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Magazine of the European Agency for Safety and Health at Work

# magazine

## The changing world of work

A WORLD OF CHANGE

MAKING CHANGES WORK

FROM AGEING WORKERS TO TELEWORKERS

## HANS-HORST KONKOLEWSKY

Director, European Agency for Safety and Health at Work



# Editorial

As the nature of our world evolves from an industrial base, through service and into an information society, so our workplaces, work practices and production processes are constantly changing in character. These new work situations, some of which are described in this publication, bring with them new risks and challenges for workers and employers alike.

The shift away from traditional concepts of work is reflected in increasing levels of self-employment, of subcontracting and of temporary employment. It is accompanied by such factors as an ageing workforce and increases in work-related stress and in musculoskeletal disorders. If we are to ensure that these new forms of work do not result in new risks for workers, they must be fully understood and properly assessed so that effective protection policies can be introduced. These must sensitively balance greater worker protection with the need to improve business competitiveness (two issues which it is becoming increasingly apparent do not conflict).

Greater understanding must be based on shared knowledge through open communication between all parties, and it is no coincidence that a common theme running through the Agency's 1998 conference on this topic was the need for greater information exchange and cooperation at all levels with practical examples of activities particularly at SME level.

This second edition of the Agency's Magazine builds on the Conference discussions and attempts to take them a stage further by focusing on individual examples of changing work patterns and crystallising a number of key points. We have as usual attempted to present a balanced view with contributions from all social partners and others closely involved in workplace health and safety.

The Conference itself launched a series of joint European activities relating to the changing world of work which are now well underway and I hope that this edition of the Magazine can help promote and encourage further debate on this most important of occupational health and safety issues.

## LORE HOSTASCH

Former Federal Minister for Labour, Health and Social Affairs,  
Austria

# Foreword

Today's changes in the world of work are being shaped by the globalisation of economies and the unprecedented level of mobility of capital. International competition has led to considerable rivalry between the European Community regions in terms of preferential conditions offered for establishment of businesses. It is not so much the long-established internationalisation of economic relations that has such far-reaching consequences for the shape of the world of work and industrial relations. It is more the new forms of corporate structure and organisation arising from the dynamics of internationalisation, often combined with technical advances and the introduction of new technology, which are having a direct impact on individual workplaces and workers.

Economic and social changes pose new challenges for worker protection in areas such as:

- part-time work and those working shorter hours;
- people increasingly alternating between employed and self-employed status;
- the increase in the numbers of self-employed people;
- an increasing number of contracted staff, and public employees on fixed-term contracts;
- a rise in work/service contracts and temporary work;
- new forms of employment in the information and communications sectors (teleworking, virtual companies on the Internet, etc.).

Like work organisation, the workplace itself is subject to changes. Flexible working time not only engenders a greater need for worker mobility, but also brings about an intensification of work. We have noted for some time that one of the major new drawbacks of ongoing rationalisation and innovation, leading to staff cutbacks and an ever-faster pace of work, is the high level of stress in the workplace. It is alarm-

ing to note that 28% of European workers believe that their health is suffering as a result of stress in the workplace. Increasing account will therefore be taken of stress-related factors damaging to the health of workers in future worker protection policies.

Another important factor is the demographic change in the age pyramid. Increased life expectancy means that people are in the labour market for longer. This also means, however, that work organisation and workplace equipment must correspond to the requirements of older people, calling for specific health and safety measures.

Policies are required to tackle these new challenges. New thought must be given to how we can prevail over and take on these challenges. The rapid pace of internationalisation of production and of the capital market is increasingly diminishing the potential for control by individual States through autonomous policies. In speaking of changes to the world of work and the need for a response, we must also bear in mind the fact that changes in the world of work may not just be brought about and effected at national level. Indeed, today, States with similar economic and technical levels of development frequently face very similar problems. Consequently, these increasingly international links should indeed be accompanied by a global policy. This must not however be limited solely to economic goals, such as the removal of trade barriers, price stability and consolidated national budgets. Improvements in the work situation, raising standards of living and, last but not least, guaranteeing levels of social protection are at least of equal importance.

The policy goals in terms of people in employment are to develop new techniques and new working conditions within a socio-economic framework. One valid requirement as regards social policy is to ensure that new working processes, such as teleworking, in all their different forms are provided with the same level of protection as traditional forms of work.

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*Worker protection  
must reconcile itself  
to radical change* ”

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Nevertheless, I believe that that worker protection must reconcile itself to radical change. The economic conditions have become much harsher. Corporate needs have become more diverse and complex as a result of faster technological developments. Due to market changes, many businesses have had to slim down, optimise work organisation and make economies across the board, which has not always been to the advantage of their workforce. This global economic development at national and corporate level presents new tasks in the field of 'prevention'.

Safety and health protection is seen increasingly as an integral and systematic task of management. Businesses want a process-oriented approach to the integration of safety and health protection, together with more subject-specific information and instructions and the development of sector-specific instruction manuals. Particular attention will have to be

paid in this respect to the smallest businesses, which can hardly be covered by traditional blanket methods of labour inspection.

Naturally, however, regulations, which up to now have been aimed at traditional, stable working conditions, must be adjusted on a regular basis to the new requirements. Last, but not least, a stronger link between safety and health in the workplace and employment policy should be established, since a healthy workforce is both a prerequisite and a consequence of a fulfilling and satisfying job.

There is already a broad spectrum of knowledge available as regards changes in the world of work. The European Agency has ascertained and summarised the priorities and strategies of the individual Member States with regard to the new risks. We must now continue to work together at European level. This means meeting the new challenges through joint strategies involving the social partners, the governments and European organisations and bodies and then transferring these to businesses.

A common understanding of the shaping of a social Europe in a changing world of work must be developed. Thereafter, the priorities must be set for a European policy on worker protection.

## ALLAN LARSSON

Former Director General for Employment and Social Affairs,  
European Commission

# Introduction

The technological, economic and social conditions that shape workplaces and workforces in the EU are changing rapidly and profoundly. The political, administrative and technical approaches that we apply to health and safety policy must be equal to this pace of change. As we ask Europe's workforce to embrace change in skills, in technology, in materials and in production processes, we must be able to demonstrate that this change can be made without putting safety at risk.

Though we have much to be proud of in applying health and safety policies in the EU, more still needs to be done. Too many workers are being killed and injured in workplace accidents. A great deal of potential remains to be realised in terms of health and safety as a factor in employability. Too much of the progress we have made at the legislative level has not yet been translated into national action, nor into the workplace itself.

The pace of change in technology, in materials and in workplace organisation needs to be anticipated better in policy development. There is also much to be done in the next few years in the applicant countries, as they prepare to meet their health and safety obligations under the Accession process.

These priorities are at the centre of the European health and safety agenda. They are the reason why we have enhanced our operational base to equip the EU better in meeting our objectives of improving the working environment. The Commission's DG Employment and Social Affairs Unit D6, based in Luxembourg, will now operate as the policy core for work environment issues. The Bilbao Agency is developing the essential information resource, and the Dublin Foundation will continue its key research role.

This strengthening of European action and resources is now being applied to the four priorities laid out in our mid-term report on the *Community Programme concerning safety, hygiene and health at work (1996-2000)*.

The first of these priorities is making European legislation work better. This means better implementation of directives. Member States have transposed 95% of European health and safety legislation. This is a great achievement. We can only capitalise upon this by moving to a stronger emphasis upon proper implementation and practical application. To do so, we need to focus more strongly on assessing national implementation, compliance at workplace level and the enforcement effort deployed in its application.

The second priority is preparing for enlargement, towards which we are now working intensively in the Commission. It is vital that we get the employment and social policy aspects of this historic project right from the start. It is important both for the applicant countries, in order that they comply with the Community acquis, and also for the citizens in the present Member States, who must see that enlargement is about raising not lowering standards; nor is it about giving up the European Social Model.

The third aspect of the Commission's new priorities is to strengthen understanding of the link between improvement of the working environment and employability. The European employment strategy is based upon these linkages. Measures to improve health and safety at work contribute to employability in the workforce in two ways.

One is prevention of accidents and diseases. Health and safety policy contributes to improving productivity and helping to improve the economic performance of enterprises. The second concerns employment of people with disabilities who should not be excluded from the labour market. This is not just about access and justice. It is about the central theme of the European employment strategy: to enhance the productive capacity of the whole potential workforce.

Europe can no longer afford to discriminate against disabled people in the labour market. There is much that we all need to learn if we are to pursue these objectives effectively. The role of research is essential to doing so.

The fourth priority is to place a strong focus on the potential new risks of the new world of work. One important new

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trend is the transformation of the economy into a service economy. Another aspect we must take into consideration is the steady increase of women in employment. A third trend is the ageing of the workforce. A fourth factor is development of new forms of work organisation.

New technologies, new materials and new forms of organisation of work might reduce old risks, but they can also lead to new problems.

The Commission will continue to help Member States and social partners to put more emphasis in the future on the implications of change and on developing methodologies for anticipation of change, to ensure new information and trends are applied in designing new policies.

The Bilbao-based European Agency for Safety and Health at Work is now an integral part of the EU's effort to meet these important responsibilities, as this publication shows.

# the changing world of work

# Contents

## A WORLD OF CHANGE

### *t*he changing world of work: prospects and challenges for health and safety

*Hans-Jörg Bullinger, Fraunhofer Institut für Arbeitswirtschaft und Organisation (Fraunhofer Institute for Industrial Engineering IAO)*

Global competition, increasing use of information technology, productivity growth and the readjustment of human and social values are only some of the factors that are currently contributing to the momentous changes in the world of work.

### *t*he consequences of new enterprise structures

*Richard Clifton, Health and Safety Executive, UK*

New enterprise structures resulting from changes in industrial organisation and in labour markets present challenges and difficulties which may threaten standards of health and safety at work. There is a risk of a multi-tiered system developing, with higher standards in some sectors and significant health and safety problems elsewhere.

### *a*n American perspective

*Steven Sauter and Linda Rosenstock, National Institute for Occupational Safety and Health, USA*

Fundamental changes in the organisation of work are taking place so rapidly that it is becoming increasingly difficult to monitor the health and safety implications. New research initiatives and partnerships are seeking to address this problem in the United States.

## MAKING CHANGES WORK

### *i*ntegration and globalisation

*Bernd Tenckhoff, VEW ENERGIE AG, Dortmund, Germany*

A new health and safety programme has helped one German utility company face up to fundamental changes in market conditions and work environments.

## **i** mproving safety cultures in construction

*Martin Whelan, Irish Congress of Trade Unions, Dublin*

A construction worker with nearly 30 years' experience of the industry in Ireland outlines past problems for Irish construction workers in addressing health and safety issues. However, recent initiatives to introduce more Safety Representatives may well herald a new partnership that should greatly improve the industry's safety culture.

## **m** anaging new technologies in hospitals

*Dr M. Veron, Service Central de Médecine du Travail, Hôpital de L'Hôtel Dieu, Paris*

New technologies are being introduced into the hospital sector at an ever-increasing pace in pursuit of improved patient care. However, the occupational safety and health implications for hospital workers must be properly addressed if these new technologies are also to improve working conditions.

## FROM AGEING WORKERS...

### **w**ork organisation in an ageing Europe

*Anders L Johansson, National Institute for Working Life, Sweden*

Dramatic changes are taking place in the way work is organised and in the structure and age profile of workforces. The number of workers who are permanently employed is falling. Companies are increasingly concentrating on their core businesses, transferring secondary activities to contractors. Flexibility and adaptability are the new watchwords. Against this background, a Swedish research programme is under way with the aim of studying the labour market, the working environment and work organisation trends from a European perspective.

### **C**ompany solutions for older employees

*Angelika Pensky, Federal Institute for Occupational Health and Safety, Bremen*

Europe's ageing workforce is creating a new set of challenges for companies seeking both to benefit from the experience of older workers at the same time as introducing younger blood into their workforces. Here, the experiences of two German companies are used to illustrate different approaches to coping with an older workforce.

## ... TO TELEWORKERS

### **s**afety and health implications of telework

*Pekka Huuhtanen, Finnish Institute of Occupational Health, Helsinki*

Findings of an EU-wide study of the social implications of telework show a need for more research in areas such as stress, musculoskeletal disorders, new working time patterns, work-family interfaces and the effects of isolation.

### **r**edefining work as a result of globalisation and the use of new information technologies

*Lesley James, Royal Society of Arts, UK.*

The 'Redefining Work' project, set up in 1996 by the UK Royal Society of Arts (RSA), was concerned with the ways our society may function in the new century and the assumptions we might make about the nature and pattern of work within it.

### **h**ome alone - health and safety issues for the self-employed

*Liz Barclay, freelance journalist, UK*

Getting the health and safety message across to self-employed individuals, often working from home with little spare time and limited resources, is not easy. It relies on the dissemination of information by fellow professionals and on client companies facing up to their responsibilities.

## AGENCY CONFERENCE

### **s**ummary of the Changing World of Work Conference conclusions

The Agency's Changing World of Work conference held in Bilbao in collaboration with the Austrian Presidency at the end of 1998 highlighted many aspects of the health and safety impact of the changing global economic and social environment. The Conference conclusions focused on many new challenges to be faced in improving occupational safety and health in Europe in the future.

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## the changing world of work: prospects and challenges for health and safety

**G**lobal competition, increasing use of information technology, productivity growth and the readjustment of human and social values are only some of the factors that are currently contributing to the momentous changes in the world of work.

A wide variety of customised ranges of products with exact quality standards and time schedules, shortened innovation cycles and a widespread propensity for deregulation are the hallmarks of the current situation in international markets.

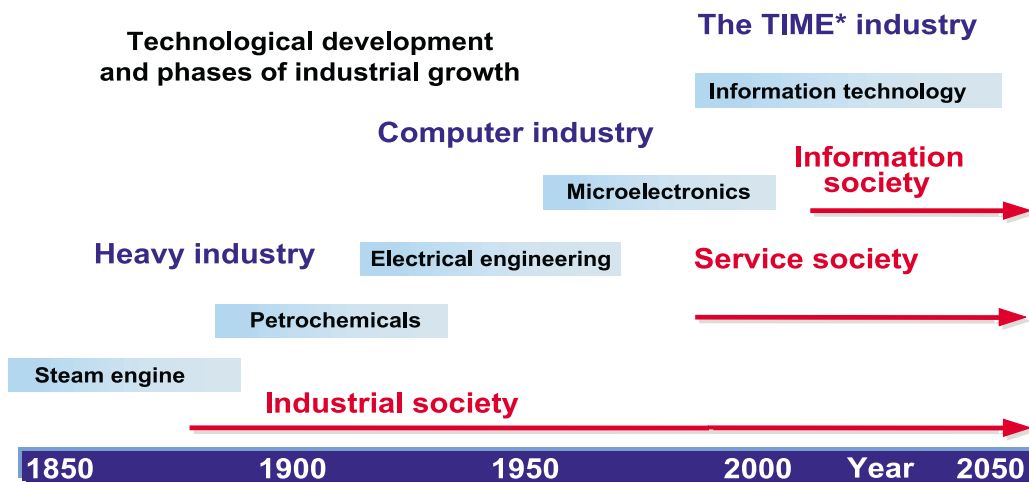
Globalisation and liberalisation of world trade are accompanied by accelerating technological change and ever-fiercer competition. In the work of the future, success will depend on the human resources of knowledge and creativity. The use of resources requires appropriate prevention strategies that will help to stabilise and promote employees' health and productive capacity. Prevention is developing into one of the foremost prerequisites of innovation in the knowledge-intensive service society.

### TOWARDS THE KNOWLEDGE-INTENSIVE SERVICE SOCIETY

As is widely postulated, the world of work is in a transition from an industrial to a knowledge-intensive service economy. The predominant feature of this transition is that information, knowledge and creativity are becoming crucially important factors in the value creation. Even today, every other employee in the highly developed countries does a job where information is the primary resource, tool and output. According to current predictions, it will only take a few years before more than 80% of all paid employment will consist of information handling. In future, more and more people will be employed to convert data into knowledge<sup>(1)</sup>.

*Prevention is developing into one of the foremost prerequisites of innovation in the knowledge-intensive service society*

As for the future of business activity, the signs are that abstract elements and values such as information, emotions,



\* Telecommunications, Information technology, Media and Entertainment

Figure 1: The path leading from the industrial society to the knowledge-intensive service society

relationships and services will be responsible for an increasing share of value creation. This, however, does not mean to say that the production of material goods will diminish in importance. On the contrary, as we move towards the service economy, it is observable that society is abandoning the practice of regarding production and service as two separate entities <sup>(2)</sup>. Through the integrated production of goods and services, customer needs should be fulfilled, synergy effects exploited and new market potential developed. Successful innovative products are to be found wherever they add tangible value in the form of comfort and entertainment.

Other influences on product ranges are the result of the demographic trend whereby the age structure is gradually becoming top-heavy. This will lead to profound changes in the employment structure and in the domains of health and pensions.

### NEW RULES OF WORK

Business activity based on abstract values and information is governed by different rules to those that apply to the production of material goods. As the importance of information steadily increases, traditional socio-economic distinctions are becoming blurred. At the same time, new rules of information work are emerging <sup>(1)</sup>. One of the most obvious of these rules is that work must be organised more flexibly and effectively than hitherto.

Businesses are increasingly confronted by the task of producing high-quality, individualised products with comprehensive after-sales support on the same terms and at the same prices as mass-produced output. This diversity can only be achieved with flexible computerised production processes. This means turning the rules of mass production upside down. Whereas in the age of mechanisation larger production runs meant lower unit costs, in the information age small, customised production runs can save on costs. While

mechanisation begot mass production, computerisation is sounding the death knell of mass production.

The infrastructural prerequisite of information work is interconnected information technology which allows global exchanges of data to take place. The material flow of goods is gradually being supplemented by a non-material flow of information. Unlike merchandise, information can be transferred and distributed without being lost to its original owner. Information does not create values through the volume of knowledge it generates, but rather through its application. At the same time knowledge is the only resource that becomes more valuable the more it is used.

In the knowledge-intensive economy, individuals can serve the market just as well as large enterprises. Next to the quality of products, the time it takes to develop them is the key to their success. Company size and costs are no longer the crucial factors when it comes to providing services, but rather flexibility and innovation. Competition between structures is giving way to competition between behaviour patterns. The only way in which a business can gain a competitive edge is by learning how to convert a stock of knowledge into successful innovations as quickly as possible. This requires new ways of thinking and a new work culture.

Development goes hand in hand with a transformation of company

*Instead of the traditional idea of looking for jobs in suitable locations, people can now think in terms of acquiring the skills that will enable them to earn a living*

### Virtual enterprises are networks of independent businesses symbolically embodying modern organisational forms

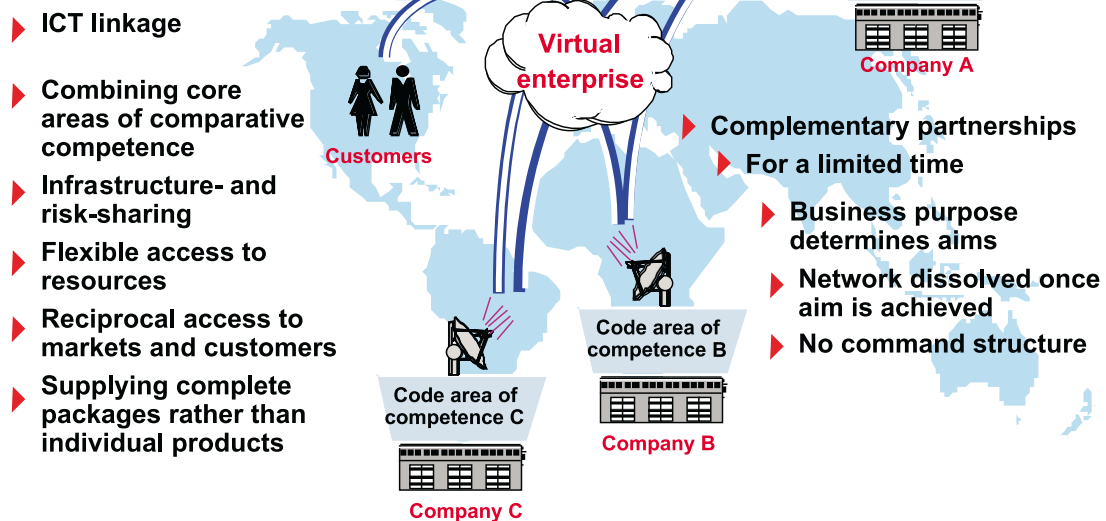


Figure 2: The virtual enterprise – a model of innovative forms of organisation

structures away from rigidly-constructed hierarchies of the sort that developed in the early industrial age. Then manufacturers came under pressure to produce ever-more goods at ever-lower unit costs into open, customer-centred systems with fewer links in the chain of command, greater scope for involvement and decision-making at the operational level, as well as interdisciplinary and multifunctional working units. Vital importance attaches in this context to the principles of initiative and self-reliance<sup>(3)</sup>. Employees regard their work as a meaningful and specific challenge, not just as something they do for the sake of having a job.

Besides reshaping internal processes, foresighted organisational development strategies also involve the creation of co-operative arrangements between businesses. The purpose of integrating various companies' tasks and processes into a value-added chain is to create a wider range of potential configurations by incorporating autonomous organisational units into a virtual network structure<sup>(4)</sup>.

Virtual enterprises, the symbolic embodiment of innovative forms of work organisation, have learned to think and act on a global scale and have incorporated this globalism into their system of values. They devote particular attention to human factors and individuality. In virtual organisations, the various parts of the network thrive on the interaction between individual activity and teamwork. Efficient flows of information enable them to co-ordinate their efforts and take decisions quickly. The participants in such networks operate on the subsidiarity principle, in other words they only pass on tasks to a higher level if the specific situation so demands. Institutionalisation or a comprehensive set of rules, is generally avoided so that the network and its component parts can be relied upon to respond as effectively as possible to the demands of the market.

Not least among the benefits of networked information activities are the opportunities they offer for alternative lifestyles and settlement patterns; fixed hours and places at which services are provided are of minor importance. Whereas industrial production required workers to assemble in central production plants, there are scarcely any temporal or geographical limits on computerised access to the production factor information. Teleworking and other forms of work that do not involve assembling at a fixed locality can free people from the restraints of centralised working arrangements and re-establish unity between home and work. Instead of the traditional idea of looking for jobs in suitable locations, people can now think in terms of acquiring the skills that will enable them to earn a living. How long it will take, however, before flexible work is the normal case is not so much a question of technological means as a matter of embracing values and career patterns in which productivity is no longer confused with physical presence and availability<sup>(1)</sup>.

#### KNOWLEDGE AS A HUMAN RESOURCE

In the knowledge-intensive service society, the value creation cannot be optimised by producing greater quantities, but only by greater differentiation. Streamlined structures and technological superiority are no longer enough to secure lasting competitive advantages. Genuine business achievements are based more and more on the use of up-to-date,

customer-centred knowledge that is available to a company's decision-makers. In information work, people – so-called 'human capital' – are the decisive factor of value creation. On the other hand, raw materials, machinery, energy, land ownership and capital, as well as the economic theories attaching to each, may be expected to diminish in importance.

The transition to the knowledge-intensive service society goes hand in hand with new training standards, which traditional specialised knowledge and routine skills only go part of the way to meeting. The ability to handle information and use it purposefully, for example, is the key to the use of all other instruments of value creation. Self-management and social skills are every bit as relevant as planning skills and administrative competence.

Given the increasing complexity of business processes, the required volume of knowledge is constantly expanding. At the same time, knowledge has an ever-shorter shelf life and needs to be constantly updated. As the flood of information continues unabated, the question of the relevance of the available stock of knowledge arises with increasing regularity. It is apparent that, if a company wishes to put its knowledge to good effect, it must construct a comprehensive system of knowledge management, which entails the development of human resources. To the extent that the human resource of knowledge is developing into a dominant factor of value creation, suitable means for its promotion must be found. Mental capacity is heavily dependent on health and well-being. Only healthy and motivated individuals can keep their intellectual and creative potential harnessed and hence work to the best of their ability<sup>(5)</sup>.

*Only healthy and motivated individuals can keep their intellectual and creative potential harnessed and hence work to the best of their ability*

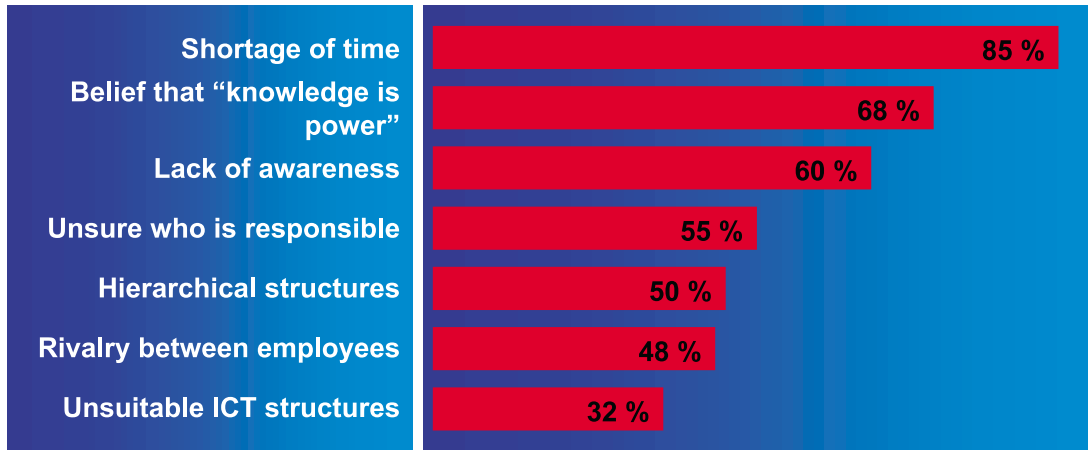


#### PROSPECTS FOR HEALTH AND SAFETY AT WORK

In future forms of employment, great importance may be expected to attach to the health of the individual. Physical, mental and social health are developing into categorical imperatives without them employees cannot achieve the required performance standards or meet the challenges of the working world. In view of demographic trends and the predicted spectrum of work-related health problems, strenuous efforts are needed if the ideal of retiring healthy is to be achieved. Indeed, it may be assumed that psychological and psychosocial stress in particular, caused by diverse factors, will continue to feature more and more prominently, along with chronic diseases, in the range of work-related health risks.

New forms of work, as well as the relevant legal provisions (cf European framework directive 89/391/EEC) are leading

**Reasons given for inadequate transfer of knowledge. Survey of 71 European machinery and plant construction firms (in %)**



**The development of knowledge and creativity is heavily dependent on employees' health and wellbeing. Suitable means must be found to foster these assets**

Figure 3: "Why are those who work with knowledge reluctant to pass it on?" Source: Wissensmanagement in der Investitionsgüterindustrie. Report on the Kienbaum knowledge-management survey Answering the Global Challenge. Kienbaum Consultants International, Düsseldorf, 1999.

with increasing regularity to the establishment of health and safety as an integral part of a management system. The aim here is to rethink traditional attitudes, behaviour patterns and structures in the domain of health and safety at work and to reap more of the potential benefits of modern management and participation models.

**“** *In a foresighted prevention policy, individuals are not regarded as endangered persons who need protection, but rather as people who can act for themselves*

In a foresighted prevention policy, in which the main risks are seen in work-related health hazards rather than in accidents, individuals are not regarded as endangered persons who need protection, but rather as people who can act for themselves. Accordingly, employees' capacity to assimilate knowledge and their creativity – assets that have been largely neglected as long as the Taylorisms has prevailed ( must also be harnessed to a greater

extent in the cause of prevention in a working environment in which worker participation and the system of bottom-up organisation ('subsidiarity') are gradually taking root. Preventive health and safety measures can only succeed if all players within a company are involved in these internal transformation processes, wherever they are qualified to play a part.

The aims of integrating preventive strategies into internal business processes are to promote total well-being and to develop skills, competence and awareness of responsibility.

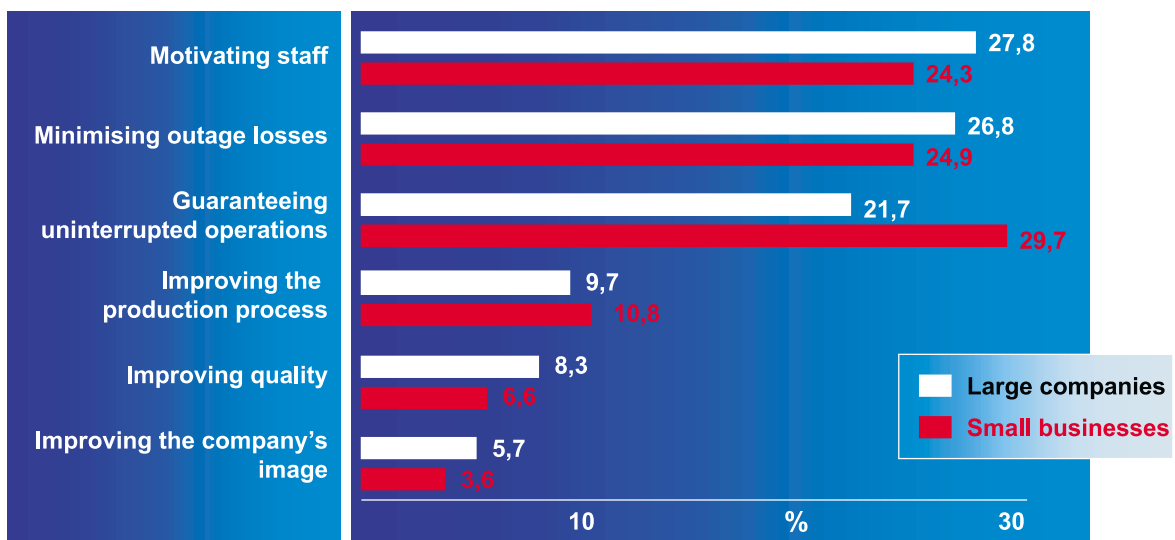
The Luxembourg Declaration of the EC-Workplace Health Promotion Network stipulates that the aims of health promotion should be achieved by means of active employee participation and through co-ordinated measures designed to improve working conditions and the organisation of the work process, measures which must be taken jointly by management, labour and society<sup>(6)</sup>. This means that, besides the creation of safe and healthy working conditions, there must be greater willingness to broach subjects such as personal development and training, the moderation of business processes, ways of influencing company policy, etc<sup>(7)</sup>.

**THE ROLE OF PREVENTION IN INNOVATION AND THE MANAGEMENT OF CHANGE**

Preventive measures to improve working conditions and to enhance productive capacities should help to make companies more competitive. The pursuit of economic targets and the social obligation to create safe and healthy working conditions are not therefore mutually exclusive, but rather two sides of the same coin. More than ever before, prevention is being seen as the result of economic considerations and as an investment in companies' innovative capacity and future prospects<sup>(5)</sup>.

In most cases, product innovations and structural innovations are firmly rooted in the present. A distinction should be made between these innovations and the ability of a company to manage the change, which is all about future potential. By making investments in potential assets, such as staff training and the development of flexible production systems, companies seek to strengthen their capacity to respond quickly and reliably to future changes.

A company's ability to innovate and to manage the change depends on its possession of various resources. One of these is



Source: Hemmer, 1998

Survey of 974 industrial, commercial and service enterprises in Germany

Figure 4: Company expectations with regard to the benefits of health and safety measures. Source: E. Hemmer, *Arbeits- und Gesundheitsschutz: eine Unternehmensbefragung*. Deutscher Instituts-Verlag, Cologne, 1999.

adaptability. Employees' adaptability, like the company's own ability to manage the change, is influenced by the company ethos as well as by its strategies and structures. Strategies are only pursued with sufficient vigour if the underlying ethos of the company imbues its employees with a sense of identity, a sense of unity and common values. Structures that are not rooted in shared values cannot fulfil their innovative potential. If the structures and ethos of a company are incompatible, the various players within that company will have conflicting expectations, and disappointments will result.

By establishing an ethos of co-operation and trust, companies also create new opportunities in the realm of preventive health and safety measures. If this ethos of mutual trust exists within a company, it can "spare itself all the procedural manuals, inspectors, and performance indicators that frequently paralyse businesses" <sup>(8)</sup>. Utopian though this assessment may appear, it nevertheless serves as a basic compass by emphasising the priority of human resources and behaviour. On the one hand, this represents an option for the future development of prevention, an option that may establish itself as one of the keys to the permanent safeguarding of companies' human and organisational resources and their work ethic. On the other hand, it gives some indication of the crucial importance of prevention when it comes to establishing or reshaping the ethos of a company.

## OUTLOOK

If the innovative potential offered by preventive measures is to be successfully exploited, health and safety must be developed into integral components of the company ethos. Since preventive strategies and measures can sometimes have a profound impact on existing structures and processes, care must be taken to ensure that preventive action is supported by all groups of players within a business. It is becoming apparent that such development processes need to take place within individual companies and that standard 'off-the-peg' strategies cannot be applied. The role model

here is that of the learning organisation. Prevention thus emerges as a medium-to-long-term investment in a company's resources, which cannot be expected to yield a quick return.

The anticipated development pattern also opens up a new aspect of prevention. Besides helping companies to fulfil their potential in terms of innovative products and structures, prevention can also play a primary role in the prefigured phase of behavioural innovation. Behavioural innovation, characterised by the systematic pursuit of health, well-being and job performance, can generate a new demand for involvement and the exercise of creativity in the knowledge-intensive service society and, in so doing, can unlock vast potential for the creation of added value.

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## RICHARD CLIFTON

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# the consequences of new enterprise structures

**N**ew enterprise structures resulting from changes in industrial organisation and in labour markets present challenges and difficulties which may threaten standards of health and safety at work. There is a risk of a multi-tiered system developing, with higher standards in some sectors and significant health and safety problems elsewhere. A 1998 Agency report on national priorities and strategies on OSH in EU Member States identified the implications of changing patterns of employment as a common concern.

The changes in industrial organisation that have affected the structure of larger enterprises, in the UK at least, in the last 10-20 years, have been:

- the privatisation and breaking up of previously large State enterprises, including railways, airlines, telecommunications, water supply and important parts of the energy sector;
- liberalisation of markets previously dominated by these firms;
- the down-sizing of large organisations in both the private and public sector, including Government Departments, to meet competitive pressures and Government economic policy objectives;
- slimmer management structures in such organisations, with little spare management capacity to handle contingencies and often with a tendency to frequent re-organisation and business re-engineering;
- concentration by these organisations on core functions with support activities eliminated, brought in as required or contracted out;
- a corresponding growth of contract staff, bringing with it a growth in numbers of small firms, of contract and sub-contractor companies and the self-employed competing for and working on contract;

- dramatic changes in technology including information technology, enabling people to work from locations remote from the enterprise, including at home and offering the possibility of rapid re-location of operations between countries or joint working between different sites which may be in different parts of the world (the globalisation of markets);
- dramatic changes in the industrial distribution of employment with a rapid decline in traditional areas of employment such as heavy manufacturing, steelmaking, car manufacture, docks, mining and agriculture, with a strong growth in office work, services, catering and leisure activities;
- changes in the way people work, with more demand for 24 hour operation due to market demand or the need to be available when markets are operating abroad.

### CHANGES IN ENTERPRISE STRUCTURE

It is possible to oversell the implications of these changes, and certainly there are some organisations that have continued to be structured much as they were 10 or 20 years ago. But in most parts of the economy the implications for the structure of enterprises has been significant.

It is possible to characterise, with a little over simplification, a traditional model of the workplace in order to contrast it with what I will call the modern enterprise model. In the traditional workplace:

- you have a large workplace where everyone works for the same employer;
- secondary or overhead operation like the maintenance of buildings, transport of facilities management are undertaken by the company's own staff;
- the company has a strong central management function with specialists in fields like health and safety who prescribe detailed policies to be followed at the level of the plant. Enforcement of these central rules is facilitated by the fact that those operating the plant all work for the company.



Today, the typical large workplace, in the modern enterprise model, is more often characterised by:

- a much smaller number of employees of the parent company, people whose jobs may often be simply the supervision of contractors;
- a large number of different contractors to the main company undertaking a wide variety of jobs, both secondary operations like maintenance and transport but also often component parts of the core task the company has as its business;
- thus a mix of people working on their own account (the self employed) or working for small firms contracting to the main employer, or working as sub-contractors to these main employers, as well as employees of the parent company.

It is a more complex picture, but the result is that we have two different types of non-traditional enterprise at different extremes in terms of organisational structure.

#### THE SMALL FIRM OR MICRO-FIRM

A significant change in my own country of the United Kingdom has been the growth of small or micro businesses, many of them in effect one-person businesses or employing just a few people. There was a large growth in the total number of businesses in the UK, mainly in the 1980s, from 2.4 million at the start of that decade to 3.7 million by 1996. Of the 3.7 million businesses over two-thirds (2.5 million) are sole traders or partners without employees; the overwhelming majority of the other (1.2 million) businesses are small firms. Only 33,000 of them employ more than 50 employees and only 7,000 more than 250 employees (though these account for more than 42% of employment).

These micro companies usually have no management structure. They often have a highly informal structure with the owner/manager handling everything from marketing and finance to routine office administration. Certainly, no-one is in charge of health and safety and they have no in-house health and safety expertise. These firms are understandably fixated on winning contracts and getting the job done, which means they are less concerned about the demands made on them by regulatory agencies. The firm may expect its life-span to be short. There is a large turnover of small firms every year with the average life-span being about 5 years, up to 400,000 new businesses start out and similar numbers cease operations each year; hence longer-term planning, investment and staff training has a lower priority.

#### THE DOWNSIZED LARGE FIRM

At the other end of the labour market are large firms, increasingly concentrating on core operations but looking to management systems that will enable them to effectively manage processes and systems that rely on large numbers of suppliers and contractors. The characteristics of these firms include:

- slimmer management structures;
- a process of production or service provision usually based on contract rather than directly employed staff;

- a strong focus on quality management systems to meet competitive pressures and efficiently manage a process in which central management has fewer direct levels of control;
- a different role for specialists, including health and safety specialists, which I will return to in examining the implications of these trends for health and safety at work.

#### INDIVIDUAL WORKERS

These trends have potentially significant consequences for individual workers. We use the term "precarious employment" - a rather clumsy translation from French - meaning a growth of short-term, contract work, sometimes part-time, without the benefits for workers of long-term career planning, training and the planned accumulation of experience that characterises career management in large enterprises. But, at least in the UK the growth of contractorisation (work being passed out to many small companies working on contract) has been accompanied by a fall in the employment share of full-time, permanent employees which is evident from the data but perhaps not as large as might be expected from my earlier analysis. In the UK between 1984 and 1995 the percentage of employment comprised by full-time, permanent employees fell from 67% to 62%, with a growth in part-time and temporary work, and in self employment.

An associated tendency with potentially serious implications is for workers to be persuaded by those who normally employ them to become self employed for purposes of the social security and taxation system, ie they work for themselves and hire out their labour. Yet they work in situations where they do not have the independence of the truly self employed worker. In such circumstances the employer may believe that he has escaped some of the obligations in law to protect the health and safety of the worker. Indeed that may be a part of his motivation for pursuing such a change, though the extent of his continuing obligations will depend on national law (in the UK we are quite clear that such workers are employees of the parent firm, and the law so provides).

*The employer may believe that he has escaped some of the obligations in law to protect the health and safety of employees ... [but] the extent of his continuing obligation will depend on national law*

#### THE IMPLICATIONS FOR HEALTH AND SAFETY AT WORK

What then, are the implications of these trends for the health and safety at work system? They give rise to a set of new problems:





*The study of injury rates in manufacturing shows that the rates of fatal injury and of amputation injury in small manufacturing workplaces are double those in larger workplaces*

provision of information to workers, who is responsible for providing protective clothing and equipment, who is responsible for overall co-ordination? An employer who sub-contracts a task cannot assume that the contractor will have all the necessary knowledge, information, trained staff or equipment to do the job if he has never visited the site before. In the UK we have sought to maintain the strong principle of our law that the employer who runs the undertaking cannot contract out their legal obligations, but there is clearly more scope for misunderstanding in this type of work organisation;

- small enterprises, which I have called micro firms, bring other health and safety risks. The absence of a management structure may mean no-one is clearly responsible for anything, though everyone is responsible for everything. The strong focus on the job in hand relegates everything else to being a side issue, including safety. They have no specific health and safety expertise, may not know where to get it or recognise when it is needed. The sheer numbers of such enterprises makes it difficult for regulatory authorities to find, let alone advise, them;
- our evidence in the UK is that small firms experience much higher accident rates than larger enterprises. A study of injury rates in manufacturing shows that the rate of fatal injury and of amputation injury in small manufacturing workplaces double those in larger workplaces;
- individual workers can find themselves, due to these trends, disadvantaged and facing new or more severe risks to their health and safety. Compared to workers who are in a clear career structure in a large firm, training and acquiring new skills may be something they have to sort out for themselves, and this may affect their competence in dealing with health and safety risks. Where corners are cut, neglecting safety for production, in small and usually non-unionised firms, the workers may find themselves in a genuine quandary about what to do. And if workers are forced into bogus self-

- situations where large numbers of contractors are working together create a large number of interfaces: effective safety management requires emphasis on co-ordination and co-operation;
- situations where large numbers of contractors are working together or for each other create scope for uncertainty about who is responsible for what, such as who is responsible for training, who is responsible for the

employment the employer may seek to avoid his legal duties;

- again, the statistical evidence is that workers on fixed-term contracts and in temporary work have lower standards of safety, worse working conditions and more health problems than those in more permanent employment, as the recent study by the European Foundation for the Improvement of Living and Working Conditions has shown.

However, some advantages may accrue. Some workers prefer more fluid working arrangements that provide them with more opportunities to choose when and where to work, to take breaks from work between contracts, and to plan their own training and career development rather than have it planned for them by the management of a big firm.

SOME COUNTERACTING FACTORS

The problems I have described have, however, themselves generated a number of market reactions which serve to control and reduce risks. Research undertaken for the Health and Safety Executive in the UK suggests that many large firms are increasingly quality-conscious, imposing high standards on themselves and on their suppliers and contractors. Many, particularly firms in the energy and chemicals sector, have adopted what has been called a Fully Integrated Quality Management System (FIQMS).

An FIQMS firm bases its management on quality controls. It does this by defining first, a set of overall quality goals (often called high level standards) describing the values governing its business. It then defines, audits and enforces operational procedures reflecting these standards. Some, like British Aerospace, communicate periodically with their staff about progress towards the quality goals in the form of a Value Plan or statement.

Generally, the headquarters of such firms are small. A part of what they do, apart from deciding business strategy and targets and advising on specialist matters, is to audit the conformity of local procedures to the high level standards. They then ensure through local audits that these procedures have been duly reflected in business plans, job descriptions, procedural manuals, etc, and are executed.

Defining overall goals helps big firms to get themselves together and if necessary to change their cultures, while enabling operational units to set their own business agendas. Since all aspects of management have to be included, health, safety and environmental management, which formerly were often left to professional advisers, are targeted for excellence in the same way as financial or selling performance.

FIQMS systems spring out of competition in world markets, which has imposed three big demands. First for a more competitive, flexible and efficient management, secondly for higher product standards, nowadays including green requirements, thirdly for an appropriate reaction to increased liabilities towards individuals and the community, driven home by legal, political and regulatory action.

Once a firm imposes such standards and checks on itself, it is only a short step to imposing them on its business partners, ie. its contractors and suppliers. The checks such firms make on contractors and suppliers are likely to extend to the care the contractor or supplier takes over health and safety at work matters, because:

- the firm cannot afford the loss or disruption caused by an accident that disrupts the work undertaken for it by the contractor, or any interruption in the chain of supply of components;
- the reputation of the parent firm will be undermined by an incident on their site caused by a contractor; aside from the direct business case for good health and safety standards, large firms are often concerned to improve their reputation for attention to moral, ethical and cultural aspects of business management;
- management of health and safety is an important indicator of general management competence.

Because checks can be time-consuming large firms may restrict contracting to a small number of favoured partners. In some cases, in the UK, large firms in an area or on a major industrial estate have banded together to share information about contractor firms, organising joint health and safety training schemes and issuing passports to enter the joint approved contractor list to those firms whose staff undertake the required training and maintain the required expertise. The small firms who will survive and prosper are thus those who themselves have high management standards and the management competence to cope with sometimes bureaucratic procedures introduced by the large companies who are their clients.

**”** *The Quality Management movement is a counteracting pressure for higher standards of health and safety at work*

Although ISO have at present turned their back on such a proposal, there are initiatives underway in a number of countries to explore the case for such a standard, and the European Commission's Advisory Committee on Safety, Health and Hygiene at Work has established an ad hoc group to examine the proposal.

A related trend is the new role of safety professionals in the companies I am describing. The traditional safety manager would be mainly concerned with laying down safety rules,

This trend and the growth of the Quality Management movement is a counteracting pressure for higher standards of health and safety at work in the changed economic circumstances I have described. It is leading to close attention to the issue of a management standard for health and safety management, similar to ISO 14000 series in the field of environmental management,

against which firms can be assessed and certified. Although ISO have at present turned their back on such a proposal, there are initiatives underway in a number of countries to explore the case for such a standard, and the European Commission's Advisory Committee on Safety, Health and Hygiene at Work has established an ad hoc group to examine the proposal.

often prescriptive and highly documented, in manuals the company's employees would be required to follow. The safety manager today is as much concerned with facilitating rather than doing, ie developing health and safety competence in line managers, guiding and auditing, and overseeing the management of health and safety in the process of contracting out.

Research in the UK into the role of safety managers in the sub-contracting process, involving a study of members of the Institute of Occupational Safety and Health (IOSH, the membership body for health and safety professionals), found that these managers exercised significant influence over contracting processes and procedures, and found that:

- the relative influence of in-house health and safety professionals increased proportionately with the size of the contract, though it was consistently less than that of line managers;
- health and safety professionals worked closely with contract managers as part of the management team in reviewing the performance of contractors;
- health and safety managers were generally responsible for health and safety training of contractors;
- and they were closely involved in the monitoring of contractors.

The modified role of health and safety professionals in the management team is a further way in which companies are trying to deal with new health and safety issues in changed economic circumstances. These trends are, of course, amongst the various trends in management approaches to the running of enterprises that impact on health and safety at work standards. In the UK we have also reached the impact of re-organisation, given that almost continuous change and re-organisation is a feature of modern industrial pressures. The research concluded that the impact of business re-organisation depends on how well the organisation assesses the changes and manages the implications. Health and safety performance was found to improve where well-planned and well-resourced schemes were introduced. In some cases it was considered that the improvement could not have been achieved under the traditional structure and style of management. Re-organisation, however, has been identified as a factor contributing to a number of major accidents, and may have a deleterious effect on the ability of the employer to handle contractual relations.

## CONCLUSION

I conclude by re-iterating that the consequences of the new structures of enterprise are in some respects negative for health and safety at work because:

- a) the pressures experienced by and the informal management structures of very small firms, who may have no in-house health and safety expertise and may not recognise when they need it, may lead to neglect of health and safety standards;
- b) uncertainties arise from new organisational structures, with the fragmentation of traditional large enterprises, and structures of contractual

- relationships involving many interfaces give rise to uncertainty about responsibilities;
- c) where workers are consequently in more precarious employment relationships they may suffer an erosion of long term skills and competence.

Against this, the growth of the Quality Movement in the larger firms that are leaders in their field is a response, in terms of industrial organisation and structure, to these new challenges, as is the way the role of safety professionals has adopted to these trends. But these trends are not universal and there may be a danger of a multi-tiered system developing. Large, high-profile companies can manage contract relationships through quality systems in ways that should have positive effects on overall health and safety management. The question remains as to how far these developments will spread within the corporate sector, and whether smaller organisations making much greater use of contractors have the inclination or resources to maintain health and safety standards through these methods. If not, the uncertainties of responsibility, relationships, and fragmentation of the traditional, inclusive enterprise discussed in this paper may be creating problems for which the market reactions seen in large companies may not be generated. There may be a risk of a two-tier system with higher standards applied by large, progressive companies and their approved contractors and suppliers, but the new problems for health and safety at work standards that I have described are being dealt with less successfully elsewhere. Clearly there remains, therefore, a need for law, regulation and other initiatives to seek to ensure standards are maintained.

One cannot easily foresee the future but the evidence is that at the more sophisticated and successful end of the employment spectrum:

- a) larger and more sophisticated firms will not reverse the process of contracting out both core and non-core functions but will continue to look to quality management approaches to retain control and to discharge their own legal responsibilities, in particular for health and safety at work;
- b) the smaller firms that will survive in the longer term may be those that can cope with sometimes complex and bureaucratic requirements of larger enterprises, but are firms that can maintain a good record, in particular in terms of their performance in the field of health and safety at work.

*This article is based on a paper presented at the 1998 Bilbao conference, "The changing world of work".*



## STEVEN SAUTER AND LINDA ROSENSTOCK

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## *a*n American perspective

**F**undamental changes in the organisation of work are taking place so rapidly that it is becoming increasingly difficult to monitor the health and safety implications. New research initiatives and partnerships are seeking to address this problem in the United States.

Technological innovation, the growth of service and knowledge work, the economic pressures of globalisation and deregulation and other forces have dramatically reshaped the nature of work in post-industrial countries. Responding to these forces, companies have restructured themselves, becoming flatter and smaller; new management practices involving, for example, self-managed teams have been adopted; and leaner, streamlined production methods, such as 'just-in-time' and outsourcing, have been implemented.

These adjustments by industry have had significant effects on the conditions of work and employment. The demand for skilled or multi-skilled workers has increased with the growth of information technology and leaner, flexible manufacturing processes that require workers to learn and perform multiple tasks. Supervisory conditions have changed with the introduction of teamwork,

the evaporation of middle management, and the trend toward flexiplace or 'at home' work arrangements. It has been estimated that 15 million workers in the USA will be telecommuting by the year 2002 (U.S. Department of Transportation, 1993). Workload demands continue to grow, and hours of work have increased for all occupations. For example, in the period 1985-1993, the percentage of the non-agricultural, salaried USA workforce that worked 'long' hours (in excess of 48 hours per week) grew 30% to over 21 million workers (Rones, Ilg and Gardner, 1997). What is of

*Evidence specifically linking recent work organisation and employment innovations to illness and injury risk is beginning to emerge* ”

particular concern is that jobs have become less stable and secure. One third of American Management Association firms downsized their workforce in the period 1990-1995 (American Management Association, 1997). Correspondingly, survey data show a doubling (22%-44%) of the percentage of workers with lay-off concerns in the period 1988-1996, although some recent moderation in this trend is seen (International Survey Research, 1998)<sup>(1)</sup>. Additionally, alternative employment practices (other than full time, direct hire) are on the rise. For example, temporary employment has increased nearly 400% in the USA since the early 1980s (see Kochan, Smith, Wells, and Rebitzer, 1994; Steinberg, 1998). Projections are that a quarter of the workforce could be working in non-traditional employment arrangements by the year 2020 (Judy and D'Amico, 1997).

### HEALTH AND SAFETY IMPLICATIONS

There has been insufficient research to ascertain the health and safety risks posed by these recent changes in the organisation of work and employment conditions. However, trends in occupational illness and injury statistics in the last two decades suggest a pattern of effects consistent with intensified organisational demands and stresses in the workplace. Job stress-related disorders have mushroomed since the 1980s. Insurance industry data indicate that disability due to stress-related illness comprised 13% of all disability claims in 1990, up from 6% in 1982 (Northwestern National Life, 1991). Data from the United States Bureau of Labor Statistics indicate that disability due to anxiety and stress are currently among the most disabling conditions in terms of lost time, averaging about 20 days lost per incident during the 1990s (Bureau of Labor Statistics, 1996). Extrapolating from several studies, it can be estimated that approximately 30% of the USA workforce is presently working under high levels of perceived stress (Barsade, 1997; Bond, Galinsky, and Swanberg, 1998).

Increasing job stress is not the only health indicator of new and intensified organisational demands at work. Within the last decade, the proportion of work-related musculo-skeletal disorders has grown to about 60% of all occupational illnesses in the USA (Bureau of Labor Statistics, 1997). Although the mechanisms are not fully established, there is now a substantial literature implicating work organisation factors (e.g. highly routine or fragmented work, uncertain job future, time pressure, heavy cognitive demands, reduced social support) in the etiology of these disorders (Bernard et. al., 1997; Bongers, DeWinter, Kompier and Hildebrandt, 1993; Moon and Sauter, 1996).

Evidence specifically linking recent work organisation and employment innovations to ill-

ness and injury risk is also beginning to emerge. Studies in Finland and the USA point to increased sick-leave absence, trauma, and musculo-skeletal and stress-related disorders among the 'survivors' of downsizing (American Management Association, 1966; Vahtera, Kivimaki and Pentti, 1997). Some studies also suggest that so-called 'lean production' practices, which attempt to increase productivity through continuous improvement, new inventory systems, and elimination of wasted time and motion, may increase injury risk in the automotive industry (Adler, Goldoftas and Levine, 1997; Babson, 1993; Wokutch, 1992). (See Landsbergis, Cahill and Schnall, 1999, for a broader discussion of this issue.) New employment practices associated with efforts to reduce labour costs have also raised concerns. Researchers at the Massachusetts Institute of Technology found, for example, that contingent workers employed in the petrochemical industry were less educated and experienced than direct-hire workers, and received less safety and health training than direct hire workers (Kochan, Smith, Wells and Rebitzer, 1994). An even stronger implication of increased safety and health risk among contingent workers is found in a recent cross-European study showing that, in comparison to permanent workers, 'precarious' workers (workers with fixed-term contracts and temporary jobs) have increased exposure to painful or tiring work postures, repetitive tasks, and increased noise at work (European Foundation for the Improvement of Living and Working Conditions, 1997).

### NIOSH INITIATIVES TO ADDRESS THESE CONCERNS

Responding to health and safety concerns in the new organisational environment, NIOSH has established an interdisciplinary team of researchers and practitioners from industry, labour, and academia to develop a national research agenda on the 'organisation of work' as it relates to occupational safety and health. This initiative is part of a broader, collaborative effort by NIOSH to develop a 'National Occupational Research Agenda' (NORA) to guide occupational safety and health research into the next decade - not only for NIOSH, but for the entire US occupational safety and health community (Rosenstock, Olenec and Wagner, 1998). Based on input from over 500 individuals and organisations, NIOSH has developed a priority list of 21 topics for research, including the topic of work organisation. In the past two years, the work team has conferred with industry and labour stakeholders, seeking to identify essential research and other requirements to better understand how work organisation is changing, safety and health implications of these changes, and prevention measures. Examples of specific needs under consideration by the team include<sup>(2)</sup>:

- need to further embed work organisation as a discipline in the occupational health field;
- need for improved mechanisms for surveillance of changing work organisation and effects on job characteristics;
- need for targeted health effects studies of changing work organisation;
- need for increased emphasis on (organisational) intervention research;
- need for improved research methodologies in studies of work organisation and health.

” NIOSH has established an interdisciplinary team to develop a national research agenda on the 'organisation of work' as it relates to occupational safety and health

As part of the NORA initiative, NIOSH has also accelerated its internal programme of research to address causes, effects and prevention of health and safety risks related to the changing organisation of work. For example, NIOSH is collaborating with Boston University in a major study of health effects (among survivors) of downsizing in the nuclear energy industry, and with the University of Minnesota to identify organisational interventions linked to improved employee health and organisational performance among nearly 1,000 companies. NIOSH is also collaborating with the American Psychological Association and several universities to develop graduate training programmes in 'occupational health psychology' to help promote research and research competencies in work organisation and health. At present, six national universities (Bowling Green State University, University of Minnesota, Kansas State University, University of Houston, Clemson University, Tulane University) have implemented degree programmes and curricula in work organisation and health under this initiative. In March 1999, NIOSH joined with the American Psychological Association and over 30 other health organisations from the USA, Europe and Asia to host an international scientific conference on work organisation and health in a global economy.

## CONCLUSIONS

Recognition and concern that work organisation is changing in ways that may increase illness and injury risk surpass present capacity for surveillance of these changes, for epidemiologic study of safety and health effects, and for promulgation of guidelines and best practices for prevention. Working in partnership with stakeholders, NIOSH is addressing these shortcomings through an accelerated programme of research (both intramural and extramural) and training in work organisation and health.

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- 1 This information is provided by International Survey Research, a leading global opinion research firm headquartered in Chicago with offices worldwide.
- 2 Because the work of this NORA team is still in progress, these points of emphasis should be regarded as provisional and examples of discussion points, and not final recommendations of the NORA team or of NIOSH.

## BERND TENCKHOFF

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# i ntegration and globalisation

**A** new health and safety programme has helped one German utility company face up to fundamental changes in market conditions and work environments.

The liberalisation of Europe's energy market has led to far-reaching changes in a very short period of time. Companies in the public utilities sector are having to undergo a fundamental change, shifting from their previous monopolist positions within clearly demarcated supply zones to open competition throughout Europe.

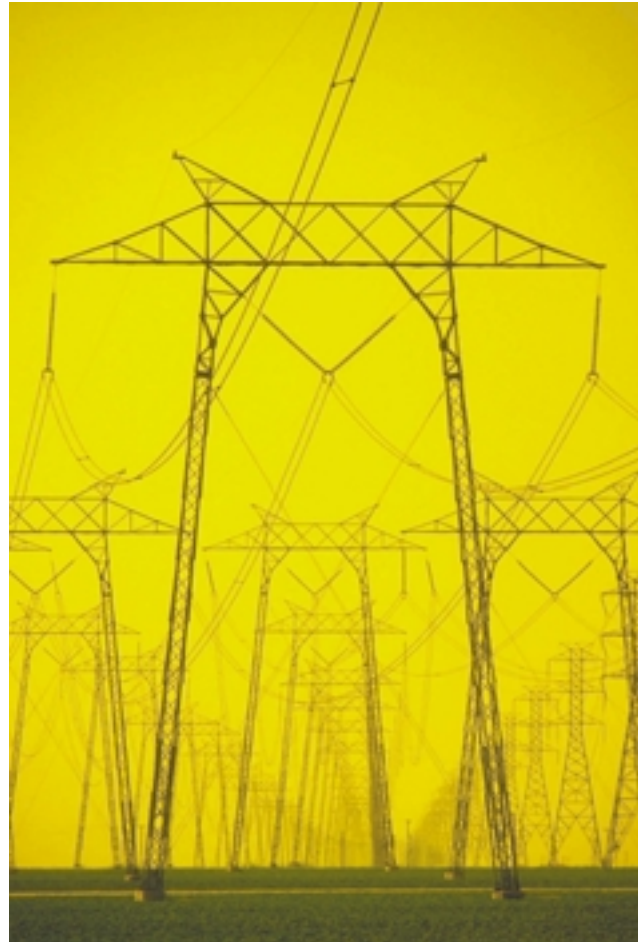
This transition began in Germany with the 'Energiewirtschaftsgesetz' (Energy Industry Act) of April 1998, which heralded the start of open, industry-wide competition in the energy sector. Other EU Member States have already opened up to free competition, or will do so shortly.

VEW ENERGIE AG – a large German energy utility – is just one company that has had to respond to this new competitive environment and to the health and safety issues it's given rise to.

### CURRENT SITUATION IN THE ENERGY SECTOR

The German energy market, because of its central European location and considerable potential, is being particularly keenly fought over. Within a few months of liberalisation, prices dropped noticeably as customers began to show a ready willingness to change supplier. At the same time, supply contracts are becoming shorter, with most now being for around one year.

Survival means being able to meet the challenge of a changing market. Nothing can stay the same as it was, or even as it is today. The only constant features are the changes themselves, and these will continue with increasing frequency.



All companies, without exception, are affected by these radical structural changes and it is only through rigorous, strategic reorientation that they can successfully compete. So what does 'global competition' mean for the energy provider?

### REORIENTATION FOR GLOBAL COMPETITION

With the liberalisation of the energy markets everything changed instantly. 'Staked out' supply zones no longer exist. The market is Europe. There has been a move away from regionalisation to globalisation, from monopoly to competition, from a sellers' market to a buyers' market. Gone are the electricity providers of old – we now have many more 'service providers'. In a completely liberalised market, the customer has free choice of supplier. Price is now the main deciding factor. Because of the limited opportunities for product differentiation, the energy

*The former strictly hierarchical organisational structures are being broken down and levelled out into two echelons of management.*

utilities can only react through price reductions and the necessary countermeasures in terms of both costs and benefits.

VEW ENERGIE AG has faced up to these challenges and divided itself into four areas of activity: production, commerce, networks and distribution.

The former strictly hierarchical organisational structures are being broken down and levelled out into two echelons of management. This is leading to drastic changes, not only in terms of tailoring tasks, but also in personnel issues. It is crucial that the people working in the company take centre stage when planned measures are being put in place. It is only through the support of skilled workers, who are enthusiastic and cooperative, committed and flexible, that change can occur.

Special attention is therefore being given to systematically capturing, promoting, developing and fully exploiting the potential of employees. It is not only their abilities, but more importantly their commitment and social skills, that are decisive factors in remaining competitive.

#### A TEAM APPROACH TO SAFETY AND HEALTH

In addition to all the strategic, organisational and personnel measures, such as rationalisation in both personnel and operations, the company is also placing greater emphasis on teamwork. Through moderated teamwork, employees are being closely involved in an area where they would certainly not have been expected to be active in the past: that of solving problems on topics relating to health and safety at work. This may appear surprising at first, but it makes sense. Teamwork is an integral part of a comprehensive management programme on health and safety at work.

*Health and safety at work can and must contribute towards the competitiveness of the company*

The programme makes it clear that health and safety at work can and must contribute towards the competitiveness of the company. Health and safety plays a decisive role in the company's policy and is an important cornerstone in personnel development and management.

In order to meet the highest quality standards with reduced staffing, it is important to foster the creative and innovative potential of employees. In other words, as the Americans might say, "money talks, but it does not think", for it is the workers alone in a company who can trigger and implement innovation.

VEW ENERGIE's health and safety management programme, AGM 2000plus, was developed with this in mind. AGM 2000plus is not seen merely as the lynchpin of future tasks and activities in the field of occupational health and safety, but it's also viewed as a key element in the shaping of future corporate and personnel policy.

It is important for every employee to be aware that an approach that pays attention to issues of occupational safety is what's want-

ed by those 'at the top'. Company managers, for their part, must act accordingly to set a credible example. Managers receive important feedback 'from below' on ways of implementing the AGM 2000plus programme. The programme is influenced and shaped by those who are best placed to know the conditions 'on the shop floor'. This increases the feeling of identification that each employee has with the company, with the AGM 2000plus programme and with their working environment.

The aims of the AGM 2000plus programme make this clear:

- to establish a *preventive health and safety culture*;
- to reduce accident figures and *increase health quotas*;
- to introduce *moderated teamwork*;
- to *consider problems and their solutions integrally*, both at work and at home;
- to *improve occupational health and safety skills*;
- to *achieve economic benefits* for the company.

*The teams give all employees the opportunity actively to participate in the decisions taken relating to their working environment*

Health and safety teams form the central building blocks of the AGM 2000plus programme. The teams give all employees the opportunity actively to participate in the decisions taken relating to their working environment and thus help shape their own safe and healthy place of work.

In order to deal progressively with health and safety topics, complete modules have been drawn up on such topics as noise, dangerous substances, addiction, stress management and road safety. These modules include information and educational material and action programmes, as well as check lists, videos and radio plays. Such modules can be used anywhere, so there is scope for their adaptation to different industrial conditions.

#### CONCLUSION

Intense global competition demands high quality goods and services. Increased cost pressures do not allow for unnecessary interruptions to working hours. Furthermore, the personnel reserves of the past are dwindling through further cutbacks in staff. These are challenges that must be met. In a past golden economic age, occupational safety was affordable as a (tolerated) tool. In a global market, examples in many areas of the economy show that it is now necessary for competitive security. Occupational safety is the responsibility of everyone in the company, not just the safety staff.

It is becoming clear that meeting future challenges will critically depend on the workforce. In the words of Scharnhorst: "The organisation as such is finished – it is the people who bring an organisation to life". It is only through a healthy, motivated workforce, working safely and using safe techniques, that global competition can be met successfully.



## MARTIN WHELAN

Irish Congress of Trade Unions, Dublin

# Improving safety cultures in construction

**A** construction worker with nearly 30 years' experience of the industry in Ireland outlines past problems for Irish construction workers in addressing health and safety issues. However, recent initiatives to introduce more safety representatives may well herald a new partnership that should greatly improve the industry's safety culture.

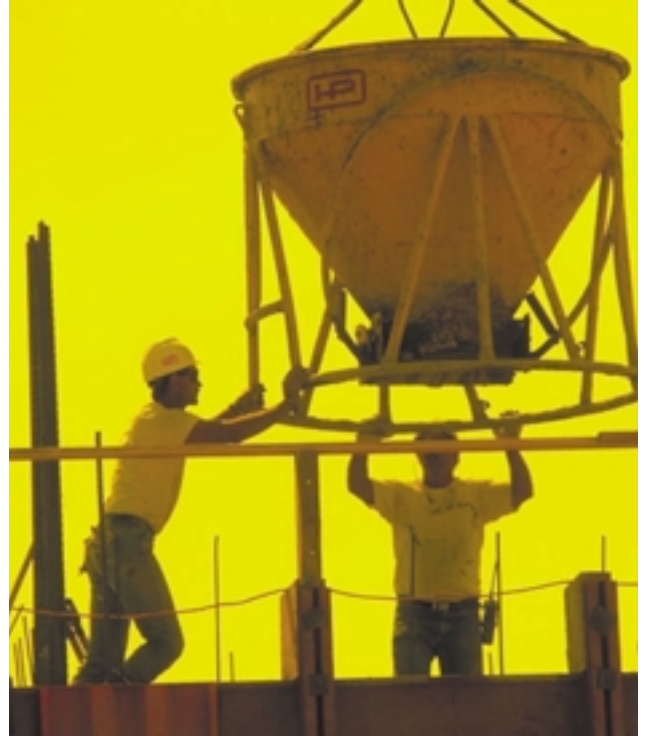
Of all the industries in Ireland today, the 'Celtic Tiger' is nowhere more pronounced or visible than in the construction industry. There are cries of labour shortages. All sectors of the industry are booming and the newspaper headlines are filled with details of new property developments.

Unfortunately, the headlines also report on the human costs of the boom in terms of accidents to and deaths of construction workers. An overview of the industry shows that in 1998 27 people were killed in construction accidents. One construction worker is injured every hour (Irish Health and Safety Authority, 1998).

### HEALTH AND SAFETY TRAINING

Health and safety training is a statutory requirement under the Safety, Health and Welfare at Work Act, 1989 and the Safety, Health and Welfare at Work (Construction) Regulations SI 138 1995. The obligation is upon employers to provide this training, through either internal or external agencies.

A typical large construction site in Ireland might have 1,200 or more people employed by different contractors. While larger sites tend to have basic site-specific induction training courses available, smaller sites, which represent the bulk of construction industry activity, usually have none. Where they exist they are of a very basic nature. I know this from both personal and anecdotal experience.



With around 145,000 people employed in the Irish industry, there is plainly a need for a National Safety Awareness Training Programme for the construction industry to ensure that all personnel already in the industry are properly trained, and that all entering the industry have prior training. My personal experience is that although health and safety training is a statutory obligation, it is by and large ignored.

### SHORTAGE OF SAFETY REPRESENTATIVES

A further question to be asked is why are there so few safety representatives in the construction industry? The safety representative system, as provided for in the Safety, Health and Welfare at Work Act 1999, was until recently almost non-existent in the construction industry. There has been a strong belief amongst construction workers that it is very imprudent to become a safety representative

*There has been a strong belief amongst construction workers that it is very imprudent to become a safety representative.*

It is the intermittent nature of construction employment that contributes to this belief and the almost inevitable result is that a safety representative could be jeopardising future employment prospects by being seen to insist on safe working practices.

One personal experience I would relate reflecting the above situation concerns a construction site on which I

was working some years ago. On-site safety was deplorable and I called a union meeting to address the safety issues. Within a short space of time (in hours) I was removed from site and instructed to travel to work on a different site. Although this incident happened some years ago, the intermittent nature of the industry still creates a reluctance amongst workers to go forward for the position of safety representative.

The sad part of this situation is that it leads to difficulties in fostering and developing not only a partnership approach to health and safety, but also the development of a safety culture in the industry.

### POSITIVE DEVELOPMENTS

But there have been some positive recent developments. The Irish Congress of Trade Unions have had discussions with the Construction Industry Federation and the Irish Health and Safety Authority. The outcome has been an agreed plan that should see the appointment of workers' Safety Representatives on the 50 largest building projects in Ireland. These representatives will be supported in carrying out the statutory functions by the Unions, the CIF and the Authority.

*“The outcome has been an agreed plan that should see the appointment of workers' Safety Representatives on the 50 largest building projects in Ireland*

The Irish Congress of Trade Unions has also, with the support of FAS, developed a three-day training course for safety representatives. The course carries a joint FAS/City & Guilds Certification.

According to Fergus Whelan, Industrial Officer and health and safety spokesperson for the Irish Congress of Trade Unions: “A small number of the course participants reported that their respective employers were initially irritated

by the request for consultation. However, this irritation quickly evaporated as the employers found that the trained representatives were a valuable asset to the construction site.”

He quoted one of the newly-trained representatives as saying: “At first he (the supervisor) thought I was trying to get his back up; now he comes to me for help.”

The following extract is just one of many that emphatically endorses consultation in the workplace:

“Establishments with joint consultative committees exclusively for health and safety have, on average, 5.7 fewer injuries per 1,000 employees compared with establishments where management deal with health and safety without any form of consultation”. (1)

### CONCLUSION

From personal experience, it is my belief that when the advantages of the Safety Representative system are recognised by all concerned, it is a positive step forward. As long as it is not adversarial, the consultation process which enhances safety and health in the workplace will take its rightful place in creating a positive health and safety culture in the construction industry.

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## D R M . V E R O N

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# Managing new technologies in hospitals

**N**ew technologies are being introduced into the hospital sector at an ever-increasing pace in pursuit of improved patient care. However, the occupational safety and health implications for hospital workers must be properly addressed if these new technologies are also to improve working conditions.

The hospital sector in France represents a complex and constantly changing work environment in which a variety of factors need consideration when looking at the introduction of new technologies and considering their consequences for safety at work.



Four main factors need to be considered<sup>(1)</sup>:

- *organisational factors* – which are the responsibility of the managers, heads of unit and senior management;
- *financial factors* – which relate to income and the costs of care and personnel;
- *medical factors* – which focus on patients and the quality of care;
- *redress factors* – in relation to damage limitation.

Each of these considerations must include prevention and hence health at work.

### FRENCH HOSPITAL SECTOR IN FIGURES

- Hospitals in France employ 1.6 million people, of whom 1 million work in the public sector. The total figure represents 7.5% of the labour force and 4% of the total active population. The hospital sector involves 133 different trades, 70% being nursing staff, 1.4% technical staff and workers, 12% administrative staff and 5% specialised medical staff.
- Each year over 13 million patients are admitted to hospital, half of them into the public sector.

### NEW TECHNOLOGIES IN THE HOSPITAL ENVIRONMENT

Hospitals have always had medical technology for monitoring and treating patients. This technology assists with ongoing monitoring of the status of patients, whether at a medical, surgical or biological level<sup>(2)</sup>.

The increasing use being made of ever-more dedicated technology, however, means that there is today a need for a wider range of highly specialised skills, calling for hospitals to be reorganised into specialised care services. This specialisation results in compartmentalisation of the services.

### THE IMPACT OF NEW TECHNOLOGIES ON NURSING STAFF AND PATIENTS

The introduction of new technologies calls for a priori evaluation of:

- *technical aspects*: compliance with legislative provisions and statutory recommendations (where these exist);
- *organisation aspects*: changes to work organisation, rules of good practice, etc.;
- *functional aspects*: to be considered on the basis of the different requirements as regards needs, functions, means, resources and integration in the hospital environment;
- *information aspects*: relating to patients or staff<sup>(1)</sup>.

Where these aspects are taken into account, working with new technologies can improve working conditions. At the same time however staff may find it difficult to adjust to changes in work content, the newness of the techniques involved and changes to work organisation with resulting increases in stress levels.

Technological developments enable new skills to be acquired, give impetus to research, education and training, and promote initiatives in the field of hygiene, health and safety at work<sup>(3)</sup>.

Working with new technologies can:

- change the relationship between patient and nurse and distance users from the product or procedure on which they are working;
- increase the mental load and therefore the level of stress;
- change the concrete picture to an abstract picture <sup>(2)</sup>;
- call into question existing skills, but also enhance the status of nurses;
- restrict staff mobility.

**”** *New technologies will have a positive effect on patient treatment, if the increased safety does not lead to a deterioration in the patient-nurse relationship*

From the point of view of the ‘informed patient’, the benefit of new technologies will have a positive effect on their treatment, if the increased safety provided by the latest technology does not lead to a deterioration in the patient-nurse relationship.

The laser is a good example of the introduction of new technology into the hospital environment. Lasers are classified on the basis of their wave length and the active material used (solid, liquid, gaseous). They are used increasingly in many

medical specialisations (such as ophthalmology, plastic surgery, dermatology, ‘oto-rhino-laryngologie’, gynaecology, etc.)<sup>(4)</sup>.

Their use has led to major advances in the treatment of many illnesses and enabled the treatment to be undertaken without hospitalisation, on an ‘out-patient’ basis.

Such new technology can be introduced more easily into a service where the phases described below are followed:

- Organisational considerations
  - Organisational aspects: changes to work organisation should be undertaken in conjunction with the human resources department, the nursing services department, the head of service and management. Work places will need to be redefined, job descriptions established and the list of user staff updated <sup>(5)</sup>.
  - Well-lit work spaces will have to be specifically designed, with anything which might result in reflection or diffusion of the laser beam being removed. Access will have to be controlled and the number of staff limited.
- Financial considerations
  - Incorporating into the budget the purchase of laser equipment and the specific materials for the use of lasers.
  - Assessing the cost of ensuring work space compliance.

– Estimating the maintenance costs; the more sophisticated the equipment, the higher the costs. Considering the cost of staff training.

- Medical considerations

These will focus more on the treatment of the patient and the quality of care. They will involve participation in medical research and the use of the new techniques and lead to a professional obligation to acquire new skills and improve performances.

- Preventive considerations

This involves risk assessment with a view to ensuring more effective management of and improvements in health and safety at work. This means ensuring that the laser receives official approval and complies with relevant standards. It involves validating collective protection measures by visiting work areas concerned, studying the work stations and checking that individual protective measures (such as glasses adapted to the laser wave length) are worn. It calls for user staff to be monitored from a medical viewpoint and means ensuring they are informed of the risks involved.

- Redress considerations

This relates to any failure of preventive policy. The risks are as follows:

- For the user – a risk of eye damage and skin burns.
- For the patient – a risk of eye damage and a fire risk (in an operating theatre), together with environmental, chemical and biological risks.
- For the environment – a risk of chemical and biological pollution of the premises, electrical risks.

## CONCLUSION

The development of new technologies must go hand in hand with preventive measures and operational constraints to ensure the continuing health and well-being of individuals in the workplace.

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## ANDERS L JOHANSSON

*National Institute for Working Life, Sweden*

# work organisation in an ageing Europe

**D**ramatic changes are taking place in the way work is organised and in the structure and age profile of workforces. The number of workers who are permanently employed is falling. Companies are increasingly concentrating on their core businesses, transferring secondary activities to contractors. Flexibility and adaptability are the new watchwords. Against this background, a Swedish research programme is under way with the aim of studying the labour market, the working environment and work organisation trends from a European perspective.

Working life in Europe is changing at an ever-increasing speed. One of the fundamental changes is that work is being organised according to new principles. Permanent lifetime employment is giving way to fixed periods of employment. One of the powerful driving forces behind these changes is the new way of organising production and labour. This development is made easier by the new information

technology and ever-freer international trade which makes it easier to find qualified subcontractors throughout the world. The fact is that world trade has increased in the last five years at a much faster rate than total production and the same trend is true for international investments. A consequence of this has been a reduction in the number of workers who are permanently employed, either due to businesses being sold or being closed down. Services previously provided internally are now bought externally when needed. Today we see a trend in which companies and organisations increasingly concentrate on their core businesses and transfer the secondary activities to other actors. A new organisational form has emerged which to a great extent has been brought about by the new demands for flexibility, adaptability and the ability to change in working life.

The ability to change immediately has become a permanent condition for survival for today's company. This development is not limited to a certain country or countries, but is global and international in character, embracing a number of large economic blocks of which Europe is one. While the bonds in Europe grow stronger we can also see that the globalisation of recent years has made it more and more difficult for nation states to influence developments in their own countries. It is necessary to note the differences between European countries in order to understand the conditions which exist in those countries, since they are important to the work related to creating common European working life policies. Occupational and working life research should therefore be directed towards monitoring and analysing what the EU and European policies aim at achieving, in terms of developing working life. What actions is the EU as a political institution prepared to take to ensure a good working environment and a dynamic working life? Consequently the R&D efforts are centred on shifting the focus from a national to a European perspective by creating opportunities for joint European research co-operation in the working life field.

It is against this background that the National Institute for Working Life in Sweden has initiated a major European research programme, known as 'The Joint Programme for Working Life Research in Europe', or the 'SALISA programme' for short. This programme has been set up in co-operation with the three Swedish central trade union organisations. The aim of the programme is to carry out problem-oriented research with a European perspective and the work will have three programme areas, namely: the labour market, the working environment and work organisation

A number of European institutions and organisations have been invited to participate in the SALISA programme. An important aim of the programme is to strengthen the development of European networks for those involved in the formation of European working life policies. I would go as far as to say that the creation of a meeting place for European researchers and the other interested parties is of vital importance for the positive development of working life policies. A further aim of the SALISA programme is to give a significant boost to the level of knowledge of the labour market partners in areas of key importance to them.

## IMPORTANT FUTURE QUESTIONS

Politics and debates in Europe have increasingly focused on labour market questions and employment issues. High unemployment gives rise to financial problems in the public sector and calls to save money. The cost of unemployment in Sweden alone is in the region of 18 billion euro. This is no less than 10% of our gross domestic product (1995). In addition, we must include a number of other factors: that high unemployment leads to shifts in the balance of power in the labour market, that employees are less able to make demands of their work or their employers, that they simply no longer dare to criticise and that their opportunities of changing to a new job have diminished drastically.

**”** *Employer-employee relations are becoming increasingly more temporary and shorter*

production-factor work according to new working environment problems. Secondly, the composition of the workforce will change through a sharp rise in the number of older workers, which in turn, will change the focus and needs for the working environment at work.

## NEW FORMS OF CONTRACT BETWEEN EMPLOYERS AND EMPLOYEES

The clear trend in Europe today is that employer-employee relations are becoming increasingly more temporary and shorter. According to the EU Commission's own statistics, the number of people in temporary work has increased by 5.5 million in the last 10 years. Another trend in the European labour market is that the service sector is expanding and is becoming increasingly important for economies and new jobs. In 1996 the service sector accounted for 65% of total employment in the EU. Since 1980, the service sector is the only sector in which there has been net job creation. In all, some 19 million jobs have been created in this sector in the EU between 1980 and 1996. It is increasingly apparent that the forms of contracts between employers and employees are changing very rapidly in this fast expanding sector. Between 1996 and 1997, the American employment agency Manpower increased its turnover by USD 7.5 billion to USD 8.9 billion. Manpower is now the biggest company in the US which says much about the huge market potential.

Not only do we need more research in to this area; there is also a great need for a common European approach, joint analyses and joint proposals for action. Not only that, there is also a great need for common perspectives in the fields of labour law and collective bargaining. The introduction of single currency will, without doubt, further accentuate demands for a common European strategy.

Assuming that new forms of contracts and the emergence of new kinds of companies are not simply temporary, cyclical

I foresee two patterns of change and development emerging in the future which, I believe, will fundamentally influence the working environment in companies and organisations. Firstly, that companies and organisations will organise and utilise pro-

blems but represent long-term structural changes, it then becomes important to try to understand the development from a management perspective and from a strategic point of view. If the trends continue as I have outlined, there is clearly a risk of marked segregation and dividing up of conditions for employees in companies and organisations.

## TOP MANAGEMENT

It is increasingly common for top management to rotate between senior jobs in companies and organisations. Senior management consists of individuals specialised in change and development processes within a particular arena, such as human resources, marketing or production. Increasingly, they work on project and target-based contracts and the elite move around between different companies and organisations at intervals of between 3-5 years.

Middle managers and line managers are a mix of replaceable managers, who increasingly can leave their jobs overnight, and loyal managers, who account for the more traditional experience-based knowledge in a company. As the rate of change has speeded up, and as top management rotation has increased, loyal servants have become more important to the companies. Their task is to deal with meetings between the internal organisation's jurisdiction, on the one hand, and the world around and the demands of the market on the other. Perhaps the most characteristic working environment problem for this group is conflict, stress and intense pressure for results, which in turn can lead to feelings of being excluded and ostracised by fellow workers in the organisation, and to burn-out. The ILO World Labour Report 1993 revealed that Japanese workers suffered from heavy stress associated with long working hours and even from Karoshi or death from overwork. The average number of hours actually worked in Japan was approximately 1900 hours in 1994, 500 hours longer than in the Netherlands and Norway and 300 hours longer than Germany and France. This comparison is, however, based on available official statistics that contains differences in the sources. Job burnout is frequently associated with people who have become workaholics, working up to 80 hours a week.

## PERMANENT EMPLOYEES

Permanent employees, and in some cases "employees for life" still make up a large part of those employed in a company. This group is, as I said, getting successively smaller. A new, growing working environment problem for the group is partly the demand for better performance which can, in some cases, lead to burn-out, and partly the continuous threat of losing the permanent employment i.e. psychological problems tied to uncertainty and insecurity for the future, which in turn creates the fear of change.

## TEMPORARY EMPLOYEES

A fourth group which can be identified is temporary employees at both high and low levels in the company hierarchies, including everyone from the highly qualified advisor/consultant to the temporary typist hired for the day. The indications are that this group will continue to grow strongly at the expense of the permanently employed. Tem-

porary employment is rising today in different forms of sub-contracting. A typical working environment problem for this group is that their job security and income is declining.

#### THE TEMPORARILY UNEMPLOYED

*These problems ... will become more far-reaching than the more traditional, more easily-grasped industrial safety problems which characterised industrial society*

As already mentioned, this group has increased significantly in recent years. Some may be offered work on a daily basis. There are seldom any long-term investments in training and competence development. Uncertainty and insecurity are probably the dominating problems. Career planning, training, and future planning are seldom possible and thus there are risks that people will get stuck in poverty with ill-health as a result. Temporary employment and temporary unemployment are two

sides of the same coin. There are strong indications that those problems which I have described will become more far-reaching than the more traditional, more easily-grasped industrial safety problems which characterised much of the former factory and industrial society. The working environment systems, regulations and policies which are found in many European countries are adapted rather to the working environment demands of the old industrial society than to the new working environment problems we see emerging in the third Industrial Revolution. These conditions will put great pressure and new expectations on existing environment systems in Europe.

#### THE DEMOGRAPHIC FUTURE - THE AGEING OF THE WORKFORCE

It is not an overstatement to say that the demographic situation regarding the ageing workforce is one of the most pressing issues confronting Europe today. The total population of the European Union today amounts to 373 millions. The population growth rate is very low (0.3 %) mainly due to net migration and low fertility rates. At the same time because of improved medical technology and healthier life styles etc, mortality has declined. This simply means a lot more elderly people and many fewer younger people. In other words in the next 20 years or so, European companies and organisations must adapt their work organisations, their working hours, their efforts towards higher productivity, their theories of management and so forth, to a much older workforce.

The structural changes of the workforce are in fact quite dramatic: the proportion of people over 60 years old is expected to grow by 50% over the next 30 years. At the same time young people (up to 19 years old) will decrease by almost

11% and those of working age between 20 and 59 will decrease by 6.5%. Obviously in the next millennium the ageing of the working population will be one of the dominant factors in European working life conditions. The pessimists regard this as the demographic burden. But it could also be seen

as a new and strong driving force for shaping a new attitude in the never ending battle between productivity and working environment conditions. I would say that the actual composition of a working population in a given period in itself affects the ideas about what optimal working conditions will be. A young working population has the ability to work hard; for example they are in good physical condition and many of them do not have children or elderly parents to take care of. In this situation it is relatively easy to put a lot of emphasis on productivity and on hard manual work.

With an elderly workforce this situation will change. There are new pressures and demands to use the skills of the ageing working population. This will preclude long working days and favour "doing the right thing at the right moment" and not overdoing things.

If, in the new millennium, we are to maintain a high degree of awareness in the field of occupational health and good working conditions, we must make use of this shift from a younger to an older working population. The elderly will become the majority group in Europe. This will give us some new important conditions to consider in the balance between productivity and good working conditions.

*This article is based on a paper presented at the 1998 Bilbao conference, "The changing world of work".*

*The ageing workforce is one of the most pressing issues confronting Europe today*

## ANGELIKA PENSKY

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# Company solutions for older employees

**E**urope's ageing workforce is creating a new set of challenges for companies seeking both to benefit from the experience of older workers at the same time as introducing younger blood into their workforces. Here, the experiences of two German companies are used to illustrate different approaches to coping with an older workforce.

Discussions about changes in the world of employment and their effects on employees often assume that most workers are in a 'normal' employment situation and that their work hours have been set through collective agreements. In Germany at least, a look at the statistics suggests that these workers can be described as follows: male, between 25 and 55 years of age, skilled, healthy and of German nationality.

However, there are many other groups of workers who are also in a 'normal' employment situation (albeit their employment is labour market dependent and often temporary) and all too often these groups are overlooked. Taken together, such 'problem' groups (including women, young and older workers, unskilled and semi-skilled workers, the partially disabled, the sick, foreign workers, etc) make up the majority of employed people. In addition, some companies are now discussing making 'normal' employment conditions more geared to change, with greater emphasis on age, life-long learning, flexibility and mobility.

The reason for these developments lies in socio-demographic trends, which are changing radically, and are particularly marked with respect to the age composition of the workforce. But while the consequences of these trends are often used as the basis for political decision-making in terms of so-

cial and labour market policies, the impact on individual companies is usually ignored.

Some companies are now trying to meet the challenge of an older workforce, coping with the same physical demands and increasing psycho-mental requirements through both individual and collective measures. Two examples of this from the Bremen region are presented below. They show different ways of dealing with older workers that look to the future and are sustainable, while catering for the particular circumstances of the companies in question.

Firstly, there is the *Stahlwerke Bremen* (Bremen Steel Company), a traditional steel plant with approximately 5 000 workers. It has been producing steel on a seven square kilometre site on the lower reaches of the Weser since 1957. It is

a fully integrated smelting works, i.e. all the installations for various production stages, from the production of pig iron to sheet processing are grouped together in the same place. Only flat products are made. *Stahlwerke Bremen* has two blast furnaces, a LD steelworks for pig iron desulphurisation, a continuous casting plant, a hot-rolling mill, a cold-rolling mill and a galvanising plant. The "Health 2000" project, aimed at cutting sickness rates, was started in the plant in 1996. It has reduced sickness rates by 2% in the past two years. *Stahlwerke Bremen* had set itself the goal of halving its accident rate within two years. Extensive action plans were launched and this target was not only reached, but clearly exceeded. The accident rate was cut by 60%.

*Stahlwerke Bremen* had set itself the goal of halving its accident rate within two years

Secondly, mention should be made of the efforts undertaken by *Bremer Straßenbahn AG (BSAG)*, the Bremen public transport company which runs the public local passenger tram and bus service. Some 254 000 people are transported by tram and bus each day. *Bremer Straßenbahn AG (BSAG)* employs 2 463 people, 543 of whom work part time. Some 1 296 are bus or tram drivers. The average age of BSAG's workers was 42 in 1998, and they had on average worked for the company for 14.5 years.

BSAG recorded 138 occupational accidents in 1998, of which 30 were road accidents. The BSAG runs a company nursery, which it shares with three other companies (including Daimler-Chrysler Aerospace Airbus).

### THE RE-SKILLING AND REINTEGRATION MODEL

In 1995 *Stahlwerke Bremen* (the Bremen Steel Company) started a trial to develop strategies to deal with personnel whose ability to perform well in their current jobs had changed. The central issue was to reintegrate the predominantly older workers into the company's work processes in the best possible manner, taking into account their individual capabilities. In particular this involved the following:



- although the workers concerned were to be moved from their current areas of work, they were not removed from the company as a whole;
- they were moved to another part of the company (*Gesellschaft für Gesundheit und Rehabilitation* – Society for Health and Rehabilitation – a major shareholder of which is the Bremen Steel Company) but only for a fixed period of time;
- while they would have to deal with new superiors or others acting as reference points, they would still be operating in their original, familiar company surroundings.

In designing the measures, the interests of the workers concerned and the relevant funding agencies of the 'Gesellschaft' (sickness funds, professional associations, pension funds) were coordinated so that a time framework of between three and 24 months could be financed. During this period the following activities were carried out:

- performance potential analysis;
- training;
- work experience.

#### Performance potential analysis

In selecting the form of benefit most likely to promote an individual worker's occupational opportunities, factors such as

**“Different and flexible solutions were developed, geared to the individual**

age, personal wishes, suitability, state-of-health and previous occupation were considered just as important as personal and social position, in order to maximise motivation for the worker. As a result, very different and flexible solutions were developed, geared to the individual, which smoothed the way to new career orientations within the company.

age, personal wishes, suitability, state-of-health and previous occupation were considered just as important as personal and social position, in order to maximise motivation for the worker. As a result, very different and flexible solutions were developed, geared to the individual, which smoothed the way to new career orientations within the company.

#### Short training courses

Short courses were linked with longer, more specific initiatives. Each participant was thoroughly monitored psycho-socially, in terms of occupational health and in order to promote their general state of health. Skills were developed through day, week and month-long courses that were given either to groups or individually, according to need. Courses covered basic subjects such as electronic data processing, social skills, ergonomics and occupational health and safety. Other options included skills in specialised areas, such as control technology, metal processing/treatment, electronics and computer-aided treatment of materials. Each was relevant to particular fields of activity, such as transport and traffic, warehousing and logistics, quality management, welding, process control, electronics, production and workshop, occupational safety and environmental protection, and supply and waste disposal.

In order to provide these courses, which were very much geared to practical work and direct application, co-operation was developed with the training establishments of the com-

panies concerned, or with other interested companies and training institutions.

#### Work experience

The subsequent work experience took place in special jobs designated for this purpose in the cooperating companies. It took the form of project work, on the basis of clearly defined work requirements. This included:

- adaptation of existing equipment to specific production requirements
- development of equipment not available on the market
- development of concrete proposals for reorganisation, taking into account acquired ergonomic understanding, in order to solve problems of work organisation.

Performance was assessed by commissioning departments or hierarchical superiors within the company, using standardised methods. The results were discussed with the workers involved and evaluated. If a worker needed to acquire further skills in order to be able to occupy a position satisfactorily, occupational reorientation and further training was provided (this included complete retraining for new occupations).

The certificate awarded to workers at the end of the process included proposals as to the area in which they might be employed and alternative career paths that may be followed. On this basis the company could establish the employment prospects of individual workers, introduce innovative forms of organisation to ensure an ergonomic work system was in place, and ensure the best possible personnel planning.

Upon termination of these company measures, the worker had a new job in a new or different post. This objective can only be achieved, however, if the employment prospects of workers whose ability to perform has changed are developed with a broad view encompassing all the employment opportunities within the company. That is to say, all areas that are subject to outsourcing (certain production and service activities, for example) must also be part of the equation.

#### The result

In 1996 and 1997 the Society for Health and Rehabilitation was able to provide 54 workers whose performance levels had changed with new skills. 43 of these were supported financially by the *Landesversicherungsanstalt für Arbeiter* (Land Workers' Insurance Institute – LVA), 4 by the *Seekasse* (Mariners' Insurance Fund), 4 by participating companies and 1 by the Bremen Employment Office. Their average age was 45 and they had on average worked for their companies for 17 years. 32% of the participants were unskilled and 27% were foreign. The predominant occupational groups were metal workers (22%) and construction workers (19%). The health problems from which they were suffering included:

- skeletal/locomotor problems (53%)
- psychological disorders (14%)
- sensory disorders (12%)

- heart/circulatory disorders (8%)
- disorders of the respiratory organs (6%) and
- metabolic disorders (4%).

The trial was evaluated in 1998. In 1999 it was continued in a modified form and with other companies. The new partners are currently discussing requirement-oriented concepts of skills acquisition and company integration, including the rehabilitation measures needed.

## PART-TIME MODEL FOR OLDER WORKERS

*Bremer Straßenbahn AG*, the Bremen public transport company, adopted a different approach. Public transport companies are generally under pressure to improve economic performance. In particular, they are having to take measures in response to changed market conditions. Given the inevitability of modernisation, social and personnel policy initiatives have to be developed and implemented.

*Bremer Straßenbahn AG* used the 'Act to promote a smooth transition to retirement' (the *Age-Related Part-Time Working Act*) and, with this as a basis, developed a modified system for its implementation within the company.

### Replacement of company early retirement schemes

Promoting part-time work for older workers was intended, in the eyes of legislators, as a way of replacing the 'old' early retirement schemes. These enabled employers to cut back on staff, while having an appreciable part of the associated costs paid for out of unemployment insurance. The new part-time scheme cannot be compared with these old schemes, however, since the Employment Office will only provide subsidies if the positions that are freed are filled with a registered unemployed person or a qualified worker.

### The advantages of the new model

For employees, the idea of gradually winding down their working careers is a frequently popular one. Other advantages include:

- workers who have experienced shift work over many years are able to reduce the negative effects on their health by gradually reducing their working hours;
- young, motivated unemployed people and people seeking training can take their place and acquire more permanent career prospects as a result of indefinite contracts with the *Bremer Straßenbahn AG*;

- by gradually reducing their hours, experienced workers are able to pass on their knowledge, sometimes gleaned over decades, to a younger generation.

For the company, these socio-political measures mean that:

- the gradual move into retirement is much more socially-supportable than previous models, from an occupational health and psychological point of view;
- because the stress factors which affect people's health and emotional wellbeing are reduced, especially among drivers, a statistically significant fall in the amount of absences on account of illness can be expected;
- with the introduction of younger staff, the company rejuvenates its staff structure and retains the know-how of older staff which can be passed on to a new generation.

Given the associated statutory conditions, however, experience to date has shown that offers of part-time contracts for older workers are not particularly attractive.

### Company agreements

*Bremer Straßenbahn AG* therefore concluded a company agreement on 15 June 1997 to increase the statutory net minimum guarantee from 70% to 85%. It was possible to do this at no additional cost to the company because of the particular collective agreement in force at the time, under which pay rates for new workers had been reduced in 1996. Where older workers work part-time under this scheme, the employer pays the statutory retirement pension contributions, payable on the difference in wages between what the worker receives for the hours he works and what would be 90% of full-time pay.

If new staff are taken on to make up the hours, the Employment Office refunds this amount to the employer.

The amendments to the statutory schemes are as follows:

- the worker working part-time on account of age works 50% of the usual working time and receives in return 85% of his previous annual net wages before tax
- the employer also pays retirement pension contributions on the basis of 90% of full-time pay
- after two years' part-time work on account of age, and on reaching the age of sixty, workers are entitled to take early retirement.

A collective agreement on part-time work for older workers is about to be concluded, which will allow the scheme to be continued for a total period of 5 years.

### Implementation

Given the age structure of the workforce as a whole, 720 employees will be entitled to work part-time on account of their age between now and the year 2004. Since the middle of 1997, 360 information and advisory interviews have been held with the company's personnel department. 251 members of staff have applied accordingly and received a contract. This corresponds to 9% of the total workforce. 10 age-related part-time contracts have already been terminated as a result of the person concerned being unexpectedly de-

*The gradual move into retirement is much more socially-supportable than previous models*

clared unfit for work, having reached retirement age or having come to the end of the period of part-time working.

There are no problems in finding unemployed people to fill the vacant posts in driving. This is done in co-operation with the Employment Office. The newly-appointed workers are trained in the necessary skills through measures supported financially by the Employment Office. To that extent there have to date been no problems in refilling the posts made free by people taking advantage of the opportunity to work part-time on account of their age.

## CONCLUSION

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Companies seeking socially responsible solutions to these issues either set store by reskilling employees alongside the introduction of specific work organisation measures, or they encourage a gradual withdrawal from paid employment with the benefit of securing the experience and knowledge of older workers for the benefit of new ones.

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# ↓ Safety and health implications of telework

**F**indings of an EU-wide study of the social implications of telework show a need for more research in areas such as stress, musculoskeletal disorders, new working time patterns, work-family interfaces and the effects of isolation.

The use of computers and telecommunication technologies enhances choice across a wide range of human activities. Services and products can be marketed and delivered at a distance, providing wider opportunities to both employers and workers to organise working places and times. Telework has been seen as one important step on the road toward the information society.

*“New thinking is needed among management and employees, so that control and supervision is based not on presence at the workplace, but on quality of results*

The concept of telework has been defined in various ways, according to its application in working life. More or less parallel concepts include flexiwork, distance work and remote work, as well as mobile or nomadic telework. Three dimensions, however, are common to all the various definitions: place, time, and the use of modern information and communication technologies.

Telework can cover many different situations, ranging from home-based telework to alternating and mobile telework, or working at satellite offices, neighbourhood offices, telecottages or 'offshore' offices. The expected benefits of telework have been discussed from both societal, industrial, regional, organisational and individual perspectives. Case studies have revealed that organisations have multiple and varied reasons for introducing telework, ranging from cost reduction and increased competitiveness to motivating their staff, enhancing the quality of work results, improving company image and retaining qualified staff <sup>(1)</sup>.

Among the most important advantages reported by teleworkers themselves are <sup>(1)</sup>:

- the better combination of work and non-work demands;
- better control of working hours and work patterns;
- increased flexibility regarding work performance and productivity;
- better quality of life;
- less commuting difficulties and expenses;
- new business creation;
- achievement of paid work instead of unemployment.

### UNDERSTANDING TELEWORK

A proper understanding of telework is needed not only as a technological phenomenon, but also in terms of associated economic, cultural and social issues. This broader view is necessary to enable it to take its proper place in the work environment. Against this background, a study of the social implications of telework was carried out in 1995-96 in 15 European Union Member States <sup>(2)</sup>, initiated by the European Commission and the European Foundation for the Improvement of Living and Working Conditions. The main task of the study was to identify and discuss the issues, obstacles and problems related to occupational health and safety issues in telework. Two other related studies dealt with issues of labour law and social security.

The following broad functional definition of telework was adopted:

*work performed by a person (employee, self-employed, homemaker) mainly, or for an important part of the time, at a location other than the traditional workplace, for an employer or a client, involving the use of telecommunication as a central and essential feature of the work.*

### JOB CONTENT AND WORKING PATTERN

In telework, as in any other type of work, the psychosocial environment, health consequences and stress levels will differ, depending on whether the tasks performed are low-skilled or high-skilled. The second important dimension is autonomy and control over the work content and work rhythms. In most cases, stress in telework is connected more to the type of work and work organisation than to the actual place of work.

In principle, telework gives room for independence and autonomy and offers possibilities for concentrated work and possibilities for organising work and timing on the basis of personal criteria. Significant increases in productivity have been reported in case studies, e.g. in insurance companies.

The individual's freedom of regulating the work rhythm may, however, lead to overload, and in the most extreme cases involve being 'on-call' 24 hours per day. Long working hours can have adverse health consequences, especially in a badly-designed workplace or where tasks are repetitive. Another stress factor connected with timing can be a difficulty in foreseeing the amount and timing of future tasks. 'Workaholic' behaviour may be an additional risk if external control does not exist, or if the teleworker is not able to control his/her own working styles.

In the case of the employee teleworker, the responsibility for carrying out the risk assessment of any workplace rests usually with the employer. Self-employed teleworkers are responsible themselves for this. The likelihood of a poorly-designed work environment and insufficient ergonomic quality of VDUs may be higher in the homes of teleworkers than in typical office environments.

## SOCIAL RELATIONS AND PRIVACY

*Physical and social isolation may be one of the biggest problems*

has been expressed that the physical isolation of teleworkers can lead to the risk of their being marginalised from the workplace and colleagues, at the same time as the importance of teamwork is being emphasised. On the other hand, modern information and communication technologies offer totally new potentials for support, training and guidance in problem situations.

Flexibility in telework gives teleworkers the opportunity to fit the work to their life and family situations and career phases. It offers a great work opportunity for people who might not otherwise be employed for reasons of disability or family duties. This can, however, also create problems of its own in terms of the distinction between work and social and family life. In this connection, the gender dimension is important. Female workers still bear the main responsibility of house-keeping and caring for children and other family members, such as elderly parents.

## ORGANISATIONAL CULTURE

The ways of organising telework are dependent on management and leadership culture, company personnel policy and motives for telework. These in turn have an impact on how the preparation and training for telework is planned, and how telework arrangements and agreements are organised at company level. In the most positive cases telework is

arranged on a voluntary basis, including the option for the teleworker to return to the traditional workplace if required. Here again, the situation of highly-skilled teleworkers is better than that of low-skilled or unskilled teleworkers.

Organisations with traditional hierarchical management methods may have problems with teleworkers being in an 'out-of-sight-out-of-mind' situation, particularly if the tasks and objectives of the telework are not clearly defined. This can lead to resistance to change from the part of middle managers. Also teleworkers themselves may feel 'under-managed' and may fear possible negative consequences for their career opportunities.

## CONCLUSIONS

The European study revealed that statistics and research data on telework are very limited, especially regarding types other than 'telehomeworking'. Data are lacking on such subjects as different working situations and conditions of mobile teleworkers. More well-planned longitudinal studies are needed on stress, strain, musculoskeletal disorders, and isolation and working time patterns in different types of telework. The impact of new technologies and new work organisations on skills, the impact of flexible hours on long-term health and productivity, problems with separating work and family life, and the building of new organisational and leadership cultures can become apparent only after a long period of time. Research should cover both individual and social system perspectives, e.g. families and partnership in a non-work environment.

Telework provides an opportunity to perform work in the most decentralised ways in society. It can be carried out from home and across borders. In order to remove obstacles from its wider adoption, especially transborder telework, many labour law and social security issues need to be resolved. Among these are:

- the sources of labour law application of labour legislation and directives in different countries;
- health and safety regulations;
- the legal status of teleworkers (employee vs. self-employed)
- conditions concerning privacy;
- regulations regarding the contract of employment;
- coverage of teleworkers by different social security benefits.

Telework may outdate the traditional concept of subordination, in which the work is performed under the command and control of an employer. New thinking is needed among management and employees, so that control and supervision is based not on presence at the workplace, but on quality of results. Working independently of time and place calls for trust between different parties. It is important to reach a balance between the privacy of the teleworker and accessibility to the work place, often home. A successful combination of work and personal life requires a clear separation of the workplace and commonly agreed rules about how to secure undisturbed concentration at work, in combination with issues of privacy and data protection. The possible risks to third parties need also to be addressed.

Large companies have created their own telework practices and agreements, where health and safety issues have been regulated. Systemic control has been suggested with health and safety surveillance directed toward the internal rules and routines of the companies. Attention to health and safety risks of materials, equipment and the work environment should start at the stage of purchase through consultation with the individual teleworker.

The dissemination of specific health and safety information is needed with guidance and training on how to proceed on relevant issues (e.g. health surveillance, how to organise work patterns, working times, re-training, risk assessment on home workstations, etc). This is especially true for small and medium-sized enterprises and for self-employed teleworkers. Guidebooks, newsletters and computer-based instructions for adjusting and checking the work environment and working should be further developed, using both internet and CD-ROM resources.

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# Redefining work as a result of globalisation and the use of new information technologies

**T**he 'Redefining Work' project, set up in 1996 by the UK Royal Society of Arts (RSA), was concerned with the ways our society may function in the new century and the assumptions we might make about the nature and pattern of work within it. Taking a timescale of some 20 years into the future, our vision of the new world of work stated that there will be fewer fixed boundaries between sectors and businesses, private and public sectors. We will not be able to make assumptions about what belongs in a sector, or what work is paid and what work is not, because all boundaries will be fluid, and change often - between public, private and voluntary sectors; people won't have careers in these sectors but will work where their skills take them.

*“The distinction between employment and self employment will become irrelevant”*

In the UK, there are many examples already where boundaries are being removed, for example, being able to get a personal loan from your local football club; and buying your pension from the same organisation which sells you your weekly groceries.

In future, more work will be centred on the exploitation of knowledge, in many forms. More people will have to 'make' work for themselves even if technically they are employed by someone else; and more people will work for themselves rather than for someone else. In fact the distinction between employment and self employment will become irrelevant as people operate in different working relationships with their employers, often several different ones, at the same time. More work will be done when individuals want to do it, rather than in fixed hours determined by an employer.

Britain like many other countries has been going through a labour market revolution that has made changes in who does work and for how long, where it is done, when it is done, how it is done and even what we mean by work - what is done for pay and what is done in other ways.

This article considers how globalisation, informatisation (ICT) and individualisation have contributed to our redefinition of work. In fact they have been critical to it. Most of the changes I have already mentioned have either been caused by them, or at least, enabled by them. The influence of each overlaps into the others as you will see when I now take each one individually.

The pace and scale of what we have come to call globalisation have been dramatically affected by the economic liberalisation of the 1980s and the tremendous growth of ICT. Their impact on the manufacturing economy was massive, the bottom third (in terms of skills) of western countries' workforces became much less valuable, in some cases, redundant as companies took advantage of ICT and 24-hour working weeks and moved production to lower cost sites in Asia and the Far East. There has been a similar move, but on a smaller scale, within the knowledge economy as organisations, such as British Airways, have utilised ICT to enable them to relocate various functions, such as ticketing, overseas, and to India in particular. However, western economies should be better placed to compete in the knowledge economy. Companies are less likely to be willing to contract out complex ICT projects to the Far East and Asia than they were to transfer whole manufacturing processes.

The consequences of globalisation are, as usual, mixed. Operating on a world scale can mean that companies have little moral or economic responsibility to countries where they choose to site production and yet these companies' influence casts a long shadow. Companies can make decisions based on cost and then walk away from the results, thus decisions affecting the North East of England may be made halfway across the world in Korea and Japan - well away from where the effects will be felt. Corporations may be more powerful than individual governments - the value of BP/Amoco is estimated to be greater than some countries' annual GDP. In this situation who has the better hand of cards when negotiating? The negative effects of globalisation have been splashed across our television screens and our newspapers over recent months in graphic images from Seattle to Davos.

Large corporations and some countries have benefited from globalisation but individuals can too. Many now trade their skills on the world market. The skilled worker, working on-line, is already globally mobile without leaving home. A lot more workers as well as a lot more work are set to become globally foot-loose. The chief executive of one of Britain's largest retailers is on record saying that a UK skills shortage can be solved relatively easily by recruiting globally, with ICT making that a much cheaper option than it would have been until recently, by using video-conferencing to interview candidates.

Let's look now at ICT. It has transformed the way we work - robots have replaced people: laptops and PCs are on most people's desks; and whole new industries have emerged. But this is just the beginning. No-one knows what its potential influence - for good or bad - might be. Technology is moving into areas most of us think of as relatively immune from its touch - health and

care sectors which we think of as people industries and agriculture for example. In Japan there are robots that can serve meals in hospitals, and recognise patients' faces to make sure they deliver correctly. In the UK there are machines at work that can plant 10,000 willow trees an hour - to feed the new power stations that burn renewable fuels.

We can already see the development of remote medical diagnosis, as the quality of video-conferencing links and of ultrasound improves dramatically. The newest video-conferencing systems now offer a quality of picture close to that of our TV screens.

As the cost of ICT-based services comes down year by year, will we reach a situation where a person-to-person service becomes a luxury and the majority of us have to make do with a robot or a computer screen? NHS Direct will provide British people with medical information via the Internet and a telephone line. It's not replacing your doctor just yet ... but in the future?

The 'virtual business', which does not directly produce goods or services itself but orchestrates the specialists who do, is a concept which will spread rapidly, for at least two reasons. One is that businesses are going to seize the opportunities it offers to cut their costs, in the face of relentless competition. They will want to put their investment into what really matters - people's skills - and not into buildings if they can avoid it. Governments will do the same as pressures on tax revenues increase. The other reason is that governments will encourage online working as a way of reducing traffic pollution. Within 20 years governments in western countries will be penalising employers who do not have employees working from home for at least part of the week where their work allows it. And people working in them will be in favour because the technology can help to support family-friendly working practices (but won't obviate the need for child-care).

#### TELEWORKING – A MIXED BLESSING?

**“Teleworking means that employment rights may be downgraded**

working hours to suit yourself on your days at home, while still maintaining contact with colleagues, and your manager, in the office on other days. But it may not prove to be as straight forward as it seems at the moment: teleworking means that employment rights may be downgraded, career development issues become more complex; new managerial skills are required and there are health and safety issues to be resolved.

A growing number of companies are shaping their businesses around Call Centres as large numbers of people see the benefits of buying insurance, pensions, air tickets, ordering bank statements and so on by telephone. Over 1% of the British workforce now work in Call Centres many of which are open 24 hours per day. 70% of their staff are female and some Centres record annual staff turnover rates of 50%. 'Low skill, low pay' may characterise many Call Centres but a more sophisticated use of ICT

Estimates put the number of teleworkers in the UK currently at over 4 million, many working from home for two or three days each week. This mix of office and home working seems to offer the best of both worlds - the flexibility to adapt your

has enabled some companies to progress and develop more sophisticated systems, multilingual Centres for example. One local government region in England has used what is called a case study approach to great effect. It enables their telephonists to answer more complicated questions - adding to their levels of job satisfaction, and also saving money as fewer enquiries have to be referred to other, more highly qualified and therefore more expensive staff.

One of the most obvious results of ICT has been the explosion in the amount of information available to individuals and organisations. This will lead to the development of business intelligence tools to help organisations find their way through the masses of information, and the chief information officer will be a critical person within the organisation. Knowledge management has already become a key business skill. But it may also threaten some professionals as members of the public get access to information previously beyond their grasp.

However, we must not forget that the information and communications technology that can empower the individual also has the capacity, in a world where it is dominant, positively to disempower the individual, and the community, lacking access to it or the understanding of how to use it. A conference delegate from east Africa was asked what plans their education ministry was making to get full value from the Internet. His answer was none, as most of their schools don't have electricity.

#### INDIVIDUALISATION

A consistent thread running through the Redefining Work inquiry was the massive shift in responsibility from organisations to individuals. Part of this shift is due to changing working patterns, as our working lives become more complicated - working for several employers at the same time for example - it makes more sense for the individual to take responsibility for such things as their pension; health and social insurance; even education, training and personal development needs. But this shift is also due to a subtle change in social mores whereby people in their twenties and thirties have demonstrated a mistrust of government, certainly in long-term financial provision - like pensions - and want to take responsibility themselves.

This trend is mirrored, in Britain at least, by the government also questioning what the State's role should be, partly driven by economic necessity, but also because we have a welfare state established 50 years ago for a society whose needs were very different from those of today. (The growth of one parent families, where Britain leads Europe, is one example of such a change.)

A recent large-scale survey of 22-25 year-olds in Britain revealed much of their attitudes towards the State and life generally. They take a much more instrumental approach to life,

**Individuals will be exposed to more of the risks associated with employment**

with less loyalty shown to employers. Many graduates now believe that staying with the same employer for more than four years is a sign of failure, rather than something to aim for.



Flexible working patterns and the ability to take charge of one's own life offer enormous opportunities, some people will find them the source of success and security. But for some it will not be a comfortable future. Individuals will be exposed to more of the risks associated with employment and business to fewer. Do people have the skills necessary to enable them to cope successfully with this new world? In Britain the majority of students leave school knowing little or nothing of the workings of the government, the welfare state, of taxation and social insurance, of pensions - and how little their State Pension will be worth when they reach retirement age. The RSA believes that this must change and that the education students receive at school should equip them with the skills and competences they will need for the rest of their lives.

Teleworking, flexibility, more self reliance - these factors are helping to produce a different sort of employee, one used to taking responsibility and working autonomously. How many companies are taking these issues seriously and looking at their own management systems and training? Asking questions such as: How do you integrate someone into a team when they are not physically in the same place for at least part of the week? In these circumstances distance can be unforgiving. How much longer will a management system based largely on direct supervision be appropriate when it is not possible to directly supervise most of your staff?

The three focal points of this article - globalisation, informatisation and individualisation - are unlikely to be rolled back, indeed their influence is set to grow rather than diminish. All three present opportunities but the demands of the knowledge society of the 21st century will be very different from those of the past. The challenges facing individuals in the management of their lives, and their jobs have changed significantly in recent years. The Redefining Work report summed up the task facing individuals as "managing uncertainty and reaching for security."

*This article is based on a paper presented at the 1998 Bilbao conference, "The changing world of work".*

L I Z B A R C L A Y

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# h ome alone - health and safety issues for the self- employed

**G**etting the health and safety message across to self-employed individuals, often working from home with little spare time and limited resources, is not easy. It relies on the dissemination of information by fellow professionals and on client companies facing up to their responsibilities.

There are 2.8 million accidents in UK homes each year according to the Royal Society for the Prevention of Accidents. One million of those involve children so the rest must be to adults, of which 4,000 are fatal. These are figures for only one EU Member State but they serve to make the point that just living is a hazardous business!

It's impossible to tell how many of those adult accidents involve people who are working but with more and more people across Europe doing at least some of their week's work at home it's a fair bet that a proportion of those accidents must be work-related. Work-related illnesses amongst people

working at home are probably even more difficult to quantify given that many will be working for themselves – possibly without any income replacement insurance – and so will struggle on, or simply complete their projects at other times when they are feeling better.

Increasingly these days people don't expect a job for life. Many now work on a freelance or

*“The first time many people working for themselves or from home think about health and safety is when accident or illness strikes*



self-employed basis – possibly for a number of different companies or organisations; visiting clients' work premises to deliver some services; working at home for others; even using the car as an office between assignments. I am one of them.

The most recent UK national survey into the numbers of people working in this way seems to have been carried out in 1994. At the time 1.2 million people fell into this category but the number must have increased dramatically since then. How many of those people – and how many of the people who employ them – think about the health and safety issues involved?

For me a working week goes something like this. I don't suffer from Monday morning blues – I usually work in my study all day, using a PC, printer and fax machine, alongside the phone and shelves of reference books. There's nothing else in the room apart from two office swivel chairs, a pile of recent newspapers and the bin. When I'm writing and have deadlines to meet I can spend the whole day working – often forgetting to come out for lunch. There is no one to make sure I take breaks. How long do I spend in the front of the computer screen? Is my work station laid out ergonomically? Am I heading for repetitive strain injuries and back problems because of the way I work? I'm not sure that I know all the answers to those questions.

The rest of the week is a mixture of going into the BBC or an office elsewhere, depending on the projects I'm working on. At the BBC, mornings are spent preparing for live broadcasts at midday each day. We work straight through from around 8am until 1.30pm. There are new desks and chairs – they have been installed within the past few months along with the latest computer screens. The chairs do everything you'd expect and more. You can adjust the back, the seat, the height, the arms – but unless you use the same chair each day at the same desk, and have the whole ensemble set up specifically for your own needs, it isn't possible to ensure that your work station suits you ergonomically. It is not the kind of work environment where we always have the same desks and chairs. We work in a newsroom set-up where peo-

ple share spaces and are up against incredibly tight deadlines. There is simply no time to squabble about someone else sitting at your workstation, or to worry about whether or not the chair is always at the right height – there’s a programme to get on air! And that’s not to mention the stress involved in working on that kind of daily programme.

At present I have three other employers. I present seminars and conferences and do some training as well, working for my own small radio and television production company for which I might occasionally hire someone to work at home in much the same way as I do. Sometimes I am standing around on street corners waiting for a TV crew to set up cameras and lights so that I can present a report for television. I work in a real world where hazard assessments forms are filled out and risks are assessed, but deadlines are everything and different companies have different approaches to safety and health at work.

### RISK ASSESSMENT

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In traditional workplaces, such as offices, factories, shops, etc, safety representatives are appointed and employers are committed to a safe and healthy work environment. Risk assessments are carried out, risks are minimised and employees are aware of health and safety issues and trained in all sorts of safety procedures such as lifting and carrying. That may be the case for the permanent staff who work in the places I go to, but in the four years I’ve been freelance no one has ever mentioned my health and safety or asked what my working conditions are like at home.

There’s an argument that a reduction in the number of people commuting between home and work will result in a reduction in the number of work-related traffic accidents. That’s probably a reasonable argument, but people feel safer and more secure between their own four walls and so will probably be less concerned with safety issues. Alongside that feeling of security is an assumption that at home we’re not at long-term risk from the kinds of illnesses and injuries we might be prone to at work. Nor is there anyone to nag on the issue of health and safety; to remind us to sit up straight; to stick to those areas designated for pedestrians only; or to wear protective clothing. It’s surprising how easy it is to cut corners when there’s no one around to see!

### RESPONSIBILITIES

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So who is responsible for my health and safety? No matter what the responsibility on my employers, I suspect that I am the only person who can practically take that responsibility. I could take the line that I want everything checked out before I use it, but I’d soon be labelled ‘difficult’ and the work given to someone else. I can’t expect representatives of four different companies to come and inspect the way I work at home – or that every time I am commissioned to do a freelance article for a newspaper or magazine the safety representative will call round. I wouldn’t want them anyway. I’ve got work to do, a living to make, and time is money. When I was asked to write this article, who asked me how long it would take? Was I sure my workstation was satisfactorily laid out? Was I aware of the kinds of breaks I should take? Nobody!

The health and safety authorities in most European countries have long worried about getting their messages through to small businesses. Those owners and managers have their work cut out simply keeping the business afloat. Health and safety hasn’t yet become an integrated part of the effective and efficient management of the business in the way it should be. It’s still seen

as an add-on. Something to be worried about when everything else in the business is running smoothly and there’s time and money to devote to health and safety. If you can’t get small businesses with up to 50 employees to take it seriously, how do you get the message that good health is good business across to the one person freelance operations like mine.

### INFORMATION NEEDS

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If I am to be responsible I need information. Many people in my line of work have never ever considered the health and safety implications of working from home. And they don’t have the financial resources to provide for themselves should something go wrong.

Freelances and the self-employed have to register for tax in this country with the Inland Revenue. They have to register for VAT if their turnover is above a certain amount but few actually have to register with the Health and Safety Executive so they may never come across health and safety legislation. The first time many people working for themselves or from home think about health and safety is when accident or illness strikes. There is a wealth of information available but people need to know where to go for it, the questions to ask and that they should be concerned about it in the first place.

How do you get the message across to people like me? What about the professionals with whom we have contact? These include the Inland Revenue, possibly the bank business adviser, an accountant, perhaps a lawyer; maybe Customs and Excise and sometimes a business adviser from a local business organisation. But rarely does the list include anyone with any real health and safety expertise. The message can only get through if everyone who comes into contact with small, one-person freelance operations is willing and able to pass it on, stress its importance and point people in the direction of available information. In the same way, businesses employing people on a freelance basis need to be informed of their responsibilities too.

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*Health and safety  
hasn’t yet become an  
integrated part of the  
effective and efficient  
management of the  
business in the way it  
should be.*

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# Summary of the Changing World of Work Conference conclusions

**T**he Agency's Changing World of Work conference held in Bilbao in collaboration with the Austrian Presidency at the end of 1998 highlighted many aspects of the health and safety impact of the changing global economic and social environment. The Conference conclusions focused on many new challenges to be faced in improving occupational safety and health in Europe in the future. The main findings are reproduced below.

## SESSION 1: MAJOR TRENDS IN THE CHANGING WORLD OF WORK

### New technologies

- There is a growing use of information and communication technology in all sectors.

### Growing occupations in service sector

- As an ever-higher proportion of workers is employed in the service sector, new burdens arise, such as

ergonomics problems in information-intensive work, musculo-skeletal disorders, etc. An increasing component of work in the service sector involves inter-personal contact – employees with clients, customers, patients etc - which can lead to increased stress and even violence at work.

### New forms of work

- There is a shift away from the traditional concepts of work towards new forms, such as telework, self-employment, subcontracting work, temporary employment, etc.

### Integration and globalisation

- The development of new technologies resulted in increased integration and globalisation of work, so that national solutions become increasingly dependent on European and international conditions.

### Ageing of workforce

- Demographic changes mean that in 2005 more employees will be in their fifties than in their thirties.

### Raising employability through new qualifications

- With the changes in the job market, employees' priorities are also changing. There is increasing interest in autonomous work, self-realisation, staying healthy, etc.

## CONSEQUENCES

### For social and labour market policy:

- Social and labour market policy, including occupational safety and health policy, must keep pace with the changes in the world of work and be adapted accordingly.

### For partnership between stakeholders:

- All stakeholders within occupational health and safety system (employers, employees, inspection authorities, insurance funds, etc) have to discuss and, if necessary, adapt their role and tasks related to the changing world of work. It is important to assess the resulting effects of the changing world of work and to find practical solutions.

### For information and cooperation:

- There is a greater need than ever for information exchange and cooperation within the Member States of the European Union, between the Member States of the EU and USA, and between the Member States of the EU and the Applicant Countries.

Each year there are in Europe at least five million accidents at work, including almost 6500 fatal accidents. Studies show that work accidents and occupational diseases cost national economies between 1.5 and 4% of Gross Domestic Product (GDP). Safe workplaces and healthy workers are essential in-

Ingredients of the European social model and contribute to improving European competitiveness and productivity. Health and safety at work is a productive factor.

## SESSION 2: SAFETY AND HEALTH CHALLENGES

The key challenges highlighted in this session included:

- There is a growing number of small and medium enterprises in which health and safety knowledge is insufficient and often missing. Traditional accident/ill health risks remain on the agenda and the risk rate is higher in small business. Risks are unequally distributed between larger and small enterprises.
- There is a general trend towards increasing working hours, work pace and work load. This has an effect on accident rate and stress at work.
- There is an increase in so-called atypical work, such as part-time, temporary or contract work and self-employment. Many of such workers fall outside the present health and safety prevention system. Workers in the service sector, women, ethnic minorities and young workers are more likely to work in these types of employment.
- New information technologies are producing new types of work and work organisation such as teleworking. This work also trends to be more 'precarious'.
- Management and structural changes in organisations, such as leaner management affects safety management too. For example, it delegates responsibilities in such a way that it becomes unclear who is responsible for health and safety decision making. Organisations may no longer employ specialists on health and safety.
- Safety and health experts, working in-house or in external preventive services, need to alter their previous way of working, for example to respond to managing and coordinating health and safety among contractors.
- Enterprises, especially small and medium enterprises, often do not realise that safety and health at work is not only a legal requirement but a 'strategic tool for companies'.

## CONSEQUENCES

To cope with these challenges, it is necessary to:

- collect and distribute the available national and international information;
- develop the availability, sharing and utilisation of information, especially for small and medium enterprises;
- identify any knowledge gaps.

In doing so it is necessary to:

- address all aspects of working life and organisation, and different types of workers;
- ensure participation (employers, employees, expert institutions, labour inspectors etc.). The continuation of tripartitism was identified as a crucial factor in ensuring health and safety at work.

Information and practical examples of activities in the following areas are needed:

- how to attract the attention of small and medium enterprises to subjects in the field of safety and health at work;
- how to improve safety and health for contract workers and the self-employed;
- ways in which safety and health experts have altered their way of working in response to work organisation changes;
- use of safety and health as a strategic tool for companies;
- linking safety and health into the equality agenda;
- action-oriented training at all levels.

Collaborative actions and a multidisciplinary approach between occupational health and occupational safety experts need to be developed and tested.

European research activities should be initiated, e.g. the impact of stress, long working hours and new forms of organisation, etc, on the safety and health of employees.

## SESSION 3: PREVENTIVE ACTIONS

Job design and work organisation have to consider the needs, abilities and skills of the whole workforce including disabled employees.

To achieve this, there is a need for fundamental changes:

- long term on-the-job training;
- more intensive and creative use of employees' knowledge and experience;
- to broaden the concept of prevention to health promotion at work;
- more awareness of health risks so that they have the same status as the acute accident risks;
- salaries should also reflect the nature of work rather than only the age of the employee.
- regulators, as well as inspection authorities, have to adapt their ways of working. they have to:
- 'facilitate' as well as 'do' and 'influence' as well as 'compel';
- gather information globally;
- use new tools and other organisations to reach companies, especially small and medium enterprises;
- use others and their agendas, e.g. health, environment, etc.
- set strategy, framework and priorities.

It is important to use decentralised institutions (e.g. social partners' organisations, organisations of small and medium enterprises, insurance funds), their expertise and their access to enterprises, especially small and medium enterprises, to disseminate practical solutions on safety and health at work.

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