



the principles of

**HEALTH SAFETY AND
ENVIRONMENTAL
MANAGEMENT**

INTRODUCTION

The purpose of this booklet is to outline the principles of sound business control in relation to Managing HSE for individuals attending courses delivered by Kingdom Management Training.

It is the responsibility of senior management to establish, operate and maintain an HSE Management System which is capable of complying effectively with their enterprise's HSE Policy.

This document is one of a series written by Kingdom Management Training (KMT) which describe KMT's approach to risk management in business. This document relates particularly to the business controls discussed on training courses delivered by KMT which are relevant to the Management of Health Safety and Environmental Care (HSE).

KMT's basic philosophy of risk management is that for an enterprise, in the widest sense, to function effectively it needs a clear, well designed management system incorporating a framework of business controls appropriate to the industry, size, culture and management philosophy of that enterprise. Without such a system and framework, the enterprise and all those involved with it may be unwittingly subject to an unacceptable level of risk. In many instances, the occurrence of a major set-back to the enterprise's success is being avoided by good fortune and not management's judgement. All too often the attitude "It hasn't happened to us" is common place and results in a failure to identify the risks involved and set appropriate controls in place. In this document we examine the risks and controls appropriate to the impact of an enterprise's activities on the health and safety of people involved and on its surrounding environment.

We hope that our courses and the content of this document will persuade you to review your enterprise's approach to managing Health Safety and Environmental factors and to adopt as necessary the principles expounded therein.

Kingdom Management Training

MANAGING HSE RISK

Major HSE incidents will affect an enterprise's overall business success, particularly by damaging its reputation.

“...organisations need to manage health and safety with the same degree of expertise and to the same standards as other core business activities, if they are effectively to control risks and prevent harm to people.”
UK Health and Safety Executive

The Imperative

Life is a succession of risks. Every day of our lives we face a variety of risks, from crossing the road to flying in aircraft, most of which we take calmly in our stride. We take risks individually and collectively as a society, in our homes and in our working lives. To be in business is a risk in itself, with many crucial factors affecting commercial success or failure, depending on decisions made by business managers. Most people will have heard of Piper Alpha, Bhopal, Exxon Valdez and Brent Spar. Incidents such as these stay in the public memory for a very long time and can seriously damage the corporate image of those enterprises involved.

There have long been ethical and legal reasons for the concept of occupational safety to be woven right through business operations. In this context, safety refers to more than just safety of employees (although that is of course a very important consideration), because when safety becomes an integral part of the way in which an enterprise is managed, in terms of both the products and the people involved, it can result in the protection of people, assets, the environment and the enterprise's reputation.

Today, enterprises operate under increasingly stringent conditions; strict regulatory standards are imposed upon them and society expects management to meet the standards. This means that an enterprise, as a matter of policy, must identify, acknowledge and control the risks which might arise from its operations, e.g. those activities or situations which are hazardous to people or to the environment. With increasing complexity and sophistication in business, these management responsibilities must not be left to chance - they have to be carried out in a considered and predetermined way, and tested in a way which gives management reasonable assurance that people, the environment and their enterprise's reputation will not be harmed.

As time goes on, society's expectation, backed up by legislation and regulation prescribing demonstrable control over these risks will become stronger. The overriding expectation of an enterprise's stakeholders (including government, society, customers, employees, suppliers and shareholders) is that management will ensure that their operations are carried out safely and responsibly. The penalties for not doing so are immense and can result in an enterprise not being allowed to operate because of regulatory sanction.

The Legal Perspective

The law in the UK relating to occupational health and safety for many years was prescriptive i.e. it told employers what they had to do and how to do it. However, today the law takes a different approach and revolves around 'goal setting', whereby employers are expected to assess the risks associated with their operation and introduce appropriate control measures.

The main legal provision which enshrines this approach in the UK is the Management of Health and Safety at Work Regulations 1992 (MHSWR).

Employers must carry out a risk assessment and appoint competent persons to assist them in fulfilling their responsibilities.

The total cost to society in the UK for work-related accidents and ill health could be as high as £16 billion.

The main requirements of MHSWR are as follows:

- Employers must carry out a risk assessment in order to identify the risks to which employees are exposed whilst they are at work, and also the risks to non employees arising from the working activity
- Employers must make suitable arrangements for the effective planning, organisation, control, monitoring and review of the measures in place to control health and safety risk
- Employers must appoint 'competent persons' to assist them in fulfilling their responsibilities i.e. competent H & S Advisers.

These regulations place a strict duty on employers to actively manage their risks by incorporating very similar control mechanisms to the ones to be found in many Quality Management Systems.

The Commercial Advantage

There are many sound reasons for an active approach to managing risk, in addition to complying with the law. A failure to manage and control HSE risks can result in incidents which translate into direct and indirect financial costs, which can far exceed insured losses, such as:

- Loss of confidence from shareholders and customers
- Legal costs and fines
- Diversion of management time into dealing with the incident
- Clean up and site clearing costs
- Increased administrative costs
- Poor morale and loss of productivity
- Increased overtime payments for additional labour
- Cancelled orders from dissatisfied customers
- Damage to public relations incurring extra management time

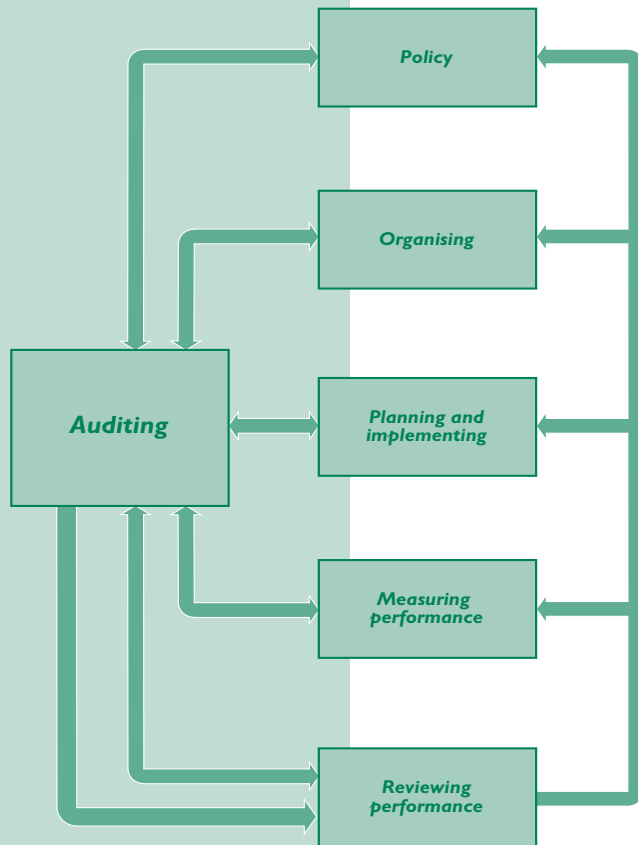
Research¹ indicates that the total cost to an enterprise of uninsured losses arising from incidents can be anything up to 36 times greater than insured losses. Other research² indicates that the total cost to employers, resulting from non-injury accidental loss, personal injury accidents and work-related ill health, could be as high as £9 billion a year; equivalent to 5% to 10% of all UK industrial companies' gross trading profits. The total cost to society as a whole, taking into account loss of welfare resulting from pain, grief and suffering of individual victims and their families could be as high as £16 billion a year; equal to 2% of the UK's GDP.

¹ The Cost of Accidents (HSG 96) Health and Safety Executive.

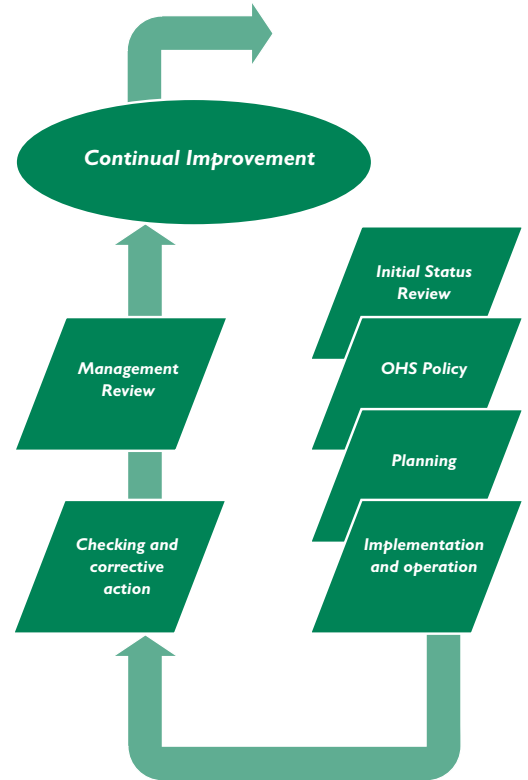
² The Health and Safety Supplement to the UK 1990 Labour Force Survey.

HSE MANAGEMENT SYSTEM MODELS

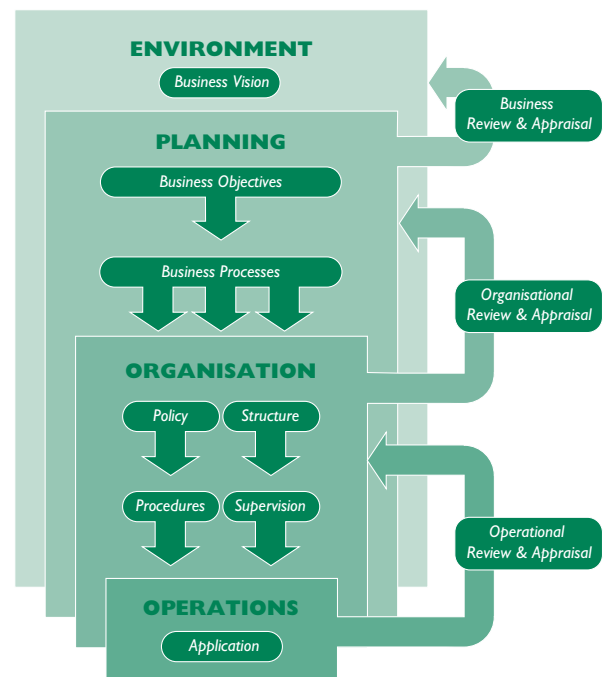
HSG 65



BS 8800:1996 (ISO 14001)



KMT Business Control Model



“**Effective HSE Management System models are based on the total quality management principle of Plan-Do-Check-Act.**”

“**A structured approach to risk management can assure an enterprise that it is operating within the law and not harming people or the environment.**”

Which one to use?

There is nothing to say that managing HSE has to be done in one certain way. There are several different examples of Management System models relating to Health and Safety, or Environmental Care and Sustainable Development, such as:

- UK Health and Safety Executive's "Successful Health And Safety Management"-HSG 65.
- ISO 14001 "Environmental Management Systems - Specification with Guidance for Use."
- BS 8800:1996 "Guidance on Occupational Health and Safety Management Systems."
- OHSAS 18001 "Occupational Health and Safety Management Systems: Specification."

Practice

Such models are based on the total quality management principles of Deming's 'Plan-Do-Check-Act' Cycle . They incorporate similar elements of management control but with different titles.

Adoption of any one of these model systems cannot give absolute assurance that an accident or incident will never happen, or that an acceptable level of environmental performance will be achieved. However, by setting out basic HSE management and operational controls in a structured way, management can be assured that relevant risks will be identified, their potential impact reduced to an acceptable level and that continual overall improvement in HSE performance can be made.

KMT's Business Control Model, shown opposite, comprises four strata of control and five business control mechanisms, all of which stem from total quality management theory. This simple business management model can be mapped to the main elements of four of the models used in the UK and worldwide for Occupational Safety and Health (HSG-65, BS8800:1996 and OHSAS 18001:1999), and Environmental Care and Sustainable Development (ISO14001). KMT's training courses refer to both KMT's business control model as well as either the HSG 65 or ISO 14001 models.

KMT's Business Control Model can be used as a "mind set" to create a structured means of control for every area of an enterprise's objectives and responsibilities. The following pages include KMT's selection of some specific controls which should be in the minds of management when thinking about how best to comply with the law and regulations regarding Health, Safety and the Environment (HSE) and effectively achieve their commitment to good HSE management.

KMT Business Control Model	HSG 65	BS 8800:1996 (ISO 14001)	OHSAS 18001:1999
Environment		Initial Status Review	
Planning			
Policy	Policy	OHS Policy (Environmental Policy)	OHS Policy
Structure	Organising		
Procedures	Planning and Implementation	(1)Planning (2)Implementation and Operation	(1)Planning (2)Implementation and Operation
Supervision	Measuring Performance	Checking and Corrective Action	Checking and Corrective Action
Review and Appraisal	Reviewing Performance and Auditing	Management Review Continual Improvement	Management Review Continual Improvement

ENVIRONMENT AND PLANNING

Commitment to HSE should be part of the Business Vision.

Management must demonstrate a visible commitment to implementing and continually improving the HSE MS.

Business Vision

HSE Commitment

The main Board should clearly state the enterprise's commitment to HSE as part of the overall Business Vision. This "promise" should be well-known throughout the enterprise and to contractors, suppliers and customers.

Senior Management Awareness and Visible Involvement

Every senior manager in an enterprise should have an overall understanding of the Health, Safety and Environment Management System (HSE MS) and consciously and continuously demonstrate the HSE implications of their management decisions at all levels of the enterprise. All managers should be individually committed and involved in making the HSE MS "come alive" to employees and contractors and encouraging continual improvement in HSE performance and management.

Legal Compliance Framework

An HSE MS should at least comply with all legal and regulatory requirements of the government and industrial bodies with jurisdiction over the country of operations. Most multinationals are committed to continuous improvement in their HSE performance in each country of operations which may lead to exceeding the local requirements in some countries. All relevant legislation and regulations should be documented and available to management responsible for implementing and maintaining the HSE MS.

Business Objectives

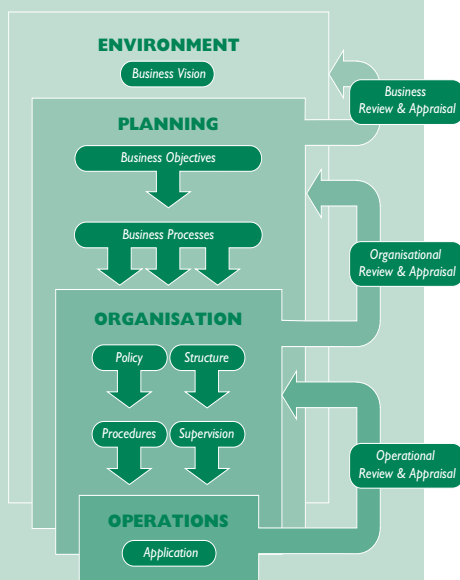
HSE Strategy and Objectives

As a start point for an effective business control framework, there should be a definite HSE strategy with a clearly identifiable set of HSE objectives and targets, which should be integrated within the Business Plans of the enterprise and each business process.

Business Processes

Hazards Identification, Risk Assessment and Environmental Impact Assessment

Business process analysis enables the identification of the hazards inherent in work activities at each stage of each business process, including the materials used, the working conditions and the potential effects of these hazards on people and environment. This exercise is best done by those involved in designing and those experienced in carrying out each activity, using appropriate checklists, standards and specialist techniques such as a hazards and operability study.



HSE strategy and objectives should be integrated within the overall Business Plan.

Hazards and effects management controls are a prerequisite for successfully integrating the concept of HSE management into the overall business management system.

Once hazards have been identified and tolerance criteria determined (in line with business principles, HSE Policy and legal compliance framework), the risk of each relevant combination of hazards and threats should be assessed. Risk is the product of the likelihood of occurrence (probability) and the severity of the consequence (impact). Risk or impact assessment should be based upon past experience of the enterprise and the industry, current levels of scientific knowledge, the judgement of people involved in the activity, the perception of management and specialist techniques such as quantitative risk assessment and environmental impact assessment.

Corporate governance regulations in many countries require a formal review each year of an enterprise's major business risks and risk assessment procedures. Hazard identification and risk assessment at the operational level should be done periodically, particularly when organisational or technological changes occur, or new projects or contracts commence.

Only when HSE hazards and effects management controls are in place and accepted as part of normal daily life will it be possible to achieve efficiently the integration of seeking qualitative HSE objectives within the Business Plans of the enterprise and each business process.

ORGANISATION AND OPERATIONS

HSE Policy should demonstrate how the "commitment" will be delivered.

Only competent personnel should be given responsibility for HSE-critical tasks.

Training and development should ensure competencies at all levels.

Performance Indicators should be meaningful and unambiguous and used for performance reviews.

Policy

A corporate HSE Policy should be developed which sets out the principles and guidelines to be followed by all people involved in an enterprise's business activities. The Policy should demonstrate transparently how the "promise" will be delivered to stakeholders regarding the Health, Safety and Environmental standards an enterprise wishes to achieve, including those regarding Sustainable Development.

Structure

Responsibility, Competence and Resources

Every enterprise should ensure that all individuals, departments and teams are aware of their own responsibilities, authorities, accountabilities and key interfaces with respect to the control of HSE risks and to achieve specified levels of HSE performance, individually and collectively.

For an HSE MS to work effectively line management should ensure that only competent personnel are given responsibility for HSE-critical tasks. Training and development should ensure competencies at all levels. Sufficient resources must always be provided to ensure the effective implementation of the HSE MS, the correction of non-conformances and for the periodic audit and/or external verification of the HSE MS.

Any HSE department should act as a professional, expert and impartial adviser to the line; it is an element of the HSE control framework but is not responsible or accountable for HSE performance.

Performance Indicators and Targets

Meaningful performance indicators should be established by those involved in the business activities at each organisational level, which demonstrate the activities' contribution to achieving overall HSE strategic objectives.

Performance targets should unambiguously describe the standards to which activities or groups of activity are expected to perform. Historic performance levels should then be periodically revised to reflect actual changes in HSE performance and to show commitment to continual improvement.

Procedures should be clear and workable and realistically reflect the task in hand.

Both active and reactive monitoring should be employed to confirm compliance with policy, procedures and targets.

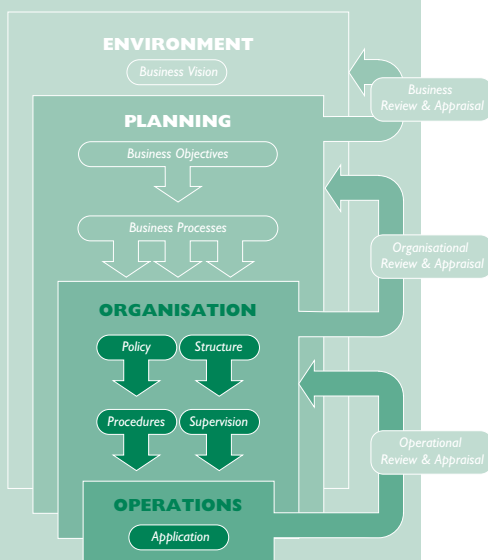
Procedures and Specifications

Procedures and specifications describe performance standards and criteria and methods to be used for particular activities or situations. They take many forms, some permanent and generally applicable, such as Material Safety Data Sheets and Emergency Response Plans, and some temporary and specific, such as Permits to Work.

HSE-critical activities need to have relevant HSE specifications and procedures documented to enable people responsible for such activities to carry them out properly. Specifications tend to reflect legislative and regulatory requirements or industry best practice. Procedures are best prepared by those experienced in performing the activity. Specifications and procedures should be used for training and development purposes as well as on-the-job reference.

Supervision

Supervision, also referred to as monitoring, includes all forms of comparison, from simple visual checks made by a supervisor to detailed incident investigation made by an expert team or continuous automated monitoring of process flow. Both active and reactive monitoring should be employed, to ensure that all HSE-critical activities can be or are being performed in compliance with policy, procedures and targets. Periodic tests and drills should be carried out to confirm the effectiveness of emergency response plans. Poor quality or lack of monitoring and testing will significantly reduce the effectiveness of an HSE MS.



REVIEW AND APPRAISAL

Robust and timely review and appraisal at each level of the business is necessary in order to identify any need for management intervention to improve the control framework.

Independent reviews and internal audits should be carried out as part of an integrated Audit Plan.

Operational Review and Appraisal

Robust and timely review and appraisal of the actual HSE performance achieved by operations is necessary in order to ensure the appropriateness and adequacy of the implementation of specific HSE controls and the effectiveness of the HSE control framework of individual business processes. Prompt comparison of HSE outcomes against plans, targets and performance indicators will often detect control weaknesses causing unauthorised levels of exposure to risk and enable early corrective action.

Independent reviews and internal audits of business process operations should be carried out as part of an integrated Audit Plan to check conformance with HSE control frameworks at the operational level.

Organisational Review and Appraisal

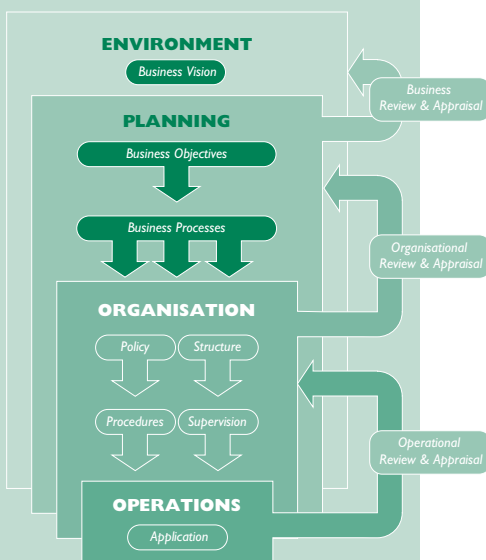
Periodic review and appraisal of the effective functioning of the management control aspects of the HSE MS is necessary in order to confirm that they are aligned with the business direction and standards of the enterprise and meet the operational requirements for resources. This level of review is particularly important if major operational or organisational changes are planned or significant changes occur within the business environment.

The findings of review and audit reports should be understood and reacted to positively by senior managers of the business process affected in order to mitigate or eliminate the control weakness or failure identified and their causes.

Business Review and Appraisal

At least once a year the Board should assess how well the enterprise has matched up to its HSE commitment to its stakeholders and review the strategy and the risks associated with the enterprise's operations and continuously changing business environment.

More frequently, Internal Audit's assessment of the effectiveness of the overall business control framework, including the effectiveness of the HSE MS, should be reviewed and effective action taken as necessary to demonstrate the enterprise's commitment to continual improvement of HSE performance.



FURTHER INFORMATION

Kingdom Management Training is a consultancy which specialises in Risk Management. We offer training courses and consultancy services in related areas, including Risk Assessment and Business Control Frameworks, Internal Auditing, Audit Report Writing, and the Control and Investigation of Fraud, as well as HSE Management.

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