



Business re-engineering and health and safety management

Best practice model

Prepared by **Entec UK Ltd**
for the Health and Safety **Executive**

CONTRACT RESEARCH REPORT



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This best practice model has been prepared to give practical advice to directors, managers and health and safety professionals involved in the conception, planning, assessment and implementation of changes in business organisation and management which have the potential to impact health and safety. Change is not only an opportunity for business to improve practices and systems but is an essential and unavoidable facet of maintaining competitiveness in an ever changing world. However, as with all new enterprises there are risks. These risks are demonstrated by the 1989 explosion at the **Phillips 66** petrochemicals plant in Pasadena (Texas) with 23 fatalities and \$1 billion of losses which occurred in the context of contractisation, and the 1992 explosion at the **Hickson** and Welch plant in Yorkshire which killed 5 people and was preceded by significant organisational changes.

The model focuses on (1) how to ensure that change is an opportunity for improving health and safety and on (2) how to minimise the risk of health and safety suffering due to unforeseen effects of changes. This is achieved by **compiling** together the best practices and lessons learnt from a survey of 10 organisations who have undergone major organisational change. The organisations are from the rail, chemicals, **healthcare**, water supply, power generation, nuclear, drink manufacturing, quarry, aviation and communications sectors.

Use has been made of previous research on the stress and mental health aspects of reorganisation, and the findings of accident inquiries regarding emergency response, to augment the **findings** of the survey.

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"... of considerable interest from a benchmarking point of view".
(Rail Operator).

"provides a basis for ensuring that health & safety is correctly
planned and managed in any major restructuring within a company"
(Aviation Maintenance Firm).

"the guidance would prove useful for organisations planning a major
reorganisation; we support the practicality and acceptability of the ideas ...".
(Chemical Manufacturer).

"the substance of the report is valuable and could help organisations
who are in the progress of de-layering".
(Drinks Manufacturing).

FOREWORD

This best practice model has been prepared as a practical guide to directors, managers and health and safety professionals involved in the conception, planning, assessment and implementation of changes in business organisation and management which have the potential to impact health and safety. Change is not only an opportunity for business to improve practices and systems but is an essential and unavoidable facet of maintaining competitiveness in an ever changing world. However, as with all new enterprises there are risks. These risks are demonstrated by the 1989 explosion at the Phillips 66 petrochemicals plant in Pasadena (Texas) with 23 fatalities and \$1 billion of losses which occurred in the context of contractorisation, and the 1992 explosion at the Hickson and Welch plant in Yorkshire which killed 5 people and was preceded by significant organisational changes.

The model focuses on (1) how to ensure that change is an opportunity for improving health and safety and on (2) how to minimise the risk of health and safety suffering due to unforeseen effects of changes. This is achieved by compiling together the best practices and lessons learnt from a survey of 10 organisations who have undergone major organisational change. The organisations are from the rail, chemicals, healthcare, water supply, power generation, nuclear, drink manufacturing, quarry, aviation and communications sectors. Examples of improvements in performance during periods of major change in organisations who did focus on safety include:

- a 85% reduction in accident frequency rate over a 5 year period at a power generation company.
- reduction in the number of contractor lost time injuries from six in a five month period to one in the subsequent 20 month period, after introduction of an upgraded contractor site safety plan system, at a chemical manufacturing site.
- a 45% reduction in the number lost time injuries in a drinks manufacturing and distribution company as a whole and a 85% of reduction in the number of lost time injuries at a site over a 5 year period in which the production level and number of temporary workers rose.
- a 78% reduction in the number of confirmed fires over a five year period on a rail system.

Use has been made of previous research on the stress and mental health aspects of reorganisation, and the findings of accident inquiries regarding emergency response, to augment the findings of the survey.

A number of disasters have occurred either during or shortly after major reorganisations. The incorporation of a planned, well resourced and effectively managed programme of health and safety work, as outlined in this guidance, should help reduce the possibility of transition related accidents, as well as improving longer term performance. With the vast majority of guidance drawn from surveyed organisations, the resources required to apply the model should not exceed the capacity of organisations. In addition, the guidance is consistent with the Health and Safety Executive's guide "Successful Health and Safety Management", which many organisations have modelled their systems upon. This should again help ensure that the resources required to apply this guidance are within the reach of organisations.

SUMMARY OF KEY ISSUES

Many of the health and safety problems associated with reorganisation are analogous to those associated with the reorganisation of business management. However, solving the business management problems associated with change does not necessarily lead to the resolution of health and safety issues. Whilst health and safety problems are analogous to business management problems, they form a distinct if related sub-set of issues which need to be identified and addressed. Moreover, many organisations view reorganisation as an opportunity to improve the effectiveness of health and safety management, prompting a parallel review of health and safety.

Changes in health and safety management often follow the same principles as the wider business reorganisation, such as increased accountability amongst management, on the grounds that:

- there must be a synergy between the style of business and health and safety management,
- the introduction of accountability, competence and empowerment into business management, are necessary precursors to the improvement of health and safety, and,
- the principles of empowerment, participatory management and ownership are equally relevant to health and safety as they are to general management.

(1) Developing and **applying** a process of **identifying**, reviewing and actioning safety issues.

Health and safety should be managed in the same planned and **informed** manner as all elements of reorganisation. Having defined the objectives of reorganisation and conceived changes, the health and safety implications of proposals should be assessed and incorporated into plans. The implementation of plans should be appropriately resourced and managed. The adequacy of all decisions, plans and resources should be continuously reviewed, with plans revised as appropriate. Health and safety performance should be reviewed and measured both during and after reorganisation to detect any unexpected trends, with actions formulated as necessary. The following points need to be addressed.

- formulation of a clear set of health and safety objectives **regarding** the reorganisation.
 - demonstrating the commitment of senior management to the recognition, assessment and management of health and safety issues arising from reorganisation,
 - reinforcing commitment by a pattern of consistent decision making and communication,
 - recognising the potential impacts on health and safety at a sufficiently early stage to allow assessment to be completed and thence for actions to be specified,
 - defining the **terms** of review before the reorganisation plans have been formulated.
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The type of assessment reflects the degree of risk and stage of reorganisation. Judgement based review is typically applied at the concept stage, followed by detailed assessment at the planning stage. Organisations operating in higher risk sectors form independent safety review teams and operate formal management of change procedures. Other organisations adopt less formalised approaches, relying on line management and health and safety advisors.

Impact of changes and the uncertainty preceding changes on stress and morale.

The strategies for minimising stress and anxiety during and after reorganisation are comparable to those for work in general. However, these strategies take on greater importance when there is widespread change due to the higher likelihood of stress, particularly where there are changes in the staffing of high risk operations. These strategies aim to maximise individuals' ability to cope with new roles and responsibilities, minimise the level of uncertainty experienced by individuals and encourage a problem solving attitude towards the uncertainty associated with changes.

(2) Creating a new approach to health and safety management which is consistent with both current health and safety best practice and the style of general management.

All surveyed organisations sought to improve the effectiveness of health and safety management through a process of devolution of responsibilities, improvement of staff and management competence, greater acceptance of individual accountability, participation of staff and line management in the development of systems and procedures, reduced demarcations, and greater team work and collaboration, with a retained specialist health and safety function to guide, support and monitor this process. However, the strategy adopted for improving health and safety and the degree of discretion passed to staff and line management varies according to:

(i) The current status of health and safety management.

Those organisations with a minimum of health and safety management at the outset focus on the improvement of line management health and safety competence, whilst organisations with highly developed health and safety systems focus on devolving, streamlining and updating these.

(ii) The level of risk associated with the organisation's activities.

Organisations with higher risk operations tend to allow less discretion over working practices, and place greater emphasis on the assurance of competence.

Where organisations seek a reduction in the level of rules and in-house managerial resources, attention simultaneously focuses on how to assure standards in the absence of these resources and rules. The task is to assess what balance can be struck between in-house managerial resources and rules versus reliance on the competence of employees and contractors. Where greater reliance on employees and contractors is sought there should be a proportionate increase in the emphasis on developing an adequate level of competence. In striking this balance due regard is also given to the risk associated with devolved or outsourced tasks.

Thus, a three way balance is struck between:

- (1) the degree of supervision, management, engineered safety, rules and procedures;
- (2) competence, and;
- (3) inherent operational risk.

For example, as the level of competence increases, so the degree of empowerment also increases. However, as the level of risk increases so the need for assurance also increases, with greater emphasis placed on standard working methods. Thus, there is greater empowerment for lower risk operations and less empowerment for higher risk tasks regardless of the level of competence.

When considering health and safety management it is also important to recognise:

- the need to retain competent staff to respond to abnormal, exceptional and emergency events,
- that upon increasing dependence on outsourcing, the adequacy of contractor safety management gains greater importance and should be reviewed to determine if changes are needed to avoid "importing" risk. This includes the risk of contractor injuries and ill-health and the **risk** of contractors impacting the safety of the company's plant and people.

Many organisations devote substantial resources to training needs analysis and training. This training is a crucial, even pivotal, element of reorganisation without which the success of reorganisation cannot be assured. Competence should be transferred along with re-assigned and new roles and responsibilities.

- (3) **Ensuring that the** standard of **health and safety** performance is sufficient.

This commonly involves the development of health and safety audits, statistics and verification processes. One or more measures are tracked for the period before, during and after reorganisation. The goal here is to gain an objective indication of the impact of changes on health and safety, **thereby** providing assurance that the reorganisation has been a success from a health and safety perspective, and helping to identify where additional actions are needed in light of **unsatisfactory** performance.

CONCLUSION

This model is based on the belief that the potential impact of change on health and safety needs to be recognised at an early stage by senior management, and followed up by a coherent and well defined set **of** health and safety actions. Whilst each reorganisation project should be considered in its own right, the guidance given here should help formulate actions to manage these organisation specific issues.

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GLOSSARY

Accountability: making people responsible for their own performance and decisions within their span of authority, thereby prompting people to apply due care and attention to their work.

Business units: an internal accounting unit within an organisation, with a distinguishable range of operations.

Business process re-engineering: a redefinition of business organisation, systems and practices around those processes central to the goals of the customer and the organisation.

Delayering/downsizing/right sizing: the elimination of tiers of management in order to delegate responsibility to those with direct responsibility for operations and improve speed of decision making and communication.

Empowerment: Empowerment is a process of assigning responsibility for a function or activity to a team of people, co-ordinated and supported by a team leader, where goals are set for the team but who are allowed a degree of freedom to decide how to fulfil these goals.

Flexible labour: employment arrangements which allow companies to control more easily the supply and divestment of labour according to demand, such as short term and fixed term contracts.

Multi-skilling: Multi-skilling involves the removal of functional barriers to employee roles, with the remit of individuals' expanded to cover a range of functions, requiring the exercise of a number of skills.

Outsourcing/contracting out: the procurement from external companies of services previously completed by persons employed by the purchasing organisation.

Performance related reward: reward is based on performance against an agreed set of objectives, typically stated in terms of contribution to the business and key performance indicators, such as linking pay to customer satisfaction and profits.

Restructuring: a revision of the structure of an organisation around a defined set of goals, such as merger of geographically based organisational units.

Streamlining: a reduction in the resources used to carry out operations without a significant redefinition of work organisation or organisational structure, perhaps by automation, new equipment or increased individual productivity.

Teamwork: the channelling of a range of skills held by a group of people towards a common and shared set of objectives in a cost-effective, coherent and co-ordinated way.

BACKGROUND RESEARCH

There has been immense media attention on layering, outsourcing, flexible labour and the purported effects of these aspects of working life on stress and industrial health and safety. However, there has been little unequivocal research on these issues. At the same time, traditional **forms** of health and safety management are often based, if implicitly, on the presumption that organisations retain a hierarchical structure with a "**command and control**" style of management. These presumptions may no longer hold true for latter day "layered" management structures advocated by strategies such as Business Process Re-Engineering (**BPR**). Consequently, there is a need to ensure that health and safety management is compatible with current organisational structures and ways of working as well as establishing as far as is practicable the effect which latter-day styles of management have on health and safety performance.

Accordingly, the Health and Safety Executive commissioned a research project comprising a literature review and survey of organisations, the results of which are summarised here

LITERATURE REVIEW

Nature of latterday business management

Fundamental to latter day management philosophy within both the public and private sectors, is the belief that hierarchical organisations with activities split into departments place barriers between the customer and the supplier, and the recognition of customer needs. Accordingly, a flatter structure is required whereby teams of people are empowered to respond to customer needs. Management control is moved to the point of execution, with a direct link between front line management and organisational strategy. Thus, layering is presented as a means of making organisations more responsive to the market (i.e. more flexible) as well as a means to cut down on unnecessary management burden.

Consequently, the removal en masse of entire layers of middle management is presented as a permanent rather than a temporary phenomenon. Layering is presented to be a reflection of the fact that with new technology and organisational structures the functions and roles traditionally performed by the middle manager simply no longer exist. In this way, companies are revised from top to bottom, rather than **improving** on the current **hierarchical/functional** structures.

In addition, by creating process or supply chain oriented organisations, with each process focused on fulfilling customers' needs, the organisation will be naturally driven to identify and respond to changes in these customer demands. Consequently, it is possible that the organisation will be in a constant state of change, responding to the ever changing demands of the market. This state of constant change is presented as both an intentional and desirable phenomenon, needed to respond to changing demands, rather than a sign of poor or direction-less management.

The pursuit of flexible process oriented organisations often entails a radical change in the attitudes and behaviours of staff to match the new management philosophy, as well as the systems and style of management.

Key changes include:

- increased financial transparency and accountability of line management
- introduction of empowerment, team working and self-development, to balance the reduction in direct supervision of staff and to maximise staff contribution to the business.
- introduction of competence initiatives, to provide staff with skills needed to work flexibly without close supervision.
- setting of individual performance goals and targets for improvement, often linked to pay and promotion, to reinforce the **refocus** of management expectations.
- increased labour flexibility, such as multi-skilling and contracting out functions.

As with all areas of business any characterisation of trends will obscure individual differences. This is equally true of business reorganisation where:

- the speed of change is dependent on the factors prompting reorganisation, with rapid change associated with "crisis" but with many organisations approaching change in an incremental manner.
- the extent of reorganisation within a company, and the manner of reorganisation may be related to the duration of cost pressures on organisations, with organisations first streamlining in response to initial cost pressures and subsequently seeking more radical business re-engineering strategies.

Accordingly, the extent to which the organisation of individual companies have followed the latter route will vary greatly

Effects on health and safety standards

Information regarding the effects of reorganisation on health and safety standards is mentioned almost without fail, incidentally within publications. It is only in the area of stress and mental health that research has focused on the effects of reorganisation on health. A survey of research (Wright, 1, 1996) did not identify any formal research which explicitly examined the wider effects of reorganisation on health and safety, such as the impact on major hazard safety. Accordingly, caution should be taken in drawing generalised conclusions on the effects of reorganisation on health and safety. Nonetheless, the main findings of previous research are:

- it is possible to identify examples of where reorganisation has contributed to major accidents involving multiple fatalities.
 - on the other hand, health and safety statistics published by companies within and outside of this survey reveal an improvement in overall performance subsequent to reorganisation, although standards may fall during reorganisation.
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- industry level statistics in those sectors experiencing change, including the rail, power, water and petrochemicals sectors, do not consistently reveal a decline in performance, with most sectors **revealing improvements** in reported accident and injury rates, although it should **be** noted that these statistics exclude contractors.
 - reorganisation can be a major source of stress and result in poorer mental health and job satisfaction, although the level of mental health has been reported to return to **pre-reorganisation** levels in some but not all of the studies.
 - some research suggests that latter day forms of management structures and systems are **associated** with permanently higher levels of stress, but there are only a few studies in this area **and** accordingly it is difficult to reach firm conclusions based on these studies alone.

Thus, it is difficult to reach **firm** conclusions other than to suggest that reorganisation can be a stressful process and that health and safety standards can be effected in both positive and negative ways.

Pitfalls **and** opportunities

As noted in Wright (1, 1996) there are mixed reports on the success rate of business re-engineering, with some companies reporting significant improvements such as 40% reduction in administrative costs and 100% improvements in productivity, and other reporting lacklustre results and unforeseen problems. The mixed results of business re-engineering projects are attributed to the poor implementation of changes, such as following simplistic goals, failing to train people for new roles and failure to redesign working methods to match new organisational structures.

Many of the reported health and safety problems associated with reorganisation are analogous to the lessons **learned** in the implementation of *latter-day* business management practices. For example, it has been noted in the context of both health and safety and general reorganisation, that empowerment can, on occasion, be implemented without providing support in the form of training in team building or other necessary skills, whilst delayering may be implemented without revising working methods.

Consequently, it could be argued that the negative effects (other than the effects of job insecurity) of latter day reorganisation on health and safety are due to, or at least exacerbated, by deficiencies in the approach taken to the planning and implementation of changes rather than constituting inherent and unavoidable side effects of "latter" management. For example, reduction in personnel does not **necessarily** impact health and safety but the loss of personnel with key safety competencies may well do so. This view is lent some support by the **observation** that the changes in health and safety management favourably reported by those companies which also report higher safety standards, such as Increasing line management responsibility for safety, are **broadly, if perhaps coincidentally** consistent with the principles of latter day reorganisation strategies such as Business Process Re-engineering (BPR).

Clearly, whilst there is a similarity between the ideals of **BPR** and the ideals of health and safety management, research into the implementation of BPR suggests that there can be a gap between its ideals and actual practice. Consequently, the supposed employee benefits of business re-engineering, such as greater **involvement** in decision making and more interesting work, can be

overtaken by disbenefits such as increased workload, role overload and distrust. Also, whilst the reorganisation of the business may be the initial prompt to change in health and safety management, these changes appear to be equally driven by new regulations and latest views of best practice. Indeed, some of the changes in health and safety management are designed to mitigate the effects of reorganisation on health and safety, such as the development of contractor safety management controls, rather than to extend such reorganisation into the area of health and safety.

SURVEY OF ORGANISATIONS

Selection of case study organisations

Organisations were selected on the following criteria:

- (1) They were or had undergone a period of significant organisational change
- (2) The organisation had either managed the reorganisation successfully, from a health and safety perspective, **and/or** had some valuable lessons.
- (3) Operated in a sector where health and safety hazards are considered to be significant.
- (4) Provide a broad sample of industrial sectors, from high to low risk, capital intensive versus human resource intensive, public and private sector.

Scope of discussions

Discussions were held with representatives who could provide:

- (1) An overview of the form, objectives and nature of reorganisation
- (2) An explanation of the links between the wider reorganisation and changes in health and safety.

The model was circulated to the 10 case study organisations to (1) validate the acceptability and practicality of ideas and (2) gain feedback on the usefulness of the guidance

Health and safety performance

A number of the surveyed organisations reported improvements in health and safety performance during **and/or** subsequent to the reorganisation, although three of the ten surveyed organisations were unable to provide health and safety statistics, but judged that performance was, in their opinion, static.

The former improvements in accident rates does not prove that reorganisation leads to improved health and safety. Firstly, these organisations witnessed significant changes in the approach to health and safety management. Secondly, it is difficult to discern the effect of planned changes

from other factors such as the influence new regulations and unsurveyed changes in safety attitudes amongst the general working population.

Rather, it is concluded that the impact of reorganisation depends on how the organisation approaches the assessment and planning of health and safety. Health and safety performance was reported to improve where well planned and well resourced health and safety actions were developed and implemented. In some cases it was considered that the improvements in health and safety could not have been achieved with the traditional form of organisational structure and style of management and that the reorganisation was **an** opportunity to improve health and safety management. But again, this should not be interpreted to suggest that the business reorganisation led to improvements in health and safety or that health and safety improvements necessarily follow on from such **reorganisations**. Reorganisation acts only as a prompt to change in health and safety management.

Indeed, at least **3** examples were found where health and safety was not recognised as an issue during, at least, the initial phases of reorganisation. In these cases a view was initially taken that the reorganisation was solely an exercise of business improvement. The need to consider the impact of the reorganisation on health and safety **and/or** the argument for updating the style of health and safety management to match the new style of business management were not recognised until a significant event **occurred**, such as an Health and Safety Executive audit. However, having recognised the need to address the management of health and safety, the subsequent approach was broadly comparable with the approaches adopted by organisations who had addressed health and safety from the outset.

Links between wider reorganisation and changes in health and safety management

The style of health and safety management had or **was** changing in all of the surveyed organisations. These changes can be linked directly and indirectly to the wider business reorganisation in a number of ways, as discussed below. Typically, there are a number of "drivers" which come together to prompt the change in health and safety management, with varying emphasis placed on each driver by different organisations. It appears that, implicitly or explicitly, surveyed organisations simultaneously aimed to ensure that health and safety **performance** was, at a minimum, maintained, whilst also responding to new issues and keeping health and safety management in line with current best practice at the same time as maintaining consistency between the style of general business management and the style of health and safety management.

Reorganisation as an opportunity for health and safety improvement

The changes in health and safety management followed the same broad principles and objectives as the wider business reorganisation, such as increased ownership and accountability amongst line management, in the majority of case studies. However, the reason for applying the **principles** of the wider reorganisation to **health** and safety varied, as follows:

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- (1) It is decided that all areas of management will be managed according to the new set of principles, without exception. It is argued by the case study organisations that there must **be** a synergy between the styles of management applied to each area of responsibility, i.e. a centralist "command and control" style of health and safety management would not be effective in an organisation with an empowered devolved style of general management.
 - (2) The reorganisation of the business is used as an opportunity to introduce latter day principles of health and safety management, which happen to be analogous to the **principles** of the wider reorganisation, i.e. a sought for devolved and participatory style of health **and** safety management is introduced on the back of the **wider** reorganisation.

The view was expressed by a number of organisations that:

- it is not possible to resolve the roots of unsafe behaviour and poor safety performance in a traditional hierarchical organisation, due to the lack of ownership of safety management **and** the lack of management accountability, and;
- similarly, it is difficult to introduce a participatory or empowered style of health and safety management without also introducing participation into general business management.

Thus, the changes in the style of general business management, particularly the focus on accountability competence and empowerment, were regarded to be necessary precursors to the improvement of health and safety management.

Reorganisation as a threat

A number of surveyed organisations judged that an effective approach to health and safety management had to be assured to avert regulatory and other threats to the business. such as:

- (1) **Loss of licences to operate.**
- (2) **Prosecution of individual** managers, particularly where (1) senior management felt that they were more likely to be held individually accountable for accidents subsequent to delayering. (2) arrangements were not in place to provide assurance of health and safety performance and (3) one or more notable accident or serious incident had occurred.
- (3) **Public relations damage.** Organisations sought to demonstrate an effective approach to health and safety to third parties, to avert negative publicity arising either from reports that safety had been downgraded or from accidents being linked to the supposed effects of reorganisation.

In these cases the surveyed organisations recognised that reorganisation has the potential to impact health and safety **performance** and that the management of health and safety has to be explicitly considered to avoid potential negative impacts.

External and unassociated threats and issues to be met in parallel to the reorganisation

A number of surveyed organisations recognised that the approach to health and safety management had to be revised to ensure that an effective response could be given to issues which had emerged in parallel with the reorganisation. For example, it was judged by the mail distributor that the health and safety function had to be professionalised and that line management had to be involved in the completion of risk assessments to fulfil new manual handling regulations.

Health and safety strategy

The health and safety strategies adopted by surveyed organisations reflect the "drivers" underlying initiatives, and hence involved, to varying degrees:

(1) Developing and applying a process of identifying, reviewing and actioning safety issues associated with the reorganisation.

Organisations operating in higher risk sectors formed independent safety review teams and operated formal management of change procedures. Other organisations adopted less formalised approaches to the management of change, relying on management competence and assistance from health and safety advisors without a management of change procedure or formal review team.

However, in all cases the process of assessment and decision making relied on judgement, even if this was informed on occasion by the completion of formal assessments.

(2) Creating a new approach to health and safety management which is consistent with both current health and safety best practice and the style of general management.

All surveyed organisations sought to improve the effectiveness of health and safety management through a process of devolution of responsibilities, improvement of staff and management competence, greater acceptance of individual accountability, participation of staff and line management in the development of systems and procedures, reduced demarcations, and greater team work and collaboration, with a retained specialist health and safety function to guide and support this process.

The strategy adopted for improving health and safety performance and the degree of discretion passed to staff and line management varied between surveyed organisations according to:

(i) *The current status of health and safety management.*

Those organisations which commenced reorganisation with a minimum of health and safety management capability focused on the improvement of line management understanding of health and safety.

Those organisations which commenced with highly developed arrangements for health and safety management focused on (1) devolving these to line management and staff, (2) streamlining these arrangements and (3) updating arrangements to match new demands **such as** the management of contractors.

(ii) ***The level of risk associated with the organisation's activities.***

Organisations with higher risk operations tend to allow a lower level of discretion over day to day working practices, and place greater emphasis on the assurance of contractor competence, to the extent of requiring long term contractors to develop "safety cases" prior to contract award.

(3) **Ensuring that the standard of health and safety performance is sufficient to minimise the risk of prosecution, loss of operating licences and adverse publicity.**

This commonly involved the development of health and safety audits, statistical collation and verification processes.

Limitations of survey findings

The survey identified few examples of:

- (1) Formal assessment of the safety implications of reduced staffing levels.
- (2) The application of quantified risk assessment.
- (3) **Benchmarking**, except for examples of benchmarking of accident rates and staffing levels.
- (4) Assessment **and/or** monitoring of the impact of major organisational changes on health, particularly mental health, absenteeism and sickness levels.
- (5) Companies focused on the assessment and planning of proposed changes rather than the management of the process of change.

Consequently, the survey does not provide an adequate basis upon which to generate advice or guidance on how to approach these issues and incorporate them into reorganisation plans, or on which to judge the impacts of continued reductions in staffing levels on safety performance.

CONCLUSION

The approach to the management of health and safety found in this survey:

- corresponds broadly with the ideas and principles of HS (G) 65 "Successful Health and Safety Management".
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- is associated with positive reports of health and safety performance by surveyed organisations, and;
 - was accepted as a practical and valuable approach by case study organisations.

Accordingly, it was concluded that the survey and the literature review provides a useful basis for this Best Practice Model. Clearly the state of the art in health and safety management and the demands placed on health and safety will change over time. But, whatever the exact issues and strategies may be, the value of a proactive strategy of assessment and advanced planning is only likely to increase, especially in organisations experiencing rapid or continuous change. Thus, each reorganisation project should be considered in its own right, using the guidance given here to manage the organisation specific issues.

INTRODUCTION

The **guidance** focuses on fundamental changes in organisation and management, such as management layering. The health and safety implications of minor organisational adjustments, such as the appointment of a new manager should be handled by routine health and safety management reviews and procedures and is outside the scope of this guidance.

As with all aspects of health and safety management, the level of resource allocated to the management of change in surveyed organisations varied according to:

- the complexity and **risk** associated with the company's activities.
- the level of uncertainty regarding how changes may **impact** health and **safety performance**.
- whether the changes introduced new risks, such as lone working.
- the health and safety objectives, with more resources are applied where the aim is to improve performance as opposed to maintain health and safety performance.
- the range and significance (for health and safety) of changes in organisation and management.

For example, a major hazards (Top Tier CIMAH) chemical manufacturing site undergoing major rationalisation devoted greater resources to the management of health and safety than a drink manufacturer undergoing major changes. In addition, some organisations, including a rail operator and the latter chemical manufacturer, instituted a "safety validation and review" process which initially filtered proposed changes and thenceforth **determined** the level of assessment and planning required.

Commonly, surveyed organisations incorporated health and safety into reorganisation plans on the grounds that (1) health and safety should be managed in an effective manner as with all aspects of business and that (2) the principles driving the wider reorganisation apply equally to health and safety. However, it should be noted that, whilst the Management of **Health & Safety** at Work (MHSW) Regulations 1992 do not explicitly refer to reorganisation, there is a regulatory duty under the Regulations to review and revise risk assessments, if necessary, when there are significant changes in the nature of work (reg 3, **para** 3). In particular, it is stated that:

"The employer or self-employed person needs to review the risk assessment if there are developments that suggest that it may no longer be **valid** (or that it can be improved). ...such reviews should form part of standard management practice." (p4, para 11)

In addition, the MHSW regulations require that every employee is provided with adequate health and safety training on their being exposed to new risks because of being transferred or being given a change of responsibilities or due to a new or changed system of work (reg 11, para 2).

Thus, the **MHSW** regulations are likely to apply if a reorganisation introduces changes in the nature of work, risk exposures or responsibilities.

The guidance contained here-in is divided into three sections, namely:

Chapter 1: an overview of some of the key health and safety issues, objectives and strategies commonly adopted during radical organisational change.

Chapter 2: on the assessment, planning and management of reorganisation.

Chapter 3: on the health and safety aspects of latter day "flatter" management structures.

Whilst an overview of strategy is given in Chapter 1 on a case by case basis, the best practices of the surveyed organisations are integrated into a single model in Chapters 2 and 3.

Although this document raises a sample of common issues, it should be recognised that each reorganisation is different and it is the responsibility of the organisation in question to identify health and safety issues, assess their impact and thenceforth manage these issues. Also, due regard should be given to those provisions of industry specific regulations, such as the Railway (Safety Case) Regulations, which relate to notification of changes in health and safety management.

As noted earlier in the document, many of the problems associated with the management of change and the strategies for managing these problems are common to both general business management and health and safety. Accordingly, those organisations which are able to recognise and address the business management issues should be better pre-disposed to handling the health and safety issues. In addition, the changes in general management and organisation can have a direct bearing on health and safety performance. For example, the adequacy of retraining for multi-skilled technicians on a plant was regarded by surveyed organisations to have an equal bearing on the achievement of business rationalisation goals and the safe operation of plant. Failure to achieve adequate levels of staff competency upon introduction of multi-skilling could hinder productivity improvements and threaten the safety of both plant and personnel.

Moreover, some surveyed organisations explicitly judged that there should be a synergy between the style of health and safety management and the style of general business management. Without synergy the two areas of management can conflict, thereby reducing the overall effectiveness of one or both areas of management. Indeed, some surveyed organisations judged it is difficult to achieve a more participatory and accountable style of health and safety management without a corresponding introduction of participation and accountability into general business management. Thus, there appears to a seamless join between the goals of business reorganisation and the goals of health and safety management.

However, solving the business management problems associated with change does not necessarily lead directly to the resolution of health and safety issues. Whilst health and safety problems may be analogous to business management problems, they form a distinct if related and overlapping sub-set of issues which need to be identified and addressed. For example, training supervisors in team leadership skills will not equip them to carry out work place **risk** assessment. In addition, the

health and safety function and management systems are often reorganised as part of or in parallel to the wider reorganisation. Such changes need to be managed effectively as with the reorganisation of other parts of the business.

This guide illustrates the application of change management best practice to the area of health and safety. Given the overlap of health and safety issues with general organisation and management issues, much of the guidance relates equally to the wider reorganisation as it does to health and safety. As such the guide may be of use outside of the strict confines of health and safety management, as well as acting as a benchmark for the health and safety management aspects of major organisational change.

CHAPTER 1

KEY ISSUES, OBJECTIVES AND STRATEGY

1.1 KEY ISSUES

The key health and safety issues addressed by surveyed organisations during or subsequent to major reorganisation are given below. This document provides guidance on how these issues were addressed.

- (1) Senior management commitment to recognise, assess and manage potential health and safety impacts of changes, with a clear policy regarding the health and safety aspects.
- (2) Early recognition and assessment of potential health and safety improvements **and/or** impacts of organisational changes,
- (3) Competence of staff, management and contractors.
- (4) Allocation of accountabilities and responsibilities.
- (5) Level of health and safety resources retained in-house.
- (6) Status of key safety rules and procedures
- (7) Management of outsourcing.
- (8) Emergency capability.
- (9) Impact of changes and the uncertainty preceding changes on stress and morale.
- (10) Phasing and management of changes, including communication.
- (11) Measurement, monitoring and review of impact of changes.

1.2 OBJECTIVES

It was considered important by surveyed organisations to formulate a clear and explicit set of health and safety objectives regarding the reorganisation. In the cases of the drink manufacturer and quarry companies, health and safety was not focused on in the early stages of reorganisation. Subsequently concern grew that the organisation **was** not in a position to demonstrate effective health and safety management or to gauge their standards of performance and risk. Both organisations latterly initiated centrally co-ordinated health and safety management initiatives to resolve these concerns. In contrast, those

organisations which included health and safety from the start of reorganisation judged that this had ensured that, at a minimum, the reorganisation **was** unimpeded by health and safety problems and had allowed them to significantly improve the effectiveness of health **and** safety management.

Health and safety objectives tended to reflect the goals of the wider reorganisation, such as devolving responsibility to the point of execution (i.e. line management), but also usually incorporate a wish to guard against adverse impacts of change on health and safety. Thus, the objectives of surveyed organisations incorporated all of the following to varying degrees.

- (1) To use the reorganisation as an opportunity to identify and implement improvements to the management of health and safety, such as improving the uptake of health and safety responsibilities by line management.
- (2) To assess and review the planning and implementation of reorganisation to ensure that there are no unforeseen or adverse impacts on health and safety, with a minimum goal of maintaining current health and safety standards.
- (3) To provide assurance to both the organisation and other key stakeholders, such as the Health and Safety Executive (**HSE**) and members of the public, that adequate health and safety standards have been maintained both during and after the reorganisation. In reducing uncertainty regarding the impact of changes on health and safety the speed of decision making and hence reorganisation should be increased. Also, the ability to demonstrate how the health and safety aspects of reorganisation are being managed should enhance the speed and quality of discussions with third parties.
- (4) To ensure full compliance with all applicable health and safety regulations, with an expectation that performance standards would subsequently improve.

1.3 OVERVIEW OF STRATEGIES

Surveyed organisations sought to improve the effectiveness of health and safety management through a process of devolution of responsibilities, improvement of staff and management competence, greater acceptance of individual accountability, participation of staff and line management in the development of systems and procedures, reduced demarcations, and greater team work and collaboration, with a retained specialist health and safety function to guide and support this process. However, the strategy adopted for achieving these goals and the degree of discretion passed to staff and line management varied between surveyed organisations according to:

- (1) The current status of health and safety management.

Those organisations which commenced reorganisation with a minimum of health and safety management capability focused on the improvement of line

management understanding of health and safety management, often by the introduction of a formal audit programme. In some cases, these organisations subsequently refocused their initiative from the creation of a health and safety management system to the improvement of staff safety related behaviour and the streamlining of the management system.

(2) The level of risk associated with the organisation's activities.

Organisations with higher risk operations tend to allow a lower level of discretion over day to day working practices, although staff and line management are still involved to a high degree in the **formulation** and agreement of the practices. Once set, staff and management are expected to abide by agreed practices without constant supervision and to be accountable for their own performance, with a requirement for further procedural changes to be reviewed and agreed before implementation. These organisations also tended to place greater emphasis on the assurance of contractor competence, to the extent of requiring long term contractors to develop "safety cases" prior to contract.

A case by case summary is given below of surveyed organisations

Rail organisation: The rail organisation went through a series of major changes over about 7 years which initially introduced additional management into a previously undermanaged organisation and clarified goals and accountabilities by the creation of business units and definition of performance measures. Subsequent changes focused on increased productivity through multi-skilling, teamworking, changes in working practices, decentralisation of maintenance services and merger of operations and maintenance functions. This included a 25% drop in the workforce, which comprised 40% of the workforce in some areas. Health and safety mirrored this process with the introduction of a proprietary audit based health and safety management system and health and safety training for management and staff, directed by an expanded central safety department and supported by business unit based safety advisors. Once the organisation's health and safety management capability had developed sufficiently, the role and composition of the central safety department changed into a support role with less emphasis placed on auditing and oversight. The status of rules and procedures was unchanged throughout.

Chemical manufacturer: The manufacturer underwent a major downsizing exercise over a 2 year period, including reduction in capacity, rationalisation of workforce, outsourcing and reduction of central **support** and management positions at both production and HQ sites. Working practices changed radically with the introduction of multi-skilling, teamworking, decertification of trade unions, merger of operations transport and materials handling departments into product based business units and delayering of site management. Health and safety responsibilities were devolved to line management with site and HQ health and safety departments assigned support and corporate oversight roles. Contractor management and staff competence programmes were upgraded. A higher level of self-auditing was introduced, with occasional external auditing using a proprietary

scheme retained to allow for industry wide benchmarking. The status of site level rules and procedures **was** unchanged, although corporate level standards were reclassified as guidance.

Power generator: The generator underwent a major programme of change, taking about 5 years to date, in which plant based staff were reduced by over **50%**, along side introduction of contractors, multi-skilling, team working, performance based assessment, **and** creation of business units. A key objective was to move away from a "dependence" culture amongst staff to a culture of self management. Whilst the organisation introduced an audit based health and safety management system using an external proprietary scheme a high level of emphasis was placed on development of line management, team leaders and **staff** health and safety competence and the organisation's safety culture. Health and safety responsibilities were devolved from central safety departments to individual site management, with the site based health and safety resource strengthened at some sites. The role of the central safety department refocused onto **support**, policy guidance and oversight of local safety management. The mandatory status of safety **rules** on electrical and mechanical systems **was** retained, with supporting instructions rationalised into associated codes of practice (ACOP's) and issued under policy. Local variations to **ACOP's** are audited by the central health & safety department.

Water utility: Prior to privatisation, the water utility went through significant change **as** it moved from being a number of separate small utilities to becoming a large and geographically widespread organisation. This process included a strengthening and centralisation of its health and safety arrangements. The privatisation of the industry provided a catalyst for further change, and a review of its health and safety arrangements. However, the strong central health and safety function which had been recently created was seen to provide valuable stability during the major reorganisation which followed privatisation. The changes have included staff reductions across all areas of activity, coupled with major investment which has led to changes in plant and processes. Responsibility for safety has been more closely placed with the operations groups, but with the central health and safety function providing a credible and professional in-house source of expertise and advice. The potential impact of reorganisation on health and safety performance has been recognised, and arrangements put in place to control it, such as change management checklists and safety action plans, and extensive workforce consultation, although the current arrangements have been achieved in part through a learning process. Increased empowerment has raised issues of training and competence which are being gradually addressed, as is the need to ensure that procedures and arrangements match the new organisational structure.

Drink manufacturer and distributor: Subsequent to a merger with another drinks company, the organisation underwent a rationalisation programme involving large scale reduction in staffing and central management and engineering support, with major engineering works outsourced. Site level changes included introduction of team working and multi-skilling. Subsequent to the initial phases of reorganisation the organisation introduced an external **proprietary** audit and management training scheme as a means of creating a safety management capability. In parallel, a newly created central health and safety management function supported the realisation of health and safety responsibilities

and competence by line management. Team leader training included health and safety, with the implementation of safety management systems led by site based team leaders and line management. Upon achievement of an adequate level of health and safety capability the external proprietary audit scheme was radically revised by the organisation to match more closely its needs and to minimise the audit workload. Site management were allowed discretion over the range of tasks covered by rules and permit to work systems, although there is an expectation that there will be consistency in the procedure of safety critical work.

Quarry firm: Within a few months of being acquired by another organisation, the company's HQ was radically downsized with consequent increases in the responsibilities assigned to the regional management structure. This included the allocation to regional management of 3 centrally reporting (but regionally based) health and safety officers. Whilst some parts of the business were sold and regional management was organised into new groupings, the organisation of business units was largely unaltered. Although the downsizing resulted in some reduction in staffing levels, the systems and approach to health and safety in each part of the business did not change and the company felt that there was no discernible reduction in the effectiveness of the management structure. Standards of health and safety were maintained throughout the period of change not least because the structural changes did not have effects at production management level. At a later date some concern developed in the company that the safety management procedures and structure did not provide adequate assurance that the standards required to satisfy the requirements of the company Health and Safety Policy were being maintained at all operating locations at all times. An HQ based health and safety manager was appointed to review corporate health and safety policy and to provide guidance on methods of assuring compliance with policy. A health and safety management system was developed to establish unbroken and auditable links between the statements of company policy and the work instructions which implement the policy. Within this system the requirements for procedures are determined by the company HQ and the procedures or work instructions necessary to achieve compliance with these requirements are determined at regional level.

NHS hospital trust: A number of hospital and health care units were merged into a single NHS Trust. The management structure was revised into a series of over 30 directorates reporting to the chief executive. The status of the hospitals changed to suppliers of services to health authority purchases within the NHS internal market. At the same time the loss of crown immunity and increased awareness of accountability prompted moves to increase management knowledge of and competence in the area of health and safety management. Central occupational health and risk management departments were retained, with a larger risk management department, to assist with the development of a health and safety management capability, focusing on increasing line management competence and the organisation's safety culture.

Aircraft maintenance firm: The aircraft maintenance organisation had the opportunity of revising management practices upon the setting up of a new "greenfield" company. The new organisation was set up with a minimum of management, no Functional demarcation between trades, simplification of maintenance tasks and task instructions, a cellular based

team working structure with team leaders and profit related pay. Maintenance teams are permanently **assigned** specific parts of an aircraft, such as the left wing, which they will **work** on each time an aircraft comes in for maintenance. This compared with the past practice of having roving maintenance crews, who may work on any part of **an** aircraft. The new organisational structure and working practices mirror the cellular structure and process simplification of manufacturing organisations such as Rover. Health and safety was devolved to team leaders and team members, with support from a safety advisor. The status of rules and procedures remained unchanged in a tightly regulated industry, although personnel and management are all involved in the development of such working practices and procedures.

Nuclear firm: The organisation has reduced staff by about 10%, delayed management, restructured its business process and undergone major cultural change, including teamworking and multi-skilling. The drive for these changes was the need to reduce costs. The reorganisation of health and safety **was** an intimate part of the wider business reorganisation as any negative effects on safety were intolerable. The goals were to ensure that the reorganisation did not affect safety and that any opportunities to improve safety as part of the wider reorganisation were pursued. **Expert** review teams were set up to review change proposals and a continuous dialogue with the regulator was maintained. Workload assessments, risk assessments and task analyses were completed as detailed proposals emerged. **A** wide range of performance indicators were monitored, such as Lost Time Injury rates and a set of nuclear safety indicators. **A** detailed analysis of the change process itself was undertaken, with emphasis on the effects on morale etc. A communication process was set up with staff, audits were carried out and performance indicators monitored during the period of change. Safety performance initially deteriorated but subsequently LTA rates halved. Line management responsibility for safety has increased with greater workforce involvement in planning.

Postal collection and distribution business: The organisation has sought to move from an internally focused organisation, emphasising cost control and public accountability over and above customer needs, to an externally focused organisation which recognises and responds to customer needs. At the same time the organisation has sought to increase productivity and improve the treatment of staff, including reductions in staffing levels and **empowerment**. Safety officers were eliminated in an earlier 1986 phase of reorganisation and safety **was** taken out of line management. Subsequently a 1988 Health and Safety Executive audit report and the preparation for (aborted) privatisation prompted a number of initiatives, including the professionalisation of safety, embedding safety back into line management and development of audit systems. The ongoing initiative has succeeded in meeting new safety regulations and cascading ownership of safety into line management. Reported accident rates have fallen significantly.

The rail and chemical manufacturer formed independent safety review teams and operated formal management of change procedures. These organisations were involved in very large reorganisation projects, operated in sectors where it was judged that reorganisations had previously contributed to major accidents and considered themselves to operate in a

high risk sector where safety performance was critical to the success of the organisation. Other organisations adopted less formalised approaches to the management of change, relying on management competence and assistance from health and safety advisors without the application of a management of change procedure or formal review team.

CHAPTER 2

ASSESSMENT, PLANNING AND MANAGEMENT OF REORGANISATION

2.1 OVERVIEW

Health and safety should be managed in the same planned, considered and informed manner as all elements of business reorganisation. An approach to the health and safety planning, assessment and management process is illustrated in Figure 2.1. Having defined the objectives of the reorganisation and conceived the scope of changes, the health and safety implications of proposed changes should be assessed and appropriate actions incorporated into the reorganisation plan. The implementation of plans should be appropriately resourced and managed. The adequacy of all decisions, plans and resources should be continuously reviewed during the reorganisation by both the reorganisation management team and an independent reviewer(s) reporting to both the organisation team and executive management, with objectives, plans and implementation revised as appropriate. Health and safety performance should be reviewed and measured both during and after the reorganisation to detect any unexpected trends, with further actions formulated as necessary.

Figure 2.1 presents just one way of managing health and safety aspects of change. However, whichever way change is managed, the effect on health and safety management needs to be factored in.

2.2 SENIOR MANAGEMENT COMMITMENT

The firm and demonstrable commitment of senior management to the recognition, assessment and management of health and safety issues arising from reorganisation was considered by surveyed organisations to be vital for a number of reasons:

- effective control over health and safety matters rests with those who are leading the reorganisation, typically line management and/or project management. The commitment of senior management is required in order for line management to allocate time and attention to these issues.
 - given that the philosophy of reorganisation often entails encouraging the realisation of health and safety accountability by line management, it is important to consistently demonstrate this by facilitating line management contribution to the formulation of changes in health and safety management - otherwise there is a risk that the professed philosophy of devolvement is contradicted by exclusion of line management from key health and safety decisions.
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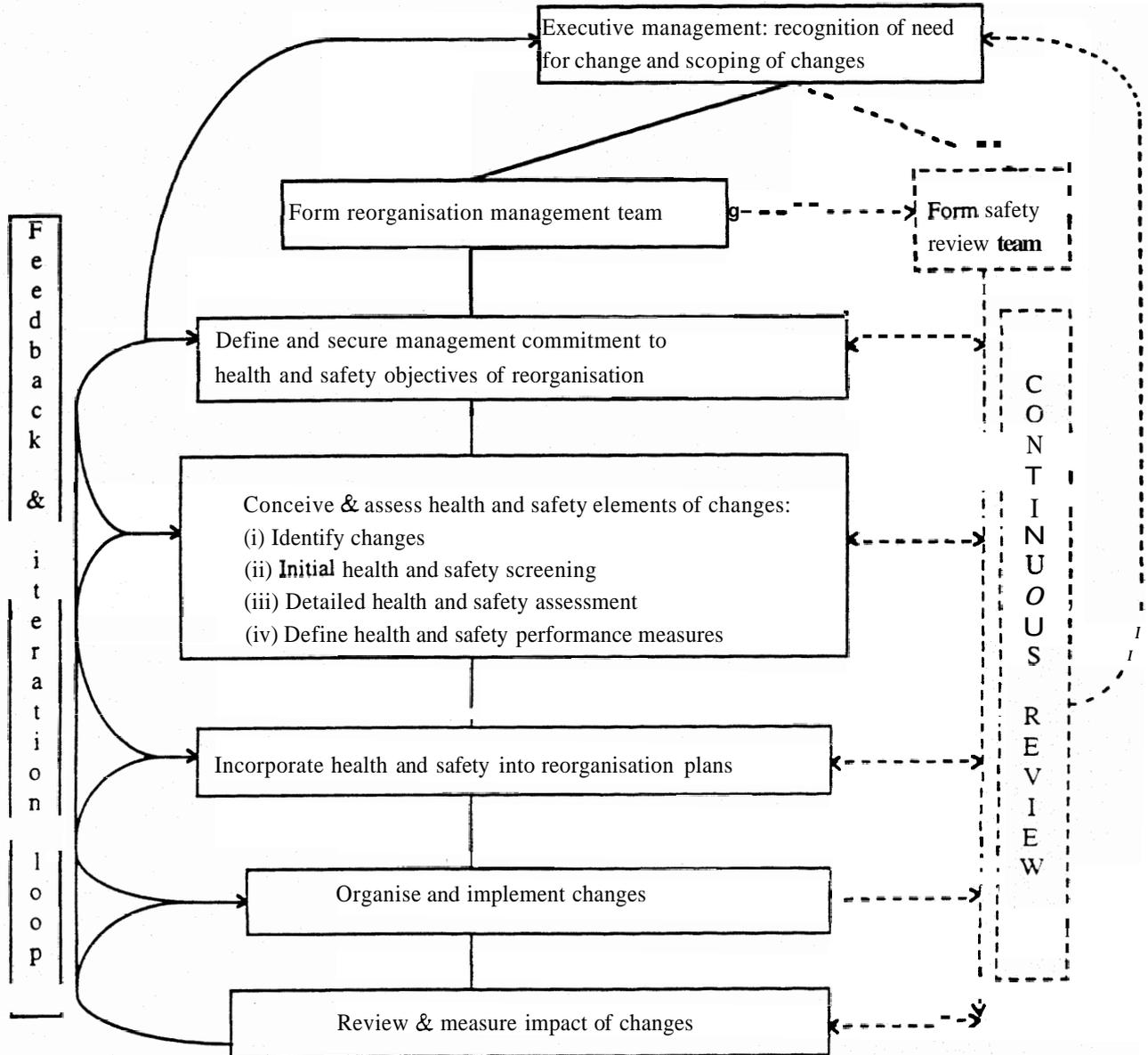
- responsibility for the impact of reorganisation on health and safety ultimately rests with senior management, and hence senior management need to take a lead here to discharge their duty of care.

Such commitment involved an executive level verbal or written policy statement outlining the health and safety elements of the reorganisation strategy, typically covering:

- the health and safety objectives of reorganisation.
 - where the locus of responsibility lies for meeting the latter objectives.
 - the respective roles of line management, project management, health and safety personnel and staff.
- the key elements of the process by which the objectives will be achieved, such as by a process of proactive identification of issues, assessment, planning, implementation and review.

As with all examples of management commitment it should be reinforced by a consistent pattern of decision making and feedback to line management and staff over the duration of the reorganisation, to demonstrate that the stated commitment is valid. In the cases of the rail, drinks, quarry and chemicals manufacturer this involved senior management seeking, reviewing and responding in a manner consistent with stated policy to briefings on health and safety matters on a regular basis throughout the period of reorganisation, intervening as appropriate to ensure implementation matched senior management expectations.

Figure 2.1 Overview of assessment, planning and management of health and safety aspects of reorganisation



2.3 ASSESSMENT OF AND REVIEW OF CHANGES

2.3.1 *Health and safety terms of reference*

The chemical manufacturer and rail operator considered it essential that the terms of reference should be defined before the reorganisation plans have been formulated and be endorsed by executive management. The actual terms should include an open ended commitment to identify all potential impacts of reorganisation on health and safety, to track the management of health and safety throughout the planning, implementation and review of the reorganisation, and minimise the uncertainty associated with changes. A typical scope of review covered:

Conception of reorganisation: Adequacy of the health and safety objectives of the reorganisation.

Planning of reorganisation: Scope and adequacy of health and safety aspects of reorganisation plans, such as whether all opportunities for health and safety improvement have been identified, **and;**

To provide opinion on the likely effect of changes on health and safety performance and standards.

Monitoring of implementation: Assessment of extent to which implementation of plans matches intent of plans.

Review of effects: To provide assessment of the actual impact, based on performance measures, of the reorganisation on health and safety performance and standards.

EXAMPLES OF ISSUES INCLUDED IN HEALTH AND SAFETY TERMS OF REFERENCE

Some particular issues which were addressed by one or more surveyed organisation included:

- numerical targets for safety **performance**, e.g. no worsening.
 - definition of roles and responsibilities, and whether responsibilities have been assigned to suitably qualified and experienced persons.
 - adequacy of training needs analysis and subsequent training of staff, contractors and management.
 - uniformity or consistency of standards applied across the groups involved in the reorganisation.
 - criteria for severance, i.e. to ensure that core competencies are retained.
 - phasing of severances, i.e. to ensure critical personnel are retained until competent replacements are available.
 - co-ordination of teams involved in the reorganisation - such as whether severances are being co-ordinated with retraining of new personnel.
 - communications with staff, third parties and management.
 - effectiveness (from a health and safety perspective) of proposed organisational and management **arrangements**.
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2.3.2 *Definition and recognition of a substantive change*

The objective at this point is to ensure that the potential impacts of changes are recognised at a sufficiently early stage in the conception and planning process to allow a suitable and sufficient assessment to be completed and thence for adequate health and safety actions to be specified and implemented as an integral part of the wider reorganisation. The rail organisation achieved this by the application of a "filter" where proposed changes were reviewed one by one to determine whether there **was any** potential impact on health and safety, regardless of the judged level of impact. Where a potential impact **was** identified and the complexity of issues and degree of risk were significant, further more detailed assessment **was** required.

The precise timing of the initial review varied from the conception stage of reorganisation to the planning stage and the implementation stage. However, the early identification of issues was considered essential as the failure to recognise important health and safety issues at an early stage in the reorganisation of a number of surveyed organisations led to late revisions in plans, incurring avoidable costs and risk. For example,

- the quarry firm redeveloped a central health and safety function subsequent to the reorganisation to ensure that health and safety standards were maintained whilst;
- the chemicals manufacturer introduced additional safety management requirements for contractors after the occurrence of a series of incidents.

In contrast, the water utility explicitly recognised that the existing health and safety function needed to be retained as a means of ensuring stability and the maintenance of health and safety standards.

It is considered important to have a clear definition of what comprises a material change. If the definition is too narrow important health and safety issues can be missed. Too broad a definition and the review process can capture changes which should be handled by standard management systems and the review work load grows out of proportion to the risk. Thus, the organisation needs a clear understanding of what constitutes, from a health and safety perspective, a substantive change.

EXAMPLES OF SUBSTANTIVE CHANGES

Some examples of changes reviewed from a health and safety perspective included:

- New competence criteria for posts with health and safety responsibilities, such as operations management.
- Elimination of one or more type of managerial or supervisory post, such as elimination of foreman or supervisory posts, or elimination of one or more tier of management.
- Merger of functionally distinct posts, such as merger of operations and maintenance management, or merger of operators and maintenance posts.
- Changes in the span of individual responsibility, such as an operations manager being assigned two processes instead of just one.
- Changes in reporting lines, allocation of accountabilities and responsibilities.
- Significant reduction in staffing levels without a proportionate reduction in workload.
- Significant increase in range or volume of outsourced work.
- Changes in operating or maintenance policy or procedures, such as switching from preventive maintenance to defect only maintenance.
- Changes in work organisation, such as changes in shift systems and hours of work.
- Changes in **performance** objectives and assessment systems, such as from tenure based to productivity based assessment.

2.3.3 *Assessment*

The type of assessment applied by surveyed organisations reflected the degree of risk and stage of reorganisation. Surveyed organisations typically applied judgement based peer review at the concept stage of reorganisation, followed by detailed risk assessment at the planning stage once the nature of changes and the health and safety issues have emerged.

Top level review (for screening changes)

The initial assessment of changes typically relies on judgement based review by suitably experienced and competent reviewers. The reviews were aided by the application of checklists in some cases, such as:

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- a the rail operator used a list of the major hazards associated with the organisation's operations, such as fire and explosion, to screen proposed changes at the **pre**-planning stage to identify which changes had the potential, however slight, to impact fatality risks.
 - the water utility used a **proforma** style checklist with a tick box for noting whether changes in staffing and contractor arrangements affected specific areas of health and safety, such as safety authorisation work.

Similarly, the tracking of health **and** safety actions during the reorganisation relied on peer review, such as:

- review of safety action plans to check whether they reflect the health and safety objectives of the reorganisation.
- review of training programmes to check that they address health and safety issues.

Risk Assessment

Formal, quantitative or judgement based risk assessments, are applied where there is uncertainty regarding the impact of changes or a regulatory requirement to perform an assessment, such as:

- the introduction of lone person working at the water utility.
- changes in train driver working hours and shift systems.
- multi-skilling of control room operator at the rail organisation.
- changes in chemical plant operating procedures.

Benchmarking and Inter-Company Comparisons

There was little evidence of benchmarking in the surveyed companies. None of the organisations identified other organisations who lead in the health and safety management of analogous processes, where (for example) transport of perishable food products is analogous to transport of blood supplies. However, some organisations did draw comparisons between themselves and others, including:

- the chemical manufacturer reviewed staffing levels at other chemical firms,
 - the mail organisation compared its approach to health and safety to Du Ponts, by means of a commissioned review, and;
 - comparison of working group formation at manufacturers with team formation in the aviation maintenance sector.
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2.3.4 Performance measures

One or more measure of **health** and safety performance were identified and tracked for the period before, during and after the reorganisation by some of the surveyed organisations, including the rail, nuclear, chemical, power and drinks manufacturer. The goal here is to gain an objective indication of the impact of changes on health and safety performance. It **was** judged that these measures provided assurance that the reorganisation had been a success, from a health and safety perspective, and helped to identify where additional actions were needed in light of unsatisfactory performance. However, due to the reactive nature of these measures, they were considered to be of limited value in guiding the planning and initial implementation of changes.

On the other hand, three of the surveyed organisations were unable to produce statistical information for the period before or during the reorganisation due to the lack of an appropriate management information system. This led to a concern that the organisation **was** unable to gauge its health and safety performance and associated risk of serious accidents and prosecution. All three organisations subsequently took steps to develop a health and safety information system, focusing on compilation of lost time accident rates, trend analysis and causal analysis.

In selecting performance measures, consideration should be given to the possibility that there may be conflicting trends in the rates of different types or causes of accidents and ill-health, with the consequence that a single overall measure of performance may obscure conflicting trends. Thus, the measure(s) should:

- (1) Be sensitive to the impact of changes.
- (2) Enable review of the pattern of causes of accidents to identify whether some causes are increasing whilst others are falling.
- (3) Be comparable across all parts of the organisation undergoing change.

Some organisations also used spot checks (audits) of working practices, standards of work and competence both during and after reorganisation to identify discrepancies between intended and actual performance. The checks related to the areas of work impacted by changes, such as:

- with the introduction of contract cleaners into high risk areas of operation checks focused on their compliance with **personal** protective equipment and safe working procedures.
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- with the introduction of multi-skilling and broadened spans of **management/supervisory** responsibility checks focused on personnel's understanding of their roles **and** responsibilities.

Close out reviews were completed by the rail and chemical manufacturing organisations. These included a statement outlining the impact of changes on health and safety performance and any lessons learnt during the process. In addition, the rail organisation required explicit "sign off" for completion of all safety control or improvements actions by a single named and accountable manager.

**EXAMPLES OF PERFORMANCE MEASURES USED TO MONITOR
IMPACT OF REORGANISATION ON HEALTH AND SAFETY**

- Perception of your supervisor or manager's commitment to accident reduction
- Lost Time Injury rates (both staff and contractors).
- All accident rates (i.e. non-reportable injuries such as minor cuts).
- Near misses.
- Frequency of trackside, train, station and tunnel fires on a rail network.
- Signals Passed At Danger (train drivers incorrectly passing signals at danger).
- Health and safety audit scores.
- Management understanding of hazards.
- **Absence/illness** rates.

In the examples above it is interesting that the measures were matched to the areas of performance impacted by changes, as follows:

- The Signals Passed At Danger measure **was** selected by the rail operator specifically to monitor the impact of changes in drivers' working hours on vigilance.
 - The chemical manufacturer used the Lost Time Injury rate to track the impact of changes on workplace safety but used near miss reporting to track the impact of changes on process safety in the belief that Lost Time Injury rates are not a sensitive indicator of the potential for process accidents.
 - An audit **was** rejected by the rail organisation on the grounds that (1) the frequency of audit was insufficient to identify trends within the time scale of the reorganisation and (2) that the audit would only identify the obvious impacts, which internal reviews should already have identified.
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2.4 PLANNING AND ORGANISATION OF IMPLEMENTATION

As with **any** aspect of reorganisation, health and safety actions should be properly resourced and planned. Where the reorganisation project team is assigned responsibility for identifying and resolving health and safety issues, the reorganisation team should incorporate appropriately competent health and safety advisors. In at least one case, the rail organisation, it **was** judged in hindsight that a higher level of health and safety resource should have been incorporated into the reorganisation management team at the outset. Some key points pursued by surveyed organisations were:

- (i) To incorporate health **and** safety issues and actions into reorganisation plans, with nominated persons and schedules for implementation and verification. With the **large** reorganisation projects at the rail and chemical manufacturer this involved a top level reorganisation plan and sub-plans for each project area, such as engineering versus operations versus headquarters reorganisation plans.
- (ii) To ensure that sufficient time and resources are allocated to complete all necessary assessment, planning and implementation work. This **was** considered particularly true where the reorganisation entailed a large volume of retraining, revision of operating procedures, transfer of staff and outsourcing of work.
- (iii) The reorganisation schedule should take account of the level of uncertainty regarding the impact of changes and the level of assessment and consultation which is required to resolve these uncertainties and the concerns of stakeholders, such as executive management, regulators and special interest groups. In the case of the chemicals manufacturer they judged that the successful and proactive management of communications with third parties facilitated the smooth progress of the reorganisation.

Special attention was given to "transition management" where the reorganisation involved large scale redundancies and internal transfer of staff, such as:

- ensuring that staff and management maintain a clear understanding of their roles and responsibilities during the transition period, such that key tasks and decisions are attended to during the reorganisation.
 - clarifying the respective roles of **departing** management and incoming management during hand-over periods.
 - ensuring that the hand-over period is sufficient to allow new or transferred individuals to acquire adequate experience, information and skills to handle their new tasks before the departure of other individuals or withdrawal of introductory support.
 - ensuring there is sufficient oversight of new or transferred staff during their induction period to assure performance meets adequate standards.
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- (iv) To employ suitable techniques for the assessment of health and safety requirements, such as:
- **task analysis** - all organisations which introduced multi-skilling or otherwise transferred staff used task analysis to determine training needs, roles and responsibilities.
 - **risk assessment** - to determine new health and safety requirements
 - **natural working group reviews** - the power generator completed natural working group reviews to determine which persons are functionally related and can be considered to comprise a recognisable working group or team, and to identify which reporting lines and interfaces should be retained.
 - **loose-tight reviews** - the rail operator conducted "loose-tight" reviews to determine which procedures and rules should retain their mandatory status and which may be reclassified as "guidance".
 - **"make or buy" reviews** - to determine which activities the organisation can outsource and which should be retained in-house.
- (v) To involve all interested parties in the conception and planning of changes, such as:
- representative bodies (e.g. trade unions)
 - contractors
 - regulators
 - emergency services, such as fire service
 - special interest groups

with the goal of identifying their concerns and addressing these in the reorganisation plan.

- (vi) Ensure each of the elements of a reorganisation are co-ordinated, such as co-ordinating the schedule of redundancies with the retraining programme for backfilled posts. Where the volume of work is large, as at the chemical manufacturer, the task of co-ordination can be assigned to a project management unit.

The rail operator created a special team of seconded managers, backed by consultants, to plan the changes needed and their implementation, although actual implementation was undertaken by local managers.

It was judged, by the power generator and chemical manufacturer, that the initial failure to co-ordinate severance plans with the specification of new job requirements meant some personnel left the organisation before the criticality of

their skills was recognised. The worth of the chemical manufacturer's review team was demonstrated by their recognition and resolution of this problem.

- (vii) Schedule key milestones for each stage of the reorganisation and define criteria for progressing from one phase of the reorganisation to the next, such as requiring all core retraining to be completed before releasing key personnel from employment. The schedule should incorporate a self-verification process (administered by the management team) to ensure that planned actions have been carried out as intended.
- (viii) Scope and implement a programme to communicate proposed changes and implementation progress to employees and third parties.
- (ix) Allow for the eventuality of rescheduling the reorganisation if it becomes apparent that critical health and safety actions are not feasible within initial time scale or resources.

2.5 ORGANISATION OF HEALTH AND SAFETY ASSESSMENT AND REVIEW.

Given that the review process is heavily dependent on the quality of judgement the organisation of the review team was considered to be critical by surveyed organisations. It was considered important by most organisations to assure the independence and quality of judgement, as follows:

Safety Review team (or reviewer) independence.

The reviewer or review team should be independent of those managing changes but with a remit to review and comment on any aspect of the reorganisation which may impact health and safety. However, the reviewer team's role should be clearly defined to ensure there is no confusion over who is accountable for health and safety performance. as follows:

- the role of the reviewer/team is to provide a check on the identification of health and safety issues and the adequacy of plans, providing additional conclusions and recommendations as appropriate. The review can only "sample" reorganisation plans rather than check each and every plan item and decision.
- responsibility for identifying health and safety issues, deciding upon health and safety actions and implementing these rests with those directing the reorganisation.

For the review to be effective it should have open access to people and documentation.

Reviewer competence and credibility

It was considered essential that reviewers are able to demonstrate:

- a subject matter knowledge of the organisation and operations under review,
- competence in the area of health and safety, and;
- sufficient experience.

to **be** regarded as a credible point of judgement by those managing the reorganisation.

Designated reporting procedures

The **reviewer/team's** reporting process was designed so as to ensure that the review process has an effective input to the decision making process. This typically included:

- a including **reviewer(s)** observations on the agenda of routine reorganisation progress meetings,
- designating a direct **reporting** line from the **reviewer(s)** to a level of management senior to those directing the reorganisation, and;
- agreeing report format and follow-up process, such as findings, actions, designated person, time scale for actions and timing of follow-up.

with the reporting frequency set according to the scale, speed and significance of reorganisation.

Some examples of review organisation include:

- involvement of staff and contractor safety committees in the review process, meeting monthly to review proposed changes, with meetings chaired by operations management and attended by health and safety advisors and safety representatives.
- a formation of an **ad hoc** review team comprising corporate, external and **ex-**operations management personnel, working **permanently** alongside the reorganisation management team.

with reporting:

- weekly reporting from review team to reorganisation management team.
 - a monthly by safety committee.
 - every 3 months from the review team to the chief executive.
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2.6 MORALE, STRESS AND UNCERTAINTY

Previous research, as summarised in Wright (1) (1996), has shown that the prospect of change often creates uncertainty regarding an individual's future. A person who is uncertain of their future can experience anxiety, depression, and feelings of anger and frustration, i.e. stress. Stress is a product of how individuals appraise a situation rather than the objective risk, although the two are connected. Consequently, these feelings can be experienced regardless of the ultimate outcome of changes and whether the changes enhance the individual's situation.

Anxiety is likely to be magnified where individuals:

- lack accurate information on the nature and implications of changes, as this will increase the objective level of uncertainty and reduce the individual's feeling of control over their own destiny.
- personality predisposes them to feel they lack any control over how changes will impact them.
have an expectation that their destiny will be determined by events out of their control.

The highest level of stress is likely to occur where an objective high level of change combines with a lack information on the nature and implications of changes, an individual's expectation of limited control over their own destiny and an objective lack of control over the changes.

Where the changes entail new roles and responsibilities the individual can also experience stress if they lack confidence in their abilities to cope with their prospective roles, even if they are objectively able to meet required standards of performance. Moreover, if their competence does not objectively match the demands of new roles, the perceived inability to cope may be associated with the continued experience of stress until the situation is resolved. Finally, if the individual lacks a clear understanding of their new roles, this may also be associated with feelings of anxiety due to the uncertainty surrounding what is expected of them and what they should expect of others, with anxiety arising from ambiguous inter-personal relations.

Signs which may point to stress amongst personnel include:

- decline in performance.
- loss of motivation and commitment.
- tension and conflict between colleagues.
increased level of absence and/or sickness.

The strategies for minimising stress and anxiety during and after reorganisation are comparable with those advocated for work in general, as outlined in "Stress At Work: A guide for employers" and published by the HSE, and in Cox (1993). However, these strategies take on greater importance when there is widespread change due to the higher

likelihood of stress **and/or** where there are changes in **staffing** in high risk operations. These strategies should aim to maximise individuals* ability to cope with new roles and responsibilities, minimise the level of uncertainty experienced by individuals and encourage a problem solving attitude **amongst** personnel towards the uncertainty and "threats" associated with changes. Some options are:

(1) **To reduce the level of uncertainty during change by, for example:**

- providing clear, accurate **and up** to date information on the nature and implications of changes.
- enabling an interactive process of communication so that individuals can raise personal enquiries and have them resolved. This can include face to face briefings from the staff's own manager. The rail operator used "song sheets" to get a consistent message, with briefings starting at the top and being cascaded so that everyone is briefed by their manager.
- anticipating role ambiguity during changes and thus clarifying roles and responsibilities during and after the period of reorganisation.
- minimise the period of active uncertainty where it is known that reorganisation is imminent or being planned. This does not prohibit the recognition that there may be further reorganisation in the future but does suggest that the period where individuals* roles are under active scrutiny should be kept to a minimum.

(2) **Increase the individual's feeling of control over their own destiny by:**

- providing them with information, as above, which allows them to evaluate the impact of changes and determine how they can respond to them.
 - involving individuals in key decisions, such as definition of redundancy terms.
 - provide individuals with information on the new organisational structure, norms and personnel systems with an explanation of what is expected of them, so that they can start to adjust their behaviour and skills to the new structure.
 - having a policy of "happy to stay, happy to go" (if it can be afforded) i.e. voluntary severance.
 - providing the opportunity of counselling aimed at facilitating a problem solving approach to changes by individuals. The problem solving should focus on what new skills and behaviours the person needs to develop to cope with their new roles, or on how to make best use of their experience
-

and qualifications if they do become redundant, i.e. employee assistance and/or outplacement counselling.

(3) Reduce anxiety about being unable to cope with new roles and responsibilities by:

- minimising the objective risk of a person being unable to cope with a new role by optimising the match of individual skills with those demanded by new roles, (i.e. selecting best people for posts and providing them with the competencies needed to cope with new roles through retraining).
- provide support such as access to a more experienced person during the induction period into new posts, to reinforce and/or augment new skills.
- ensuring that there are no obstacles to the person fulfilling their new role, such as lack of authority to discharge new supervisory or managerial duties, lack of finance to fund developments required to meet new performance
- providing a high level of feedback to individuals regarding their performance, so that they are reassured about their performance (with additional retraining or transfer to another post where their performance does not meet required standards). Confidence not just competence is important here as stress arises from the perceived ability to cope not just the individual's actual ability to cope.
- provide people with a clear understanding of their new roles and responsibilities, and the roles and responsibilities of persons around them.
- provide training and support in self-development skills where the new style of management has changed from management directed to self-directed development.

(4) Maximise individuals' ability to manage feelings of stress by providing stress management training and/or counselling. However, whilst stress management may serve to improve the individual's ability to manage their own feelings of stress, preference should be given to removing the sources of stress (by the means described in points 1 to 3) as the most effective means of stress reduction.

Where the level of job security remains at a low level after reorganisation, consideration could be given to highlighting how new skills demanded by new roles are "transferable" to other organisations, thus increasing the likelihood of the person retaining a feeling of control over their own destiny.

CHAPTER 3

HEALTH AND SAFETY MANAGEMENT IN DELAYED ORGANISATIONS

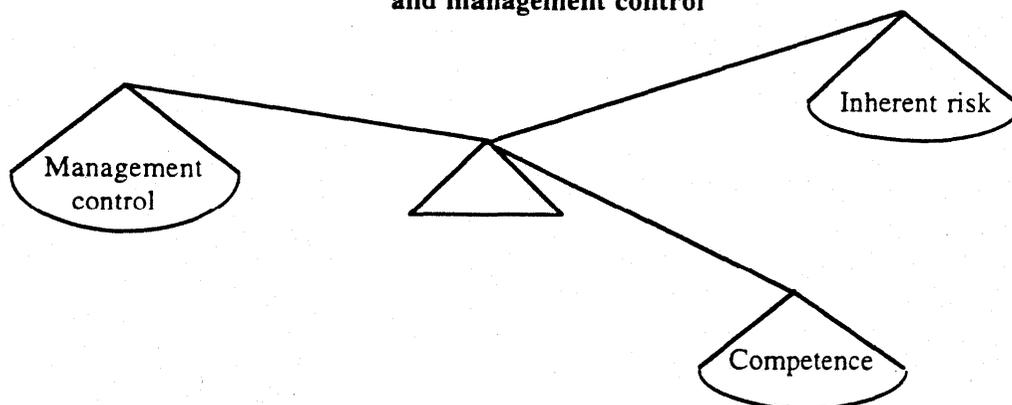
3.1 OVERVIEW

Whilst guidance is provided on an issue by issue basis in this chapter, it should be appreciated that no single issue can be considered in isolation. Where surveyed organisations sought a reduction in the level of rules and limits on job scopes, managerial and supervisory resources, attention simultaneously focused on how to assure standards are maintained (or improved) in the absence of these resources and limits. The task is to assess what balance can be struck between reliance on managerial, supervisory and in-house resources, rules and procedures versus reliance on the competence of employees and contractors. Where a greater reliance on employee and contractor competence is sought there is usually a proportionate increase in the emphasis placed on developing and assuring that an adequate level of competence and self-management is achieved. In striking this balance due regard is also given to the risk associated with devolved or outsourced tasks, and the level of discretion which the organisation judges it can confidently devolve. Thus, as shown in Figure 3.1, a three way balance is struck between:

- (1) the degree of supervision, management systems, engineered safety systems, rules and procedures;
- (2) competence, and;
- (3) inherent operational risk;

such that an adequate level of overall health and safety can be assured.

**Figure 3.1: Three way balance between risk, competence
and management control**



3.2 POLICY

Health **and** safety policy should be updated to match the new organisational and management arrangements and philosophy, such as changes in:

- **the** locus of accountability **and** responsibility for health and safety policy **formulation**, standard setting, implementation **and** review.
- **the** roles of line management, health **and** safety personnel, staff and contractors.
- **health and** safety objectives.
- **weight** attached to occupational health and safety, third party health and safety and process safety.
- **key** health and safety management systems **and** practices, such as changes in status of safety rules, manuals and engineering standards.

3.3 HEALTH AND SAFETY ORGANISATION AND MANAGEMENT

Goals and principles of organisation and management

All surveyed organisations sought to redefine the allocation of health and safety roles and responsibilities, as part of the wider business reorganisation, in pursuit of the following goals:

- to ensure that there is no confusion where accountability for health and safety **performance** lies.
- to ensure that accountability rests firmly with those persons who have direct authority and control over health and safety performance.
- empowering those people who are considered to be in the best position to match health and safety arrangements to local circumstance and needs (typically line management), hence allowing discretion to diverge from the "standard" system of management.
- to minimise decision making failure or inertia due to a diffusion of accountability and responsibility for health and safety (by assigning accountability for an area of management across too many people).

Where the reorganisation involved a reduction in central resources and sought to empower those persons who are directly responsible for operations, these goals were often achieved by placing greater reliance on the role of **line** management and personnel and less reliance on central health and safety functions for the implementation of health and safety management. However, this did not always lead to a reduction in central health and safety resources, as it was often **determined** that the central health and safety resource is required (at least initially) in order to develop line management's and personnel's ability to take the lead in the implementation of health and safety management. In one case where a dedicated central health and safety function was eliminated as part of a reorganisation, the

need for a central shared specialist health and safety capability was recognised at a later date and re-introduced into the organisation to co-ordinate and guide safety development across the organisation. It **was** judged that safety had "gone adrift" in the interim, with uncertainty over standards and consistency of practices.

Accountability, roles and responsibilities

As with all aspects of business management, a balance was struck in the **area** of health and safety between:

- the goal of devolution, namely generating action through the focusing of responsibility at the point of control, and;
- the need for the organisation (as the ultimate responsible body) to be assured that a minimum standard will be and has been attained, and;
- the need to be able to demonstrate a coherent and consistent approach to **health** and safety across the company to third parties, who may regard the business to comprise a single entity rather than a series of self-managing business units, and;
- ensuring that the empowerment of individual parts of the business does not lead to (1) each business re-inventing the same systems, and (2) business units becoming isolated from other units and failing to learn lessons from other parts of the business, and;
- the level of support which general management, supervisors and staff require in order to understand how to meet health and safety standards.

The precise level of devolution of responsibility and the range of responsibilities which are passed to line management and staff varied between organisations depending on the balance of these points. The role retained for the specialist health and safety function was defined by determining how a specialist function can "add value" to the activities of line management and staff.

The extent to which the devolvement of responsibility includes discretion over health and safety rules, procedures and systems varied between surveyed organisations, as discussed in section 3.9 of this guide. For example,

- (1) The status of rules, procedures and systems of health and safety management was unaltered at the chemical manufacturer, rail operator and aircraft maintainer, with devolution restricted to assigning prime responsibility for the implementation and audit of these rules to line management and staff.
 - (2) The drinks manufacturer allowed local variations to be produced without a requirement for approval from a central health and safety function. Reliance is placed on (1) line management giving due care and attention to revisions and (2) persuasion by health and safety **specialists**.
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- (3) At the quarry firm, the health and safety manager formulated a package of rules, procedures and systems. This **was** judged to be required in order for line management and staff to be able to understand how they can fulfil their health and safety responsibilities. Local management are able to add rules to supplement the core to take account of local circumstances, providing they pass the requirements of the group systems and **are** confirmed as doing so by the group Health and Safety Manager. The locus of responsibility for implementation of systems was retained by line management who also participated in and concurred with the company standards and guidance. This involved:
- Level 1: Draft policy centrally, with input from line management, and thence classify policy as mandatory
- Level 2: Draft performance standards centrally, again with input from line management, and hence make the achievement of performance standards "mandatory".
- Level 3: Issue a best practice model, to demonstrate what is expected of line management but class this as "guidance" over which management has discretion.
- (4) 8 core safety rules covering electro-mechanical systems were retained upon privatisation by the power generator. A set of mandatory national safety instructions were not fully adapted upon privatisation, as many of these instructions concerned power distribution rather than generation, and did not correspond to changed working practices. Subsequently, pertinent instructions were rationalised and presented as ACOP's and issued under health and safety policy. Stations can produce variations to ACOP's which central health and safety will audit. A distinction is made between core electro-mechanical system mandatory procedures and non-critical procedures, with discretion allowed over the latter.

Notwithstanding the goal of locating responsibility for performance with line management, an independent reporting line was maintained between health and safety and senior operations management in all cases. This was either direct from local health and safety advisors to senior management or direct from a central health and safety designate to senior management, where the latter had oversight of health and safety performance of each **part** of the business. The objective here is to retain an independent avenue for assuring, on an exception basis, senior management that line management is discharging its responsibilities. To ensure that effective accountability for performance is retained by line management, the authority to intervene in the health and safety management of individual business units is restricted to senior management as opposed to any central or local health and safety function.

TYPICAL ALLOCATION OF HEALTH AND SAFETY RESPONSIBILITIES

Senior management: are assigned ultimate accountability for health and safety policy and performance, necessitating regular review and approval of reported performance and improvement plans.

Line management: line management are assigned responsibility for:

- ensuring performance meets the required standard and follows company policy.
- the implementation of health and safety arrangements.
- participating in the formulation of health and safety management systems, procedures and reviews.

This extended to passing responsibility for the operation of safety authorisation and permit procedures from health and safety personnel to line management **and/or** team leaders, as discussed in section 3.9 of this guide.

Staff: to understand their roles and responsibilities, discharge responsibilities without recourse to direct supervision from other, resolution and reporting of problems and participation in improvement of health and safety **performance**.

Health and safety function: The range of "value adding" functions retained by a specialist health and safety function typically included:

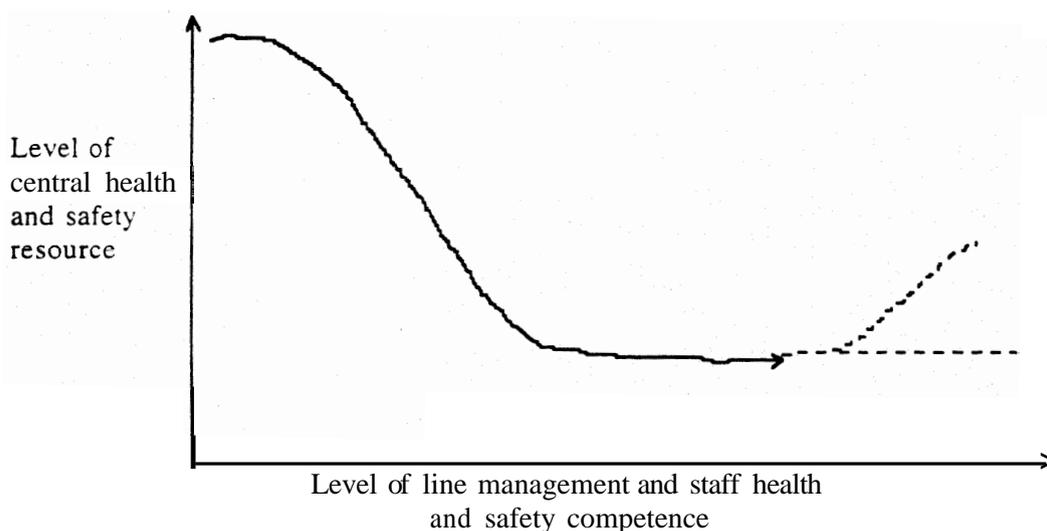
- advising on policy.
 - advising on the health and safety standards which need to be achieved.
 - **assisting** line management in the development of systems required to meet standards.
 - collating health and safety performance measures from each part of the business, interpreting these and forwarding **conclusions** on to senior management for their review
 - completion of occasional top level "corporate audits" of local health and safety management systems to ensure that self-audit and management arrangements are in place and meet adequate standards.
 - assessing the implications of new regulations.
 - provision of specialist advice and services such as Quantified Risk Assessment, safety management advice and research.
 - facilitating or leading the collation and dissemination of lessons learnt from one part of a business to other parts of business.
 - providing advice on industry best practice and lessons learnt from outside of the company
 - management of interface with third parties, such as with the **HSE**.
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Health and safety resources

The level of specialist health and safety resource retained by the organisation depends on the judged need for support. This varied between organisations depending on complexity of operations, role of the health and safety function, and the strategy for implementing the devolvement of health and safety responsibilities to line management. The level of health and safety resource retained reflected the level of assistance required to develop line management and staff competence to a level where they could implement health and safety management with little assistance, and contribute to their continued improvement. Consequently, the retained level of resource increased in some and decreased in other organisations.

An inverse or "U" relationship appears to occur in surveyed organisations between the level of health and safety resource and line management/staff competence, where demand initially decreases as competence increases but either levels off or increases again once a certain level of competence is achieved (with a minimum level of central resource retained for executive and oversight purposes). This is illustrated in Figure 3.2.

Figure 3.2: Balance of retained health and safety resource **with** line **management/staff** health and safety competence



For example, the level of in-house resources increased at the rail, drinks manufacturer and (at the site level) power generator and remained unaltered initially at the water utility to assist in the development of line management and staff health and safety competence. In these cases, the health and safety resource was required to manage:

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- a high volume of health and safety training needs analysis,
 - a high volume of health and safety training to instruct personnel on their responsibilities, standards and systems,
 - the revision of health **and** safety management systems to reflect a devolved approach,
 - reviewing rules, procedures and practices to determine where these need to be changed to match new empowered style of management,
 - providing assistance to line management and staff in the initial implementation of health and safety management arrangements, and;
 - monitoring the success of the devolution process.

Once it is concluded that the competence of line management and staff has developed to an adequate level the in-house health and safety function was again reviewed in most organisations. As before the level of resource increased or decreased depending on:

- (1) The residual role of health and safety, and particularly the extent to which it maintains involvement in implementation and audits,
- (2) The need for continued specialist support,
- (3) The recognition of necessary improvements previously left unattended due to decision making inertia brought about by previous diffusion of responsibility, and;
- (4) The size of workforce, complexity and risk associated with operations retained after downsizing.

For example:

- a group Health & Safety Manager was appointed at the quarry HQ to assist in developing new systems.
 - the level of in-house specialist support fell at the rail operator (having previously grown) where line management and staff were able to handle a larger proportion of safety issues.
 - where the size of the organisational unit within the quarry firm fell below a point where it can support a dedicated health and safety advisor. health and safety advisors were shared across business units.
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- a review of safety resources at the power generator led to a strengthening of resources at some sites, retention of part-time resources at others and introduction of non-specialist resources at others.

The retained specialist health and safety resources comprised one or both of a central shared function **and** local advisors attached to specific parts of the business, although there is a tendency to retain a central resource (of variable size) to manage company wide issues.

The actual strategy, and hence the level of retained resource, for developing line management and staff competence varied from the “**training**” oriented approach **above**, **and** instead relied to a larger degree on:

- the communication of expectations through the completion of formal health and safety audits with associated follow-up action plans and monitoring, using either bespoke or proprietary audit schemes at the rail organisation, drinks manufacturer and power generator.
- the utilisation of consultants to deliver training needs analysis, training packages **and** revisions to management systems instead of relying solely on in-house personnel, at the rail operator and drinks manufacturer.

However, some organisations raised concern over the consistency of the chosen strategy for developing competence with the goal of placing effective responsibility for health and safety with line management and staff. In particular, a strategy which is perceived **as** prescribing a single approach to health and safety management **was** ultimately regarded **as** a contradiction to the goal of devolution at the power generator, rail operator and drinks manufacturer, with the possibility that line management and staff would retain the view that other functions (namely health and safety) effectively take the lead in health and safety.

Finally, there is also a tendency for the composition of the health and safety function to continually change in line with changes in their role and relationship with the rest of the business. As the health and safety function changes from;

- one focused on the implementation of "standard" health and safety management arrangements, enforcement and assessment, to;
- one focused on the provision of specialist support. policy advice and co-ordination;

so the need for specialist health and safety professionals as opposed to generalists grew at the power generator, chemicals manufacturer, rail operator and drinks manufacturer. Accordingly, there is a tendency for the competence criteria for the health and safety function to be revised with greater emphasis on health and safety **and/or** related qualifications, where this is not already the case.

Auditing, monitoring and review

Here again a balance is struck between the goal of avoiding confusion over the location of responsibility and the company's need to gain assurance regarding health and safety performance. In the case of auditing, monitoring **and** review surveyed organisations gave consideration to:

- the potential for external auditing, monitoring and review to confuse the locus of **accountability**. In particular, what is the potential of line management relying on external auditing for the identification of improvements as opposed to line management proactively deciding on improvement themselves? May this transfer effective responsibility for improvements from line management to auditors? What is the role of audit systems if line management are responsible for their performance and identification of improvements?
- the need for the company, as the ultimate point of accountability, to have assurance that performance is adequate.

These concerns were met, at the chemicals manufacturer and quarry firms, by the adoption of a **3** stage progression of audits as follows:

- Level 1: Top level **audit/review** by central health and safety function of business unit compliance with group policy and performance standards, including check on effectiveness of business unit self-audits. The aim here is to provide assurance to top management that each part of the business is working within bounds of tolerability, even if the methods vary.
- Level 2: Occasional (bi-annual) business unit self-audit/audit review of effectiveness of health and safety management system. This may involve cross-auditing between business units to retain independence of auditors from line management. The role of this audit is to assure local management that their systems meet company standards.
- Level 3: Regular annual self audits within a business unit of the implementation of specified sections of health and safety management system, such as audit of Personal Protective Equipment or personal hygiene practices, typically conducted by local health and safety advisors **and/or** local management. The role of this audit is to assure local management that their systems are being put into practice.

Thus, the role of external (external to the business unit) auditing shifts from verification of line management practices to verification of the adequacy of the health and safety management system. Where confidence is placed in the effectiveness of local management systems and self-auditing systems, the frequency and depth of external auditing decline. A pre-requisite of this approach is for the central function to have assured itself that local

self-auditing and management systems are adequate, and that line management are able to identify actions themselves.

Also, as stated earlier, audits were initially used by some organisations as **part** of the initiative to increase line management and staff understanding of health and safety management. Once this understanding is in place the role of auditing changes from an educational role to a monitoring one, with an associated reduction in the depth and frequency of auditing.

However, a higher level of external formal auditing, using a proprietary technique, **was** retained at the chemicals manufacturer which wished to be able to demonstrate to third parties how its performance compared against other organisations.

3.4 STAFF AND MANAGEMENT HEALTH AND SAFETY COMPETENCE

3.4.1 ASSURING HEALTH AND SAFETY COMPETENCE

The majority of the surveyed organisations devoted a substantial level of resources to training needs analysis and training. This training was judged to be a crucial even pivotal, element of the reorganisation without which the success of reorganisation could not be assured. Indeed, the reorganisation programme of a number of surveyed organisations depended on a satisfactory level of competency being achieved, whilst other organisations viewed improved competency as one of the central means of achieving the goals of change. Thus, it is perhaps **unsurprising** that:

- the rail operator expended £20m on training,
- the drinks manufacturer expended £2m on training,
- the number of safety training staff at a power generation site was increased from 1 to 3,
- the aviation firm formed a link with the local TEC to meet training needs.

The distinction between explicit health and safety competence, such as the ability to carry out workplace risk assessments, and general technical, operating and **managerial/supervisory** competencies is minimal **as** both areas of competence influence health and safety performance. For example, lack of team leadership skills was judged to be as likely to detract from the safety performance of teams **as** it would detract from team productivity. Similarly, substandard maintenance of safety critical plant could pose a major safety hazard just as it may cause costly unscheduled downtime. Consequently, the assurance of general technical, operational and **managerial/supervisory** competence was **regarded** to be of equal importance in the achievement of safety and productivity goals, with little distinction between the two concerns.

The objective underlying competence initiatives is to ensure that competence is transferred along with re-assigned responsibilities and/or for new roles. The approach to assuring competence during organisational change mirrors the approach commonly applied to the selection and development of all new appointments, transfers and promotions. However,

there are a number of differences between day to day competence issues and competence issues associated with reorganisation. On the one hand, the scale of change increases the risk associated with competence. On the other hand, organisational changes are often used as an opportunity to improve levels of competence. For example, the rail operator restricted the geographic area that staff work in and revised rules governing transfers to damp down the amount of movement between locations, to improve familiarity with surroundings and reduce the learning curve.

(1) MAGNIFIED SCALE AND IMPORTANCE OF RE-TRAINING:

Firstly, the importance of adopting a rigorous approach to competence is magnified greatly in those reorganisations where large numbers of people are allocated new duties and tasks. Accordingly, there may be a need to (1) repeat training needs analysis of jobs across of the organisation due to the **change** in job definitions and (2) re-assess the skills and competencies of people to **determine their person-job fit and development needs**.

(2) NEW SKILLS:

Secondly, the new organisational structure and style of management can demand skills which are new to the organisation as well as to the individual, such as team leadership skills noted above. At a management level, changes in the style of supervision and management can have ramifications for the skills required of persons with "supervisory" health and safety responsibilities. For example, supervisory roles commonly changed from:

- one which emphasised technical competence and a directional style of management, where the supervisor or foreman decided upon how to complete a task and thence directed others in their work, to;
- one in which a "team leader" possesses no authority or technical leadership but instead relies on leadership skills to motivate and co-ordinate the work of others, and facilitate their self development.

The surveyed organisations considered it important that the ability of the "team leader" to "lead" and co-ordinate was assured in order for the team's health and safety actions to be **effective**. Thus, part of the competence initiative needs to focus on the new skills arising **from a changed style of organisation and management needed by personnel to discharge their health and safety supervisory duties**.

Similarly, where line **management** are intended to identify improvements in health and **safety management system, their training** is likely to include an element of theory such as on the "loss causation model". This **was** considered to be a central element of the development of health and safety capability at the rail operator, drinks manufacturer and power generator.

At staff level the new style of management often placed greater emphasis on the philosophy of self-development, to mirror the new devolved and empowered culture. Where staff previously relied upon and expected the organisation to determine training and development needs, attention **was** given to motivating and helping personnel to learn self-development skills.

(3) BALANCE OF SKILLS IN NEW WORK GROUPS:

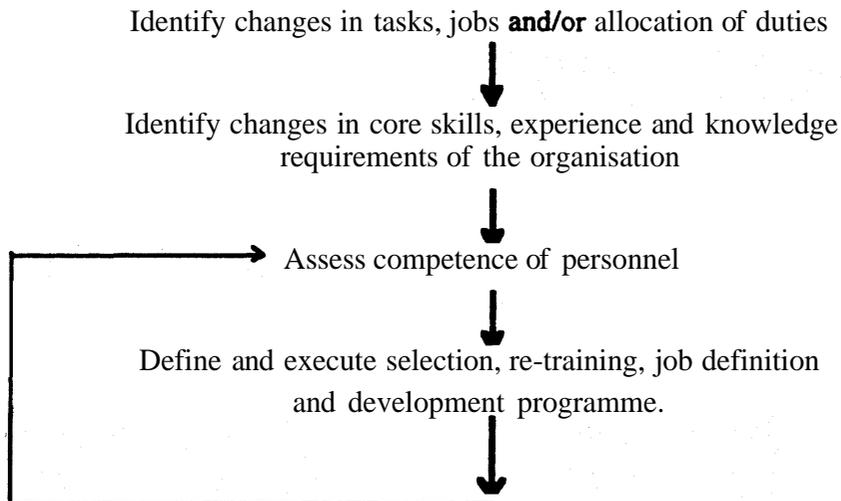
Thirdly, where the reorganisation involved a change in work organisation (i.e. introduction of team working), attention was given afresh to the balance of skills held by work groups. In particular:

- (i) with the introduction of multi-skilling and team work, it is possible that the range of skills **and** level of experience possessed by each team member will vary.
- (ii) with the delayering of management **and/or** broadening of roles, individual members of management are **likely** to be more experienced and knowledgeable in some of their areas of responsibility than others.

Accordingly, there is a need to consider afresh the balance of skills, knowledge and experience possessed by the work group, be this the management team or the operations/maintenance team.

(4) RETENTION OF CORE COMPETENCIES:

Fourthly, large numbers of staff left the employment of a number of surveyed organisations. This raised the issue of retention of people with key competencies and the concern that, if uncontrolled, gaps could emerge in the range of skills possessed by the organisation. Accordingly, actions were incorporated into the reorganisation plan to mitigate this possibility.

ACHIEVING COMPETENCE IN THE NEW ORGANISATION**Figure 3.3 Retraining needs analysis*****TRAINING NEEDS ARISING FROM REORGANISATION***

The health and safety goal of training needs analysis is to ensure that the integrity of equipment, operations and/or processes is assured and that operational safety is unimpaired by mis-management, mis-operation, **mis-maintenance** or poor engineering. Given that management decision making is as important, if not more so, than staff performance the approach outlined in Figure 3.3 should:

- be applied to all grades of personnel, from cleaners through technical and engineering grades to supervisory and managerial grades of personnel.
- include general technical, operational, and management skills as well as specific health and safety skills.
- ensure that those people who are assigned widened or greater managerial or supervisory roles are able to discharge their managerial tasks.

continued overleaf.....

Examples of re-training requirements at different levels in the surveyed organisations include:

- raising operations management knowledge of hazards associated with their broadened span of responsibility, such as raising a process manager's knowledge of transport related hazards upon being made responsible for both the production and distribution stages of an operation at the chemical manufacturer.
- increasing management skills of supervisors assigned devolved managerial roles and managers awarded higher levels of authority, at the chemical manufacturer.
- instructing supervisory personnel on the correct **operation/maintenance** of a system, the hazards and how accidents may occur, upon being transferred to a new area of work or widened range of tasks and responsibilities. For example, induction training in the hazards and safe operation of plant was delivered where chemical process superintendents were transferred from one part of a plant to another.
- raising fitter's knowledge of hazards, personal protective equipment and safe working practices associated with simple electrical isolation tasks incorporated into the new multi-skilled remit of fitters.
- where electricians' role was extended to include starting up equipment (in addition to its repair) the **electricians** were trained in start up procedures.
- equipping "foreman" with the interpersonal skills required to handle a leadership role.
- training operators who have been nominated as team leaders in COSHH, risk assessment, safe working practices, accident reporting and team leadership.

As indicated in Figure 3.3, having completed a task analysis, defined the new core competencies and developed job descriptions for new posts, the match of personnel skills to those required by these posts are assessed and thence training programmes are developed. Selection for posts is based on the match of skills rather than just tenure, seniority or technical excellence. Thus, team leaders can be drawn from amongst staff as well as from "foreman" or supervisory grades, whilst management can be drawn from supervisory grades, if their mix of attitudes, personality, person management skills and technical skills are a better match than other more senior persons.

For example, where a management role has been broadened beyond a point where a single individual will be able to claim technical supremacy, the manager was expected to depend much more on technical opinion from others. Accordingly, the criteria for selection and subsequent focus of training and development shifted from technical issues to leadership and managerial criteria.

JOB DESCRIPTIONS

As with all personnel development schemes, personnel need to be provided with a clear understanding of their roles, accountabilities, interfaces with other people and responsibilities. As with the issue of competence, it is equally important (from a health and safety perspective) for job descriptions (occasionally referred to as key accountabilities to allow additional duties to be added) to cover operational related roles as it is for them to cover specific health and safety roles. Where a reorganisation has involved a major revision of roles, re-allocation of responsibilities and changes in reporting lines the importance of providing guidance on roles is again magnified. Revised job descriptions were often incorporated into the re-training programme to ensure that personnel had a clear understanding of their role and the role of people with whom they work or interface. Thus, competence programmes incorporated:

- a definition of individuals' core competence and limits upon the span of tasks they are competent to undertake. This was complimented, at the power generator, by training personnel to recognise the limits of their competence and the need to seek **help** from either your own or another team.
- a specification of the experience, further training and competence assessments that should be fulfilled before a person is allowed to progress to either broader spans of multi-skilled work **and/or** higher grades of work.

As with re-training, it is equally important to define supervisory and managerial jobs as it is to define staff positions, particularly where the organisation has assigned a broader span of decisions to management. Thus, new limits of authority are defined for supervisory and managerial posts, taking account of the new boundaries of management and supervisory competence. For example, operations management are empowered to authorise minor modifications to plant but are required to seek authorisation for major modifications to safety critical and capital intensive plant at the chemicals manufacturer and the quarry firm.

On occasion, surveyed organisations aimed to introduce more flexibility in the scope of individual's roles, as part of a new style of management to enhance individual contribution to the business, especially where team working is introduced with team members empowered to agree task specific roles amongst themselves. In this situation consideration should be given to striking a balance between empowerment and assuring competence on key health and safety issues. An option pursued by the rail operator was to **carry** out a

"tight-loose" review. The review identified safety critical tasks for which a high level of assurance is required and for which **little** discretion is awarded to staff, and non critical tasks over which staff have discretion.

BALANCING SKILLS IN NEW WORK GROUPS

The chemical manufacturer approached this issue in four ways:

- (1) Firstly, the range of skills, experience and knowledge required by each team **was determined** and an ideal balance of team membership **was** defined. For example, in a **6** person team of multi-skilled technicians jointly responsible for operations, electrical and mechanical maintenance, a **requirement was** set to have at least one person with (say) over 5 or 10 years experience and supporting qualifications for each of electrical, mechanical and operations work.
- (2) Secondly, an individual was nominated to manage and co-ordinate shift allocations to ensure that the latter requirements were fulfilled.
- (3) A core of technical specialists **and/or** supervisors are on call to assist, as required.
- (4) At a managerial level, at least one person was retained with technical knowledge **and** experience in each of the areas of operation under the operations manager's responsibility. i.e. with the merger of materials handling (import of chemical feedstock), process operations and distribution an engineer or senior superintendent from each of these areas was included in the new team.

RETAINING CORE COMPETENCIES

Typically, the approach involved first defining a set of core competencies which should be retained by the organisation to assure safe operations and then either:

- identifying a set of personnel who are excluded from **voluntary** redundancy, or;
- phasing **severances** such that replacements are trained and allowed sufficient time to become suitably experienced in their new roles, before allowing core personnel to depart, and;
- considering applicants for redundancy as a whole and thence ensuring that sufficient personnel with core competencies are retained.

This approach included determining which categories of personnel could be considered for back-filling posts vacated under a voluntary redundancy scheme. For example, at the chemicals manufacturer, personnel from one area of operations could be considered for another area of operations but not for logistics work, with a parallel restriction on only considering materials handling or logistics personnel for back-filling vacancies in other materials handling or logistics operations.

3.4.2 DEFINITION OF COMPETENCE STANDARDS

A review was completed of the standards of competence required for the new or redefined posts at some of the surveyed organisations. The reviews aimed to define a standard of competence which is required for an adequate overall level of safety to be achieved by the new organisational arrangements. In some cases, such as at the power generator, competence standards for individuals involved in certain tasks changed although the competence standard for the task remained unaltered with greater emphasis placed on team working.

EXAMPLES OF TASK BASED COMPETENCE STANDARDS

- the same pass marks and performance standards were applied to members of multi-skilled teams as before at the chemicals manufacturer, with individuals required to progressively improve their standard of competence and qualifications to broaden their role beyond an initial restricted level of multi-skilling.
- where an appropriately trained multi-skilled electrician works as part of a team alongside ex-operators, the electrician was empowered to assist in the shut down of a pump. Given that the electrician's role is restricted to shutting down a defined range of equipment and does not extend to more complex operational tasks, the electrician's overall standard of operational competence was less than **multi-skilled operators'** but adequate for these few tasks.
- railway station staff were trained to assist in emergencies where better qualified personnel (i.e. supervisors) are unavoidably unavailable, with the understanding that the level of staff competence is less than supervisors' competence, but is still an improvement over previous levels.
- where a manager's role was broadened to cover new operations a lower standard of operational knowledge was required, assuming that the manager's team includes the necessary specialist personnel and that such **expertise** is utilised **as** required.
- a new (lower skilled) mechanics grade of staff was introduced at the aircraft maintainer. However, the range of tasks assigned to mechanics is restricted in accordance with their competence, with other tasks assigned to technicians and licensed engineers.

In each of the latter examples, the level of competence required for each task remains unaltered or has increased.

3.5 REWARD AND APPRAISAL SYSTEMS

The reward and appraisal systems were adjusted to reinforce the new allocation of accountabilities and the types of behaviours sought by organisations. In the case of health **and** safety this led to the inclusion of health and safety performance in the performance based assessment system, where such assessment systems were introduced as part of the reorganisation. Thus, for example, a percentage of line management salary or bonus was linked to performance against an agreed set of health and safety objectives, such as the objective to continuously reduce the lost time injury rate.

3.6 RETENTION OF CO-ORDINATING FUNCTION OF SUPERVISORS

With the creation of self-managing teams, the traditional "command and control" role of the supervisor **was** often regarded as redundant, except as a point of occasional specialist expertise called in by teams. However, a supervisory role was retained where the work of teams interacts and assistance is required to co-ordinate their work. Examples of where "co-ordinating" types of supervisory roles have been retained include:

- where personnel should co-ordinate their work but are physically separated and cannot directly communicate.
- the volume of interacting work is such that direct co-ordination by teams or team members is impractical.
- the actions of one team or person may impact the safety of others, such as where shut down of one section of a plant may impact plant safety elsewhere.

Supervisors also retained a work authorisation role where this is considered necessary to prevent the work of one team inadvertently impacting another team, or where regulatory requirements demanded authorisation by licensed engineers. However, in the former case, the range of authorisation would be limited to only those tasks where the actions of teams impacted other areas or people, with self-authorisation allowed for other tasks.

3.7 EMERGENCY RESPONSE CAPABILITY

Review of previous disasters suggests that the organisation should aim to assure that an adequate level of overall health and safety is achieved by an appropriate balance of human and engineered safety systems. Accordingly, due account should be taken of the need to retain suitably experienced and competent staff to respond to abnormal, exceptional and/or emergency events when reviewing staffing levels and the span of responsibilities. The number and competence of staff should be sufficient for both normal and abnormal events. However, the actual level of human resource will depend on the particular combination of engineered and human "safety" systems. Also, the level of protection required should reflect the risk posed by the events. Thus, an adequate level of overall safety can be achieved by a number of routes, such as:

-
- an increase in engineered safety systems, possibly coinciding with a reduction in staffing.
 - utilisation of a shared resource.
 - reduction in the frequency and severity of abnormal events.

However, where reliance is still placed on personnel to handle abnormal operations, a sufficient number of suitably competent personnel should be retained to achieve an adequate level of safety. Ideally the adequacy of emergency response capabilities should be demonstrated, as via exercises.

3.8 OUTSOURCING

3.8.1 ASSESSMENT OF OUTSOURCING RISK

A common objective of reorganisation was to outsource a larger proportion of non-core activities and activities which involve variable workloads for which the company does not wish to retain a fixed in-house resource. Procedures and systems for the management of contractors were usually incorporated into the standard management procedures of surveyed organisations. However, the importance of contractor health and safety management and the nature of the managerial **task** changed significantly upon reorganisation.

EXAMPLES OF SIGNIFICANT CHANGES IN OUTSOURCING

- contracting out of a much higher volume of tasks, with a possible increase in the number of interfaces to be managed, range of organisations involved and greater volume of contractors to be managed.
- activities previously carried out internally may be outsourced. The nature of outsourced work may change, requiring a review of the process of assuring the quality of outsourced work.
- a reduction in the level of resources retained in house to manage outsourcing.

Some typical examples of outsourced activities which were given close scrutiny include:

- major maintenance, design, engineering and commissioning projects.
 - cleaning, where housekeeping is a safety critical **task** due to fire or other hazards.
 - transport of **hazardous** materials.
 - plant operation.
 - routine *maintenance* tasks such as erection of scaffolding and welding.
-

Upon increasing the organisation's dependence on outsourcing, the adequacy of contractor safety management procedures is judged to gain greater importance and should be reviewed to **determine** if a more rigorous set of requirements are needed to avoid "importing" risk into the organisation. This includes the risk of contractor injuries and ill-health **and** the risk of contractors impacting the safety of the company's plant and people. The increased use of contractors raised a number of issues, especially where this coincided with a reduction in in-house resources available to manage contractors. In the case of the chemicals manufacturer, initial contractor safety performance was considered to be unacceptable and contractor safety management systems had to be belatedly upgraded. Some of the issues outlined below are "lessons **learnt**" by surveyed organisations which they judged would ideally have been considered at the outset.

(1) Does the rigour of contractor management match the risk associated with outsourced activities?

The organisation should review the risk associated with outsourced activities and revise systems and procedures to reflect the level of risk associated with the new range of outsourced activities. The risk associated with outsourcing may have changed for a number of reasons:

- an increased volume of outsourcing.
- increased number of contractors, creating a larger number of inter-organisational interfaces.
- the safety **criticality** of outsourced work often changes, such as outsourcing workshop based maintenance of safety critical equipment or on site maintenance of high risk sections of plant.
- contractors may now be physically working in higher risk areas, such as cleaning trains in depots versus office cleaning.

Where the safety criticality of outsourced activities has increased, the exposure of the organisation to errors and failures on the part of outsourced services will have also increased. Accordingly, there is often a case for increasing the emphasis placed on assuring contractor competence and performance as well as upgrading contractor management procedures and systems.

(2) Has the qualitative nature of outsourced work changed?

As **part** of this review, the potential impact of an increased range of outsourced tasks on the suitability of existing contractor management systems should be considered. Examples of changes in the qualitative nature of outsourced work include:

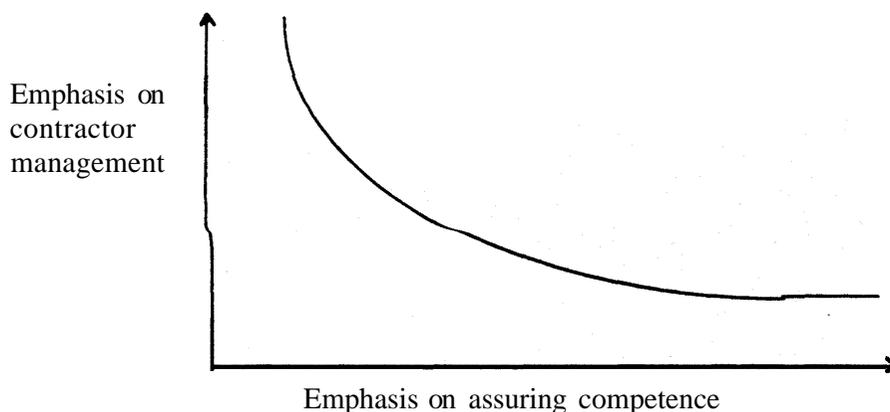
- outsourcing "intellectual" work such as design as well as work such as cleaning.
 - outsourcing the whole process of design, engineering, installation and commissioning to one or more contractor instead of outsourcing just one or two of these activities.
-

Consequently, it may be determined that a contractor safety management programme which has previously correctly focused on **managing** the workplace safety of contractors when outsourcing only extended to tasks such as catering, needs to be significantly revised when safety critical tasks such as engineering design and plant maintenance are outsourced.

(3) *What balance can be struck between contractor supervision and contractor self-management?*

A goal of outsourcing is often to minimise the level of in-house resources. There is also a concern that contractor supervision removes the motivation for the contractor to self-supervise, and that close supervision will import liability back to the client organisation. On the other hand, surveyed organisations still aim to manage the company-contractor interface and assure the quality of their work. The trend to minimise in-house resources again increased the importance of assuring contractor competence, as greater reliance is now placed on contractor self-management. Accordingly, a balance is struck between the emphasis placed on assuring contractor competence and direct supervision and monitoring. As illustrated in Figure 3.4, the emphasis placed on gaining assurance of contractor competence increases as the emphasis placed on contractor supervision reduces. When it becomes possible to assert that contractors are competent and able to take the lead in assuring their own work, the level of contractor supervision and monitoring fell.

Figure 3.4: Balance of emphasis on assuring contractor competence versus contractor supervision and monitoring



(4) *Familiarity and cultural synergy of contractors with client.*

Some outsourcing involves using contractors whose staff are very familiar with the organisation and its hazards such as where an activity is sold off through a trade sale, management buy out or where TUPE applied. These contractors may pose less short term risk. However, the contractor will gradually import new staff not familiar with the client's

hazards and procedures. Thus, the longer term risk may be more significant, especially the loss of knowledge through turnover in contractor workforce.

(5) *Changes in method of assessment.*

Outsourcing is often associated with the introduction of performance based contracts and assessment, which stipulate the outcomes but not how to achieve them. A balance needs to be struck between allowing contractors freedom to choose how to meet the performance required with the need to assure safety performance is satisfactory

3.8.2 STRATEGIES FOR UPGRADING THE MANAGEMENT OF OUTSOURCED ACTIVITIES.

Some of the strategies adopted by surveyed organisations for upgrading the management of contractors are outlined below. These strategies share a common theme of (1) developing contractor competence and (2) upgrading arrangements for the verification of contractor health and safety management. This coincided with a reduction in the in-house resources retained to supervise and monitor contractors work, i.e. placing greater reliance on staff competence and self-management. There was a pro-rata reduction in the level of contractor auditing where there was confidence in the contractor's competence and systems of self-management.

(1) *Secondment or transfer of own staff to contractors.*

Where it was judged by the chemicals manufacturer that none of the external contractors possesses the full range of competencies required to meet standards, personnel were either seconded or transferred into the employment of the contractor, such as transferring engineering personnel to a contractor.

(2) *Formation of a long term relationship with contractors.*

A commitment was developed for a long term relationship with contractors at the chemical manufacturer in order to:

- provide the contractor(s) with the commercial justification to develop health and safety standards and invest in their competence and self-management.
- provide the client organisation with the assurance of a closely monitored track record, thereby helping to verify the contractor's competence and reliability.

(3) *Incorporating contractors into your health and safety management system.*

To ensure that the contractor's performance meets or exceeds expectations a strategy is to integrate long term contractors into the organisation's own health and safety management system, such as:

-
- forming a contractor's health and safety committee, chaired by a client manager, reporting to senior management in the client organisation.
 - applying the organisation's own health and safety, design, engineering and management capability standards to the contractor.
 - providing health and safety training to the contractor.
 - licensing contractors, using the same licence system as for in-house personnel, to **perform** clearly defined ranges of safety critical tasks.

This included developing "menu based" health and safety sections of contracts at the rail organisation, where applicable sections are identified and included into each new contract. such as requirements for method statements, induction training and PPE.

(4) Requiring long term contractors to produce "safety cases".

Where a long term contractor is involved in safety critical work a strategy is to require the contractor to produce a "safety case" to demonstrate their health and safety management competence, with approval of the "safety case" by the client organisation a pre-contract requirement. One example of this at a chemical manufacturer involved the manufacturer specifying a range of health and safety management systems and processes which the contractor's safety **case** had to address. The systems matched those covered by the manufacturer's own health and safety management system, namely:

- safety action plans
- self audit scheme
- policy, rules and responsibilities
- training
- operation and maintenance procedures
- personal protective equipment
- safety procedures
- accident reporting
- safety manual

The contractor thence **demonstrated what** arrangements they had in **place** for each of the above.

(5) Shared basic training of contractor across local industry.

To minimise training costs and to provide an assured minimum level of competence for occasional contractors such **as** occasional scaffolders and electricians, local client organisations developed and delivered a standard health and safety training course for contractors, covering basic issues such as:

- personal protective equipment.
 - the role of permit to work systems.
 - the role of site rules and the need to identify and comply with such rules.
 - driving on site.
-

(6) **Measuring contractor health and safety performance.**

The majority of surveyed organisations sought measures of contractor health and safety performance, such as Lost Time Injury rates.

(7) **Operating approved contractor lists.**

The majority of surveyed organisations developed and operated a list of approved contractors, with poor health and safety performance grounds for disqualification.

3.9 RULES AND PROCEDURES

The goal pursued in respect of rules and procedures is analogous to the goal pursued in respect of devolvement of health and safety responsibilities, namely, to strike a balance between maintaining assurance that a minimum standard of safety is assured for safety critical work and the goal of empowering people. The relationship between competence, empowerment and assurance is illustrated in Figures 3.5 to 3.7. As the level of competence is increased, so the degree of empowerment also increased, as shown in Figure 3.5. However, as the level of operational risk increased from one organisation to another so the need for assurance also increased, with greater emphasis placed on specifying standard working methods, as shown in Figure 3.6. Thus, in Figure 3.7 there is a higher level of empowerment for lower risk operations and a lower level of empowerment for higher risk tasks regardless of the level of competence. Typically, whilst line management were empowered to modify procedures to match local circumstance, empowerment tends to stop short of allowing staff discretion over working practice. Rather, staff are empowered to implement procedures without being directly supervised. Staff are also involved in the development and revision of rules and procedures. However, once procedures are set staff rarely have discretion over working practices.

Figure 3.5: Balance of competence and level of empowerment

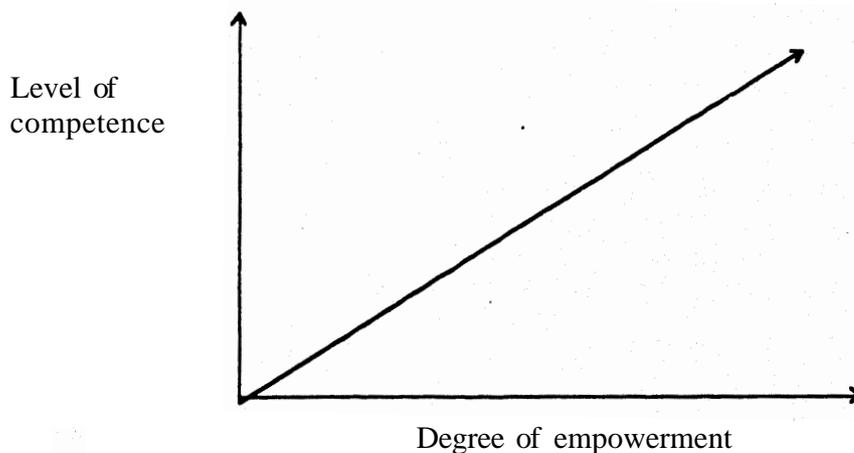


Figure 3.6: Balance between empowerment and inherent operational risk

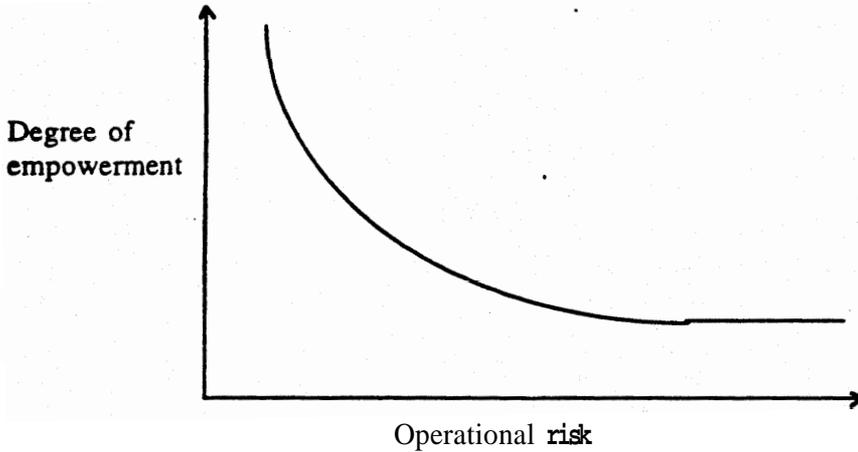
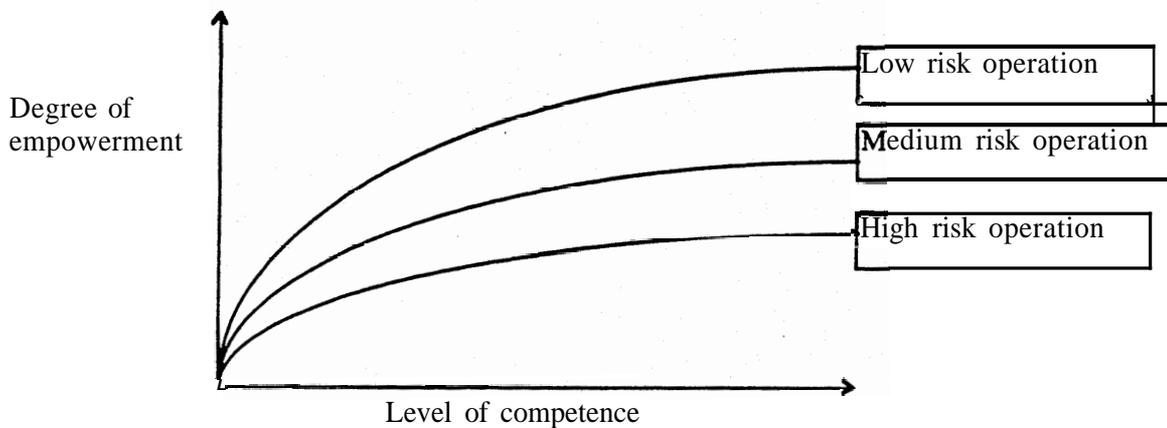


Figure 3.7: Relationship of empowerment, competence and risk



The shift of emphasis onto self-management prompted a review of **rules** and procedures in some organisations. In particular, with greater reliance placed upon self-management it was considered important that the prescribed rules and procedures are transparent, up to date, **easy** to understand, valid and readily acceptable to staff. Similarly, without direct supervision, it should be assured that staff both understand and accept rules and procedures, including understanding when and **why** they should be applied, if they are to competently follow procedures without supervision. This prompted a review of the explanation of rules and procedures, particularly a shift from "rote" instruction to knowledge based instruction with greater emphasis on explaining the logic underlying procedures.

**EXAMPLES OF THE STATUS OF RULES AND PROCEDURES
IN THE NEW ORGANISATION.**

- (1) With the advent of multi-skilling a greater emphasis is placed on the formalisation of procedures to ensure that "generalist" staff have a clear and comprehensive set of instructions to refer to, as the organisation is no longer able to rely on staff experience the **importance** of procedures increases.
 - (2) Empowered teams have the freedom to allocate tasks amongst themselves and are allowed to **carry** out the tasks without direct supervision. However, the procedure of work is still bound by standard rules and procedures.
 - (3) Maintaining the status of safety critical rules for core areas of high risk operation such as safety authorisation. "safety rules work" and isolation, but allowing discretion over non-safety critical work.
 - (4) Teams are allowed to self-authorise a certain grade of work, such as isolation of a single low voltage **electrical** panel but with higher **grades** of safety critical work and work which may impact other plant or operations requiring third party authorisation, such as isolation of high voltage panels and isolation of pipes on a chemical process.
-

CONCLUDING STATEMENT

This Best Practice Model has provided a view of how to manage the health and safety aspects of major organisational change. The ideas and principles have been favourably reviewed by surveyed organisations and are consistent with HS (G) 65, and hence comprise a practical model. The model is based on the belief that a well organised and planned business reorganisation does not automatically assure satisfactory health and safety performance. Rather, the potential impact of change on health and safety needs to be recognised at an early stage by senior management, and followed up by a coherent and well defined set of health and safety actions. This model should help formulate these actions.

However, all organisations should satisfy themselves that their plans are adequate and should not rely solely on generic guidance such as this model. This is all the more true on the issues of:

- benchmarking,
- health performance, and;
- the management of mental health and its impact on performance

which received relatively little attention amongst the majority of surveyed organisations. In line with the principle of continuous improvement, organisations should strive to improve health and safety, meeting and exceeding best practice where ever possible.

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