rates.
- (ii) Data gathered on health and safety could be presented in a company annual report by:
- ✓ graphical representations such as pie charts and histograms displaying accident statistics
 - ✓ tabular numerical representations such as for example the number of risk assessments completed
 - ✓ textual representations with brief summaries of departmental initiatives and case studies.

Unit IA: Managing health and safety

Element IA1 – Principles of health and safety management

exam question

Outline the benefits of:

- (a) an integrated health and safety, environmental and quality management system **10 marks**
- (b) separate health and safety, environmental and quality management systems. **10 marks**

answer expected by examiners

- (a) The benefits of an integrated management system include:
- ✓ consistency of format and a lower overall cost through the avoidance of duplication in procedural, record-keeping, compliance auditing and software areas
 - ✓ avoiding narrow decision making that solves a problem in one area but creates a problem in another
 - ✓ encouraging priorities and resource utilisation that reflect the overall needs of the organisation rather than an individual discipline
 - ✓ applying the benefits from good initiatives in one area to other areas
 - ✓ encouraging team working and equal influence amongst specialists
 - ✓ encouraging the spread of a positive culture across all three disciplines
 - ✓ providing scope for the integration of other risk areas such as security or product safety.
- (b) Benefits from retaining separate systems include:
- ✓ providing a more flexible approach tailored to business needs in terms of system complexity and operating philosophy - for example, safety standards must meet minimum legal requirements whereas quality standards can be set internally and, therefore, the need for a more complex system in one element may not be mirrored by a similar need in other elements
 - ✓ existing systems may work well and the process of integration may expend unnecessary resources and affect their effectiveness
 - ✓ business needs may demand systems of different complexity so bureaucracy can be more easily tailored to the needs of the subject
 - ✓ separate systems might be clearer for external stakeholders or regulators to understand and work with
 - ✓ they may encourage a more detailed and focused approach to auditing and standards.

Unit IA: Managing health and safety

Element IA1 – Principles of health and safety management

exam question

An organisation is proposing to move from a health and safety management system based on the International Labour Organization ILO OSH 2001 model to one that aligns itself with BS OHSAS 18001.

Outline the possible advantages **AND** 10
disadvantages of such a change. **marks**

answer expected by examiners

Note: From July 2012 examiner's feedback is much less detailed and pointers as to the type of things the answer should have included are described. A summary of the feedback for this question is below:

- ✓ A basic knowledge and understanding of a health and safety management system based on the ILOOSH 2011 model and BS OHSAS 18001 was required in order to answer this question adequately.
- ✓ A broad range of areas for consideration are available including accreditation, cost, sophistication and integration with other standards, all of which would have formed the basis of a good outline of the advantages and disadvantages of such a move.
- ✓ Candidates should take note of the command words in each question as those candidates who tended to list issues, instead of providing an outline as required by the question, did not gain the marks that were available for this question.

SAMPLE



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To help you with your revision and exam preparation for the NEBOSH International Diploma Unit IA exam, we are offering you the opportunity to complete a mock exam for this Unit.



Questions and answers

The exam questions have been put together from past NEBOSH International Diploma exam papers by our NEBOSH qualified tutor and marker. Your answers will be marked by your tutor and your paper, with their feedback, returned to you within 4 weeks.



Handwritten or typed?

We recommend that you handwrite your answers to give yourself practice for the real exams. 3 hours is a long time to write legibly for, and the more practice you have the better! To help you we have provided an exam style booklet for you to print out and complete.



How long?

We suggest you set aside 3 hours to sit the mock exam, as though it was the real thing. If this is not possible we suggest you break down the questions, depending how much time you have. As a guide you should allow 15 minutes to answer a 10 mark question from Section A and 30 minutes to answer a 20 mark question from Section B.



Submission

You can submit your mock exam to us either by post or by email.

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Print out the answer booklet, complete it by hand and return to us:



NEBOSH International Diploma Mock Exam

[Your tutor's name]

Astutis Ltd

6 Charnwood Court

Parc Nantgarw

Cardiff

CF15 7QZ

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... OR ...



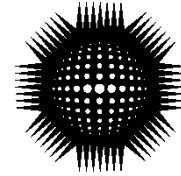
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**THE NATIONAL EXAMINATION BOARD IN OCCUPATIONAL
SAFETY AND HEALTH**



**NEBOSH INTERNATIONAL DIPLOMA IN OCCUPATIONAL
HEALTH AND SAFETY**



nebosh
Accredited Centre
807

Unit IA: International management of health and safety

Date XXXXXXXXXXXXX
3 hours, 0930 to 1230

10 minutes reading time is allowed before the start of this examination. You may not write anything during this period.

Answer both Section A and Section B

SECTION A

This section contains six questions. Answer **ALL SIX** questions.

All questions carry equal marks.

The maximum marks for each question, or part of a question, are shown in brackets.

You are advised to spend about **15 minutes** on each question.

Start each answer on a new page.

- 1 (a) **Outline** reasons for establishing effective consultation arrangements with employees on health and safety matters in the workplace (4)
- (b) **Outline** a range of formal and informal consultation arrangements that may contribute to effective consultation on health and safety matters in the workplace. (6)
- 2 Human failure was identified as a significant factor in an accident involving a crane. An employee was seriously injured when struck by material being transported by the crane.
- Outline** the types of human failure which may have contributed to the accident **AND** in **EACH** case give examples relevant to the scenario to illustrate your answer. (10)

- 3 (a) An extract from a company annual report is given below.
Comment critically on the suitability of the content in providing information to the stakeholders.
“The company has done much better at health and safety in the last year compared to previous years. In 2008 there were 170 accidents that required first-aid treatment compared to 180 in 2007, 185 in 2006 and 240 in 2005. This significant reduction is due to our new health and safety manager and a reduction in staff numbers from 1500 in 2005 to 1400 in 2006 and 1300 in 2007 to 900 in 2008, which also helps reduce business costs. Fatalities were also reduced from 11 in 2007 to 4 in 2008, a significant decrease. The management team is confident of further reductions in 2009.” (5)
- (b) **Calculate** the non-fatal accident incidence rates **AND comment** on the findings. (5)
- 4 (a) **Outline** what is meant by punitive damages in relation to a compensation award clearly stating their purpose **AND** to whom the damages are paid. (5)
- (b) In relation to a claim for compensation, **outline** the meaning of the terms:
- (i) no fault liability (2)
 - (ii) breach of duty of care. (3)

SECTION B

This section contains five questions. Answer **THREE** questions only.

All questions carry equal marks.

The maximum marks for each question, or part of a question, are shown in brackets.

You are advised to spend about **30 minutes** on each question.

Start each answer on a new page.

7

A low pressure storage vessel is connected via pipework to a manufacturing plant which could, in the event of malfunction, generate a pressure great enough to rupture the vessel. To prevent this, a pressure detector is installed in the low pressure storage vessel. If pressure starts to rise above an acceptable level the detector activates a valve control system. This in turn closes the inlet valve to the vessel isolating it from excessive pressure. It has been estimated that pressure great enough to rupture the low pressure storage vessel would be generated once every four years on average. Reliability data for the system is given below:

Component	Reliability
Pressure detector	0.95
Valve control system	0.99
Inlet valve	0.8

- (a) **Construct** an event tree for the protective system described above **AND** use it to **calculate** the frequency of a rupture of the low pressure storage vessel. (12)
- (b) It is proposed that, in addition to the protective system described above, the low pressure storage vessel is also fitted with a suitable pressure relief valve (reliability 0.9). Assuming that the vessel would only rupture if both the protective system and the pressure relief valve failed at the same time, **calculate** the frequency of rupture of the low pressure storage vessel in these circumstances. (4)
- (c) **Outline** the issues that would need to be considered when deciding whether both protective systems were needed on the low pressure storage vessel. (4)

- 8 In relation to the improvement of health and safety within organisations, **describe** what is meant by:
- (a) (i) corporate probation (2)
 - (ii) adverse publicity orders (2)
 - (iii) punitive damages. (3)
- (b) **Outline** how the International Labour Organisation can influence health and safety standards in different countries. (7)
- (c) **Outline** how legislation may improve health and safety in the workplace. (6)
- 9 (a) **Explain** the objectives of:
- (i) active health and safety monitoring (5)
 - (ii) reactive health and safety monitoring. (5)
- (b) **Outline FIVE** active health and safety monitoring methods. (5)
- (c) **Outline FIVE** reactive health and safety monitoring methods. (5)
- 10 **Outline** the desirable design features of controls **AND** displays on a control panel for a complex industrial process aimed at reducing the likelihood of human error. (20)
- 11 A fork lift truck is used to move loaded pallets in a large distribution warehouse. On one particular occasion the truck skidded on a patch of oil. As a consequence the truck collided with an unaccompanied visitor and crushed the visitor's leg.
- (a) **Outline** reasons why the accident should be investigated. (4)
 - (b) The initial responses of reporting and securing the scene of the accident have been carried out. **Outline** the actions which should be taken in order to **collect evidence** for an investigation of the accident. (8)

- (c) The investigation reveals that there have been previous skidding incidents which had not been reported and the company therefore decides to introduce a formal system for reporting 'near miss' incidents. **Outline** the factors that should be considered when developing and implementing such a system. (8)

SAMPLE

NEBOSH
International Diploma
Unit IA
Answer booklet for



UNIT IA mock exam

Name:

Remember to start each question on a new page and to enter the question number in the box at the top right of the page.

Please note: This booklet has been designed to be printed out and the mock exam completed by hand, to give you practice for the real exam.

Enter question
number in this box

Leave this column blank
for feedback from your
marker

SAMPLE

NEBOSH

Diploma in Occupational Health and Safety

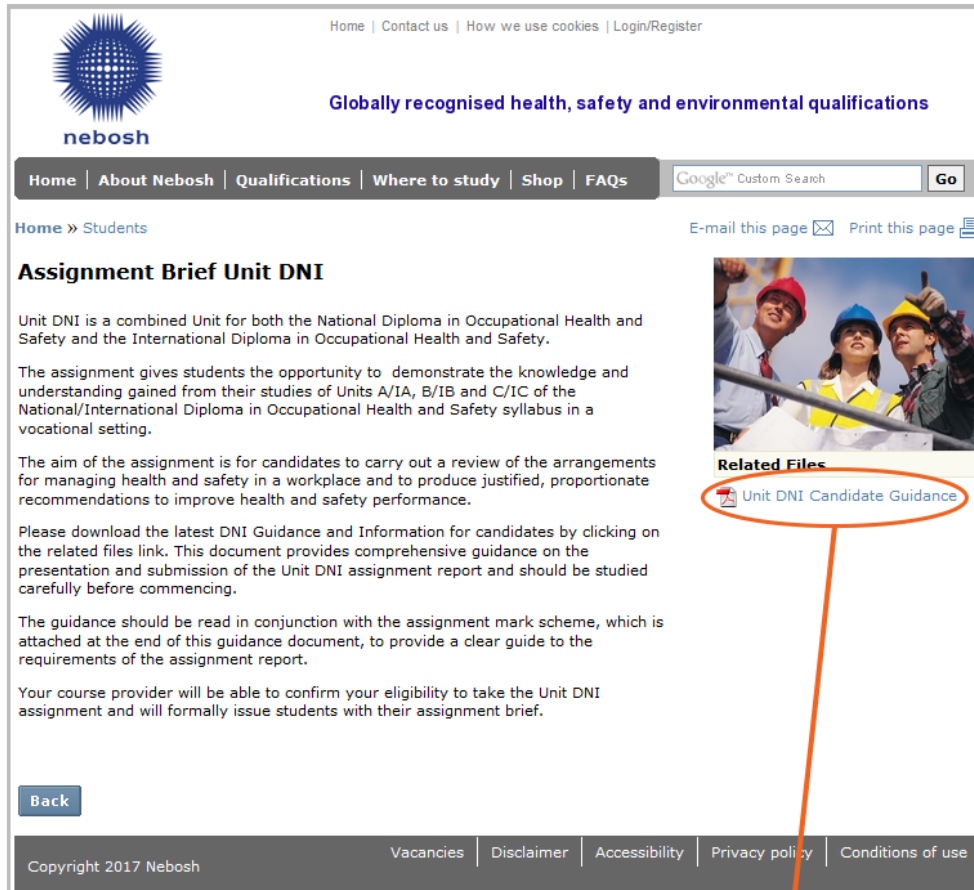
DNI

Unit DNI assignment guidance



Guidance from NEBOSH

All the information you need for completing your Unit DNI assignment is available to download from the [NEBOSH Diploma Assignment brief Unit DNI](#) webpage of the NEBOSH website.



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Assignment Brief Unit DNI

Unit DNI is a combined Unit for both the National Diploma in Occupational Health and Safety and the International Diploma in Occupational Health and Safety.

The assignment gives students the opportunity to demonstrate the knowledge and understanding gained from their studies of Units A/IA, B/IB and C/IC of the National/International Diploma in Occupational Health and Safety syllabus in a vocational setting.

The aim of the assignment is for candidates to carry out a review of the arrangements for managing health and safety in a workplace and to produce justified, proportionate recommendations to improve health and safety performance.

Please download the latest DNI Guidance and Information for candidates by clicking on the related files link. This document provides comprehensive guidance on the presentation and submission of the Unit DNI assignment report and should be studied carefully before commencing.

The guidance should be read in conjunction with the assignment mark scheme, which is attached at the end of this guidance document, to provide a clear guide to the requirements of the assignment report.

Your course provider will be able to confirm your eligibility to take the Unit DNI assignment and will formally issue students with their assignment brief.

Back

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Related Files

- [Unit DNI Candidate Guidance](#)

The **Unit DNI Candidate Guidance** is essential reading for anyone before they start the Unit DNI assignment, along with the additional information and support we offer in the following pages.



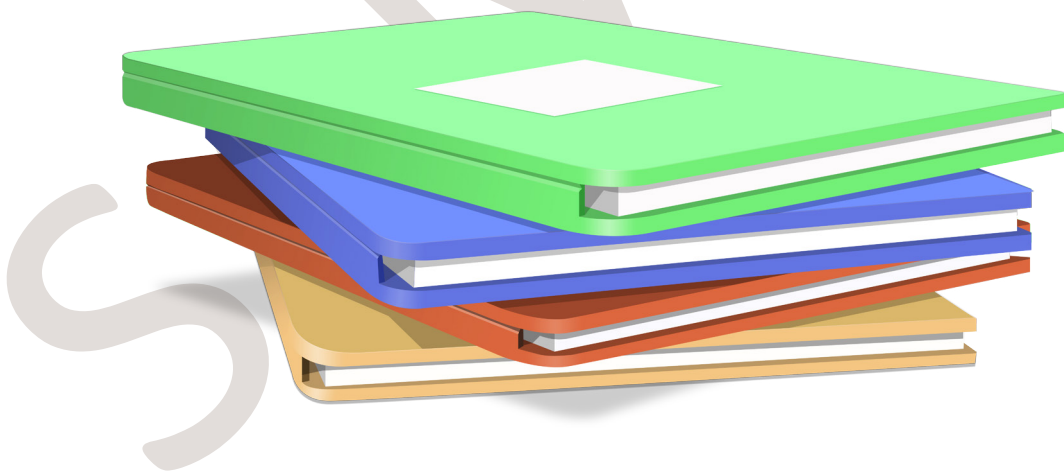
The aim of the Unit DNI assignment is to produce an overall review of the health and safety arrangements in an organisation and indicate the organisation's priorities for the future.

This assignment enables you to demonstrate the ability to carry out a range of activities expected of a competent occupational health and safety practitioner.

When carrying out the Unit DNI assignment your focus will be on applying the knowledge and understanding you have developed in the course to your workplace. This will provide you with opportunities to:

- ▶ carry out research
- ▶ critically analyse and evaluate the information you gather
- ▶ make recommendations for the workplace
- ▶ present all of this in a formal report for senior managers and executives at your workplace.

You will need to refer to the material in the course notes on the role of the health and safety practitioner when completing this part of the assignment.



Page 2 (point 1) of the *NEBOSH Unit DNI Assignment – guidance and information for candidates* gives you the information you need about the **purpose and aim**.

When?

You need to have completed your study for the other units before completing and submitting your Unit DNI assignment to NEBOSH.

There are a number of submission dates each year, which are detailed on the NEBOSH Diploma exam dates page.

- ▶ [Submission dates for National Diploma students.](#)
- ▶ [Submission dates for International Diploma students.](#)

The [How do I submit my Unit DNI assignment](#) section of this guide gives you more information.

Where?

A suitable workplace must be chosen ... ideally it will be your own workplace. The workplace should be large enough to provide the opportunity for the review of health and safety arrangements.

If the workplace is very large you should limit the area you consider to a department or a division, to ensure that the assignment is manageable and the report can be completed within the specified word limit.

If you do not have access to a suitable workplace, contact your tutor for advice.

Page 3 (point 4) of the *NEBOSH Unit DNI Assignment – guidance and information for candidates* gives you the information you need about the **assessment location**.

Before you write the report

- ▶ Decide on the workplace, department or division.
- ▶ Find out about the health and safety arrangements within the organisation.
- ▶ Review and critically analyse the management of health and safety.
- ▶ Identify the top three priorities where improvements should be made.

Writing the report

The report should be between 8 000 to 12 000 words in total, excluding the References/ Bibliography and Appendices.

The report should be word processed (typed) and presented in an 'approved manner', which means:

- ▶ A4 page size
- ▶ 2 cm margins top and bottom, left and right
- ▶ legible font, such as Arial
- ▶ minimum font size of 11 pt
- ▶ single line spacing
- ▶ numbered pages.

Remember to spell-check your report, or get someone else to read it through for you before you submit it to NEBOSH.

Note: Inappropriately presented assignments are liable to be returned.

Pages 3-4 (point 5) and pages 4-5 (point 8) of the NEBOSH Unit DNI Assignment – guidance and information for candidates gives you the information you need about **word limits and formatting the report**.

Your 'audience' is the senior managers and executives at your chosen workplace, so the report should be clear, concise and well-structured throughout. The structure of the report is clearly defined by NEBOSH:

▶ **Executive summary**

▶ **Introduction**

- Aims and objectives
- Methodology
- Description of the organisation
- The role of the candidate as a health and safety practitioner
- Ethical principles addressed

The **executive summary** (written once you have completed all other sections) is the only part of the report which is length limited ... to one A4 page. If you go over this you will have marks deducted.

▶ **Review and critical analysis of health and safety management**

- Identify and evidence current arrangements
- Comparison with identified standards considering the core health and safety arrangements for:
 - leadership
 - management
 - worker involvement
 - competence
 - compliance
 - risk profile (focusing on significant risks and critical control measures).

▶ **Evaluation of improvements required**

- Identify top three improvements
- Explain the role of health and safety practitioner
- Explain how you will effectively communicate the improvements
- Provide financial justification

You will need to make use of the course material covering **the role of the health and safety practitioner**.

▶ **Conclusions and recommendations**

▶ **References**

▶ **Appendices**

You can gain **marks** for all sections of the report. The marks are summarised in the [*How is my Unit DNI assignment marked*](#) section of this guide, and full detail is provided in the NEBOSH candidate guidance **assignment mark scheme**. Use these marks as a guide on how much you need to write for each section.

NEBOSH examiners say that **candidates who perform well** have used the structure detailed in their guidance (as shown on previous page) as section headings for their own report, as well as applying the detailed requirements of each section.

Pages 4-10 (points 8-15) of the *NEBOSH Unit DNI Assignment – guidance and information for candidates* gives you the information you need about the **structure of the report and what is expected for each section**.

NEBOSH recommends that before you start to carry out your research or write your report, you prepare an **outline plan** of your approach to the Unit DNI assignment and discuss this with your tutor, to ensure you are heading in the right direction.

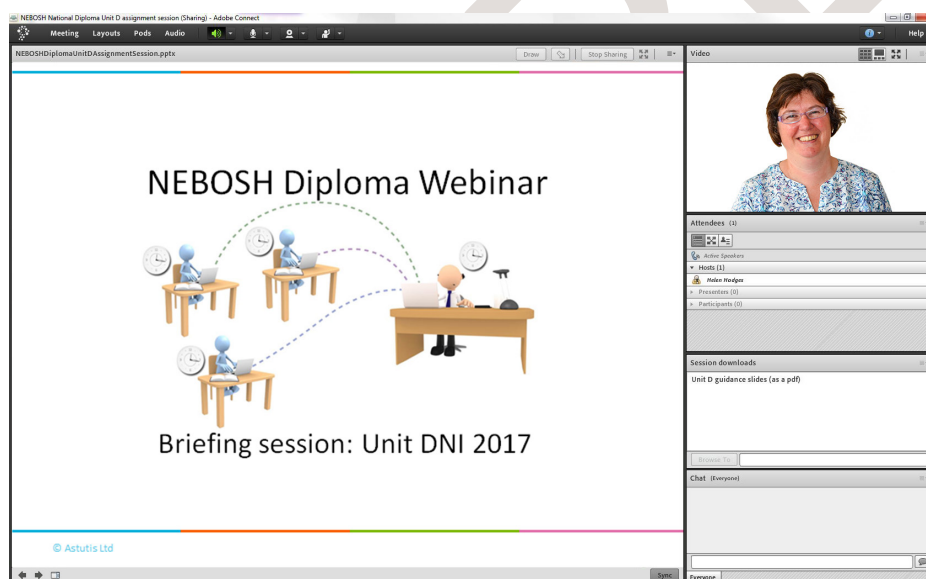
At Astutis we provide you with support to complete Unit DNI in a number of ways:



Your tutor will be available to deal with any specific queries (such as your choice of workplace or your action plan) as you are planning and putting together your assignment. **Please note:** your tutor cannot pre-mark your report before you submit it.



Throughout the year we provide a number of **live, online sessions (webinars)** where one of our NEBOSH Diploma tutors will **focus on the topics specified in Unit DNI**.



The Unit DNI online sessions are scheduled to tie in with the Unit DNI assignment submission dates, see section on [when & where to submit](#).

- ▶ **January** for the February submission deadline
- ▶ **April** for the May submission deadline
- ▶ **July** for the August submission deadline
- ▶ **October** for the November submission deadline.

Once the dates for the sessions have been confirmed we will contact you to remind you and provide details of how you can attend. If we find we need more sessions throughout the year, we will arrange them and let you know.

Unit DNI assignments are marked by NEBOSH, not by your course provider.

The marks available for each part of Unit DNI are shown in the table below. The pass mark is 50.

Report section	Maximum marks available
Focus and presentation	5
Executive summary	10
Introduction <ul style="list-style-type: none"> • Aims and objectives • Methodology • Description of the organisation • Role of the health and safety practitioner • Ethical principles 	5
Review and critical analysis of health and safety management <ul style="list-style-type: none"> • Identify and evidence current arrangements • Comparison with identified standards 	40
Evaluation of improvements required <ul style="list-style-type: none"> • Identify top three improvements • Role of health and safety practitioner • Effective communication of improvements • Financial justification 	30
Conclusions and recommendations	10
Total Marks	100

Pages 10-13 (point 16) of the *NEBOSH Unit DNI Assignment – guidance and information for candidates* gives you the information you need about **marking criteria**.

Submission dates for Unit DNI assignment are published every year on the NEBOSH Diploma exam dates webpage, see section on [when & where to submit](#).

NEBOSH need to know when you are going to submit your Unit DNI report, so you need to register with them through Astutis (your course provider).

Information about how you register and submit your Unit DNI assignment with Astutis, including registration deadlines and a link to the online booking form, can be found on our website at: www.astutis.com/nebosh_diploma_exams.html.



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National Diploma in Occupational Health and Safety - Examination Dates

Assignment submission dates

Unit DNI (2015 specification)

Wednesday 22nd February 2017

Wednesday 31st May 2017

Wednesday 30th August 2017

Wednesday 29th November 2017



Call 0345 241 3685 or email Astutis today

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Your NEBOSH Diploma Exams with Astutis

How do I register to submit my Unit DNI assignment with Astutis?

You need to complete an online booking form to register your Unit DNI submission. This year there are 4 submission dates for the Unit DNI assignment:

- February submission - REGISTRATION DEADLINE: 1st week in January
- May submission - REGISTRATION DEADLINE: 1st week in April
- August submission - REGISTRATION DEADLINE: 1st week in July
- November submission - REGISTRATION DEADLINE: 1st week in October

Remember: Once we have received your booking we will register your Unit DNI submission date with NEBOSH. Late submissions will not be accepted.

Book Unit DNI

Once NEBOSH have received your details from us and you have been registered for the Unit DNI assignment, NEBOSH will be in touch with details of how to submit your report.

Note: You must submit your Unit DNI assignment directly to NEBOSH. If your assignment arrives after the closing date your assignment will be rejected.

Pages 3-4 (point 5) of the *NEBOSH Unit DNI Assignment – guidance and information for candidates* gives you information about the **submission of completed work**.