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# Worker participation practices: a review of EU-OSHA case studies

Literature review



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## 1. Introduction

### 1.1. Worker Participation – an essential part of a successful safety and health management

A positive health and safety organisational culture is underpinned by strong leadership by management together with the active involvement and participation of workers in which everyone accepts their rights, roles and responsibilities in relation to health and safety, and works collaboratively to prevent ill-health and injury, and to promote health and wellbeing. Effective leadership is required to provide strategic direction for the management of safety and health and to motivate staff to engage effectively in ensuring good safety and health performance. The commitment to effective worker participation needs to be visible and communicated to the entire workforce. An effective safety and health management system should be based on risk assessment, with the objective of identifying key occupational hazards and key at-risk groups and developing and implementing appropriate prevention measures. Effective worker participation and employee involvement in risk assessment and planning, and introducing measures is particularly important. But there should also be active worker participation and employee involvement in the strategic development of health and safety systems and policies and the implementation and evaluation of such systems and policies.

European legislation on occupation safety and health recognises the key role of worker involvement. Employers are required to consult and involve workers and their representatives in health and safety matters in addition to providing them with information and training. In turn, employees are required to cooperate with their employers on health and safety. The EU Framework Directive 89/391 on managing occupational safety and health (OSH) sets minimum requirements on workers consultation. Broadly speaking, employers must consult workers and/or their representatives, and allow them to take part in discussions regarding issues concerning health and safety procedures, operations and policies. Within this context, employers must respect the right of workers and their representatives to make proposals, and organise their balanced participation. There are a number of issues that employers must consult workers/worker representatives on, including: any measure that may substantially affect safety and health; the designation of workers responsible for OSH activities and first aid, fire and evacuation activities, and outside competent services; and the nature and use of information relating to risk assessments and groups of workers exposed to particular risks. National legislation and/or practices set specific requirements on information provisions and consultation practices, especially regarding worker representatives and the establishment of forums such as joint safety committees.

Full worker participation can be defined as the full and genuine participation of the workforce in the management of health and safety, where workers and their representatives are encouraged to take part in making decisions about managing health and safety at work. It is based on a two-way process of communication, where employers and employees/employee representatives: talk to one another, listen to one another's concerns, raise concerns and solve problems together, seek and share views and information, discuss issues in good time, consider what everyone has to say, and make decisions together. Throughout the whole process, it is important that employees are well informed on what activities will take place and what changes the organisation intends to make. Their concerns must not only be listened to, but also acted upon. At its most effective, worker participation aims to develop a culture where relationships between employers and workers are based on active collaboration, trust, and joint problem-solving. In short, full worker participation requires effective communication and consultation, trust and respect, collaboration and partnership, talking, listening and cooperation.

Worker participation needs to be planned and systematic, but it need not be complicated. It may involve a number of different methods, for example, a safety committee or ad hoc working groups. Direct involvement may take place through team talks, surveys, suggestion schemes, accident reporting systems, or during safety audits. Normally a combination of formal and informal methods are used, combining direct involvement of individual employees with indirect involvement via worker representatives, safety committees etc.

## 1.2. Aims and methodology of this report

The European Agency for Safety and Health at Work (EU-OSHA) publishes case studies of good practices to prevent workplace risks in a series of reports on different topics. The cases are analysed for success factors, and effective worker participation is consistently shown to be a basic requirement for the successful identification of problems and implementation of practical solutions, regardless of the size or type of workplace or type of problem. Many of the cases include descriptions of how worker participation has taken place in practice and its role and place in introducing successful prevention measures. It was therefore decided to revisit these good practice case descriptions and make a compilation of the worker participation components, to provide an overview of how worker participation featured in the various cases and show the types of approaches and methods that were used in practice.

The contractors examined a range of case studies and reports of good practices to manage OSH risks to:

- identify and extract relevant sections from existing EU-OSHA cases studies showing good practice in worker/worker representative participation;
- categorise the types of worker participation; and
- identify and compile conclusions related to good practice in worker/worker representative participation from existing EU-OSHA reports.

This report contains the results of this review.

## 2. Information on worker participation in EU-OSHA good practice reports and case studies

The report is divided into two key sections. The first section outlines all the case studies that were identified to have some component of worker participation, and its key characteristics. The second section outlines the conclusions on worker participation found in the reviewed EU-OSHA case study reports.

### 2.1. Worker participation components described in EU-OSHA case studies

#### ***CS 1 - Introduction of a healthy and successful work organisation at a call centre***

**Country:** Germany

**Organisation:** Stadtparkasse Hannover KommunikationsCenter

**Activity:** call centre

**Main risks:** mental strain

**Main problem:** monotonous and high demanding work with little scope for control

**Main action:** work assessment with quantitative and qualitative methods; identify stress factors using a software tool; mix easy and more demanding tasks; seek consultation from different groups of stakeholders; assigning work resources in cooperation with staff and work council

**Main worker participation measures:** Staff council

**Description of worker participation:** staff council and workers were involved from the early stage of the project. Workers' opinions were sought for work assessment, designing of work environment and assigning work resources. Workers allowed freedom in choosing which task to do and when, as long as there were adequate staff, and they had freedom in what they say: there are no scripts on the screen. Trainings such as voice training, stress management and relaxation were provided to workers.

**Results:** No indication of the effects of inappropriate strain or stress was shown soon after the call centre was opened and no indication of increased stress levels or effects of inappropriate strain were identified after three and twelve months. Staff were involved more in decision-making.

**Source (URL):** Prevention of psychosocial risks and stress at work in practice EU-OSHA Report (2002)

<http://osha.europa.eu/en/publications/reports/104>

#### ***CS 2 - Simple steps to prevent stress at work: effective employee involvement in risk management***

**Country:** United Kingdom, Scotland

**Organisation:** BP Grangemouth – Applied Technology Group

**Activity:** Commissioning an extension to the ATC chemical process technology demonstration plant in a petrochemicals company.

**Main risks:** mental strain; petrochemical hazards

**Main problem:** inevitable technical challenges due to plant commissioning; new staff lack of experience; old staff feel job insecurity due to recent job cuts; physical hazards; safety on site

**Main action:** Stress prevention measures were determined through worker participation: a project team was formed in order to get the cooperation of cross-section of the workforce to prevent work-related stress; an external chartered psychologist was invited to brief the team member on stress; potential stressors were identified and prioritised by different teams separately; stress assessment was carried out; control measures were shared and endorsed by the whole team

**Main worker participation measures:** project team

**Description of worker participation:** representatives of the two main groups working on the project: the day support team of engineers, project leaders and chemists and the shift operations team who operate and maintain the plant, were included in the project team along with the project manager. The aim was to obtain the participation of a cross-section of the work force. After the project team identified the likely sources of stress all workers in the two main groups, i.e. day and shift teams, were involved in prioritising their stressors. Due to their distinct role and tasks the two team members worked separately. Both teams then worked together to complete the risk assessment process. They identified how or why each stressor caused harm, and shared ideas about what organisational and individual actions would mitigate the effects of the top-five stressors, and identified relevant, practical control measures. The control measures then shared and endorsed at a second workshop attended by the whole team. All workers were encouraged to use the watchword 'minimum requirements' to challenge others in order to deal with one of the stressors, i.e. 'unnecessary detail'. Day and shift team members were also involved in evaluating the stress prevention project.

**Results:** Workers were subsequently interviewed about the effectiveness of the project as well as reducing stress. The process facilitated teamwork spirit and open communication. It led to a much more open discussion about human issues. The whole team became much more open about confronting stress.

**Source (URL):** Prevention of psychosocial risks and stress at work in practice EU-OSHA Report (2002)

<http://osha.europa.eu/en/publications/reports/104>

### ***CS 3 - Stress prevention and welfare programme in the chemical industry***

**Country:** Netherlands

**Organisation:** Dow Benelux B. V.

**Activity:** manufacture chemical, plastic and agricultural products

**Main risks:** multiple risks

**Main problem:** work-related sickness absence, stress, shift-working

**Main action:** a questionnaire which covers four dimensions of the working environment was used on a regular basis to identify stress at an early stage and to decide the measures needed to tackle it at source and monitor the results. Comparisons are made with the results from previous years.

**Main worker participation measures:**

- works council representative
- staff survey

**Description of worker participation:** Workers completed the stress questionnaire on a voluntary basis. Health and safety personnel used the results to help them carry out risk assessments in the individual departments. The survey results and the actions needed are discussed within each department. Those involved in these discussions included the departmental operations leader, company medical service representatives, safety and health personnel and a works council representative. Priorities for action are set and responsibility for actions assigned with an agreed timetable. Where particular problems are identified for particular groups of staff, workshops were set up to investigate the issues further with the staff concerned. For example, this was done with the security and fire staff.

During interventions, attention was given to issues such as improving the planning of work, team working and clarity of roles. Issues such as providing for continuous learning have been dealt with through incorporation within a 'people strategy'.

The questionnaire also included a strictly confidential staff well-being section. Individuals with low score may be referred to the company medical officer. The programme also covered provision of support to staff for non work-related problems. However, the main emphasis of the programme is identification of problems and prevention at the organisational level.

The involvement of the works council was an important part of the process. The implementation programme was set out within an agreement with the works council. Each department had to attend the works council on an annual basis to report on what measures they had been taken to implement the risk reduction plan arising out of the results of the survey for their department. The works council receives regular reports on the overall progress for discussion. The works council takes up some specific issues such as work pressure.

Group level results were made to all staff via the intranet and were also written up into the occupational health service annual report.

**Results:** Stress was actively discussed in the enterprise after the project. Absenteeism rates remained at low level – at around 3-4% per year. The company earned a good reputation as a good employer.

**Source (URL):** Prevention of psychosocial risks and stress at work in practice EU-OSHA Report (2002)

<http://osha.europa.eu/en/publications/reports/104>

## ***CS 4 - Stress prevention in an old people's home***

**Country:** Spain

**Organisation:** Llar d'ancians de calvia

**Activity:** nursing home for the elderly

**Main risks:** physical and mental strain

**Main problem:** high absenteeism rate from stress-related conditions such as depression and anxiety; high level minor accidents

**Main action:** assessment of stress; risk assessment, including questionnaires to all staff, and analysis of the work and working conditions and interviews carried out on a voluntary basis; indentifying proposals for improvement; implementing the proposals on a gradual basis

**Main worker participation measures:**

- health and safety trade union worker representatives
- risk assessment survey
- interview
- communication protocol
- collective agreement meetings of workers to discuss problems and solutions

**Description of worker participation:** Workers were involved via the safety and health committee along with managers and specialists. All staff were encouraged to complete questionnaire and to participate in interviews. Management and health and safety trade union representatives of the workers examined the incidence of ill health problems and decided to carry out a study to identify sources of stress, and potential measures that could be taken to prevent them and improve the work and its organisation. Training sessions were provided in coping with situations such as death, pain and the terminally ill. Workers participation in meetings was promoted in order for them to contribute suggestions, ideas and opinions. Staff were given greater responsibilities and their tasks were better defined.

**Results:** the frequency index for sickness absence dropped from 18% in 1998 to 2% in 1999 and stayed around the same level in the following two years. There was an improvement in staff morale and working relations as well as improved relations between staff and residents. Staff involvement allowed the identification of multiple problems and their practical resolutions.

**Source (URL):** Prevention of psychosocial risks and stress at work in practice EU-OSHA Report (2002)

<http://osha.europa.eu/en/publications/reports/104>

## ***CS 5 - Jorvi hospital's model for planning work rotas autonomously***

**Country:** Finland

**Organisation:** HYKS, Jorvi hospital physiotherapy department

**Activity:** provide physiotherapy services for patients in the hospital's departments and the physiotherapy outpatient clinics

**Main risks:** mental and physical strain, work-life balance

**Main problem:** the inflexible work rotas cannot meet the increased work demand

**Main action:** an experiment of work rota autonomy was carried out; the impacts on employees' well-being, productivity, work content and the availability were monitored and evaluated

**Main worker participation measures:**

- Giving workers control to plan and change work rotas
- Questionnaire and interviews with patients and staff
- Piloting of project with employees
- Collective agreement
- Training
- Evaluation survey

**Description of worker participation:** employees were allowed to plan their own shift rotas and compile a work list within a framework set by a supervisor; employees were trained to plan and compile work rotas; employees were allowed to change their work rotas one week before they were due to begin, providing that they obtained the prior approval of the supervisor. The intervention was developed and piloted with one group before extending it.

**Results:** the physiotherapists reported that the work rota experiment increased their potential impact on their own work, work productivity, work management, and desire to work. Employees found that the experiment improved the compatibility between work and leisure. The experiment was found to have reduced the mental stress of work. Better services were provided to patients and a significant larger number of outpatients were taken care than previous year. The effectiveness of the pilot project was monitored for one year before extending it. This included conducting a questionnaire survey to both staff and patients. The rota autonomy model was then adopted permanently by the department.

**Source (URL):** Prevention of psychosocial risks and stress at work in practice EU-OSHA Report (2002)

<http://osha.europa.eu/en/publications/reports/104>

## ***CS 6 - Training for managers on management styles to reduce stress at work***

**Country:** Austria

**Organisation:** RHI AG

**Activity:** refractories, mining and quarrying industry

**Main risks:** multiple risks

**Main problem:** high level of stress

**Main action:** training for an occupational stress survey was carried out among employees in all participant companies within a mining group to evaluate the problems of stress in order to provide a basis for intervention action. Objective data on workplace stressors was analysed and indicators of problems such as overtime rates, accident, ill health and absenteeism rates. These results were linked to additional social insurance data. Possibilities for interventions were then identified. The lack of awareness among managers and supervisors that they could contribute to stress reduction was identified as one of the issues. Thus training sessions were provided to managers in order to help them understand what they could do to reduce stress. Company suggestions scheme was redesigned as a communication system within the integrated management system.

**Main worker participation measures:**

- Suggestion scheme expanded into a communication system
- Stress survey
- Awareness raising and training for managers to improve employee participation

**Description of worker participation:** Employees were involved in initial survey to assess the existing problems within companies. Work planning and management styles were identified as problems. Awareness raising and training to improve employee participation and feedback, for example, in work planning was also part of the process. Using the suggestion scheme as a starting point, a communication system within the integrated management system was designed to enable employees participate in decision making and to improve communication within companies. Feedback about the results of the evaluations and information sheets about work-related stress was provided to employees via the company internet, and information was included in the company management manual.

**Results:** improved health and motivation of staff, which will improve performance.

**Source (URL):** Prevention of psychosocial risks and stress at work in practice EU-OSHA Report (2002)

<http://osha.europa.eu/en/publications/reports/104>

## ***CS 7 - Stress programme in progress at the Swedish National Labour Market Board***

**Country:** Sweden

**Organisation:** Swedish National Labour Market Board

**Activity:** public sector labour market board

**Main risks:** multiple risks

**Main problem:** sickness absence increasing annually by one or two percentage, which is largely due to stress-related disorders

**Main action:** At the start of 2002, the Swedish National Labour Market Board launched a comprehensive programme consisting of three different sub-projects: the Stress Profile project, executives and personnel management project, and stress prevention at the individual level project. The aim was to create a positive work environment that included improvements to worker involvement.

**Main worker participation measures:**

- Workplace survey
- Project team
- Interviews

**Description of worker participation:** with support from a project team, all employees, including the managers, were involved in identification of factors, both positive and negative, which influence staff as regards work-related stress and sickness absence, as well as perceptions of the psychosocial work environment. Managers were trained to improve their handling of individual personal issues and rehabilitation causes. Follow-up interviews were carried out to get feedback on the effectiveness of the approach.

**Results:** information is not available in the report

**Source (URL):** Prevention of psychosocial risks and stress at work in practice EU-OSHA Report (2002)

<http://osha.europa.eu/en/publications/reports/104>

## ***CS 8 - Athens 2004 Olympic Games – managing stress and psychosocial risks***

**Country:** Greece

**Organisation:** Organising Committee for the Olympic Games 'Athens 2004' S. A.

**Activity:** Organise the 2004 Olympic and Paralympics Games

**Main risks:** various and multiple risks

**Main problem:** stress, violence and health-related psychosocial risks like tobacco, alcohol, drugs and HIV/AIDS

**Main action:** An integrated 'plan-do-check-act' occupational safety and health management system was developed to address work-related psychosocial risks. Particular factors considered included the work situation, the short time span of the company and the personal characteristics and different cultures of the individuals hired by the company. In 18 months, 120 internal and external training courses were delivered and each worker participated in at least two of those. Workload and job content were examined and redesigned. Several internal sport tournaments and contests with various prizes were organised aiming to establish good relationships between all the workers

**Main worker participation measures:**

- self-assessment questionnaire
- project evaluation questionnaire
- new management system incorporating staff involvement and communication

**Description of worker participation:** all parties concerned including workers and managers were involved in the development of the policy and prevention measures. Self-assessment questionnaires were distributed to all workers in order to identify the attitude of the personnel towards the existing psychosocial risks. Training courses in different areas were delivered to all workers through means such as notice boards, emails, special meetings, induction courses and training sessions. Workers were also involved in evaluation of the project by completing questionnaires.

Elements of the stress management system introduced included:

- Effective management structure with responsibility and accountability for delivering the policy which is supported by staff involvement and adequate communication at all levels;
- Establishment of a common understanding of the company's vision, values, beliefs and positive culture which promote workers involvement and commitment at all levels.
- Regarding work organisation the following were promoted:
- Participation at all levels in decision-making, people-oriented leadership and effective two-way communication;
- Supportive relationships and social contacts between supervisors, managers and all workers are encouraged;
- The workers were encouraged to discuss any conflicting demands between work and home.



**Results:** high levels of motivation and good relations among the entire workforce was achieved

**Source (URL):** Prevention of psychosocial risks and stress at work in practice EU-OSHA Report (2002)

<http://osha.europa.eu/en/publications/reports/104>

### ***CS 9 - Programme for a safety hospital: 'safe care'***

**Country:** Netherlands

**Organisation:** Sectorfondsen Zorg en Welzijn

**Activity:** hospital

**Main risks:** various and multiple risks

**Main problem:** high incident rates of mental and physical violence, sexual intimidation, and threatening

**Main action:** introduction of a zero-tolerance of violence scheme including a 'card system' to indicate the public unacceptable behaviour.

**Main worker participation measures:**

- Works council
- Staff consultative meetings
- Survey
- Interviews

**Description of worker participation:** Before the intervention started the management and works councils agreed the framework for action. Next, a working party composed of various members of staff from at-risk departments was formed. A zero measurement was carried out using the following data: incident reports, examination of measure already taken, and results of surveys and interviews of staff in at-risk departments. The working party was commissioned to draw up a risk inventory, colouring rooms using the appropriate colour to indicate the risks level. A 'card system' was used to break down the types of aggression. A survey was carried out to find out when most incidents occurred. One interesting technique used by the working party was to map the hospital floor plans. The staff and the project leaders coloured the room: red=high risks of aggression/theft; yellow=medium risks; green=low risks. This was used as a basis for discussion of how improvements could be made. There were follow-up interviews within 'at-risk' departments. Once every six weeks the project featured on the agenda of management and staff consultative meetings in the at-risk departments. There was a close cooperation with the police. Cameras were installed. Training was provided to employees and managers in various areas: customer relations, dealing with aggression and self-defence training. Transparent communication was formed to inform all staff in the hospital about the project and the measures that had been taken by means of posters and flyers in order to raise everyone's awareness.

**Results:** a survey showed that the physical violence fell by 30% and verbal aggression fell by 27% since the measures had been taken under the 'Safe Care' plan.

**Source (URL):** Prevention of psychosocial risks and stress at work in practice EU-OSHA Report (2002)

<http://osha.europa.eu/en/publications/reports/104>

### ***CS 10 - The management of violence against staff in the healthcare sector***

**Country:** Ireland

**Organisation:** Mid-Western Regional Hospitals

**Activity:** health care

**Main risks:** multiple risks

**Main problem:** violence in the healthcare sector; workers feel stress, frustration, fear and vulnerability

**Main action:** introduction of a comprehensive violence prevention programme.

**Main worker participation measures:**

- multidisciplinary working group
- incident reporting policy and form
- training staff to deliver training
- comments and complaints policy
- evaluations of the questionnaires, focus groups, interviews

**Description of worker participation:** a small multidisciplinary working group was set up to bring forward recommendations for action. Staff were encouraged to report all incidents and near misses in an open report system, new incident reporting policy and form were developed and promoted to encourage an open reporting policy for all incidents and near misses within a no blame culture. Special training was provided to staff in order to deal with aggressive and violent situations. Fourteen staff were trained as trainers in delivering an accredited programme of 'Non-Violent Crisis Intervention'. Qualitative and quantitative feedback from staff by means of incident reporting analysis, questionnaires, focus groups and interviews were used during evaluation process.

**Results:** the no-blame reporting approach resulted in an increase in the number of incidents being reported. The multidisciplinary team approach to risk assessment was used in other complex areas such as operating theatres. There was a growing confidence in the power of using an evidence base such as incident reporting to highlight areas of concern and the need for changed practice.

**Source (URL):** Prevention of psychosocial risks and stress at work in practice EU-OSHA Report (2002)

<http://osha.europa.eu/en/publications/reports/104>

## ***CS 11 - Preventing work-related violence in the retail sector***

**Country:** United Kingdom

**Organisation:** Debenhams Retail PLC

**Activity:** National retail department store chain selling to the public

**Main risks:** mental strain, physical danger

**Main problem:** work-related violence to shop workers; violent crime relating to handling cash and merchandise; contact with angry customers

**Main action:** Introduction of violence prevention measures, personal safety campaign and regional support teams. A holistic approach was taken, which includes for example, risk assessment, staff training and communication, provision of adequate resources, working with local crime prevention schemes and police forces, installation of CCTV and alarm system, provision of personal attack alarms etc.

**Main worker participation measures:**

- work place survey
- interviews and questionnaires
- staff consultation
- consultation through the safety committee and task group
- on-going feedback to make further improvements

**Description of worker participation:** The company health and safety committee discussed the problem of violence and a task group was then set up to look at the issue. Risk assessments were carried out. Incident reports and existing training materials were reviewed. Staff and managers were consulted by questionnaires and interviews. It was decided to provide a framework for preventing violence to staff. Employees were involved from an early stage of the project, identifying and discussing the issues of violence. Interviews and questionnaires were used to consult staff and managers. Training was provided to all staff including contract cleaners. Ideas of dealing with the issue were actively sought from staff.

**Results:** Results showed positive feedback from the staff and management. Improvements are ongoing; the company actively seeks ideas for further improvements from staff through consultation and feedback.

**Source (URL):** Prevention of psychosocial risks and stress at work in practice EU-OSHA Report (2002)

<http://osha.europa.eu/en/publications/reports/104>

## ***CS 12 - Implementation of a prevention plan for risks relating to third-party violence in an urban public transport company***

**Country:** France

**Organisation:** SEMTA Transports Publics Urbains Amiénois (Amiens Urban Public Transport Company), ASMIS Service Interentreprises de Santé au travail de la Somme (Association pour les Service Médicaux de la Somme)

**Activity:** an urban public transport system, operating over 16 routes, transporting 14,500,000 people in 2001, with 335 staff.

**Main risks:** mental strain, physical danger

**Main problem:** third-party violence, which includes violence against people (verbal and physical attacks) and material damage (broken windows)

**Main action:** A range of measures to prevent violence introduced, including involvement with the Amiens suburban authority and a watchdog committee. Close collaboration was developed with elected staff representatives and the members of the committee for health and safety and working conditions. A detailed presentation was made of new prevention and safety measures. Transparent communication with all the company's staff was carried out.

**Main worker participation measures:**

- company agreement
- staff representative and safety committee
- various staff communication measures
- health and safety and working conditions committee
- active communication with staff

**Description of worker participation:** A company agreement was made to set out human and material resources. Elected staff representatives and the members of the committee for health and safety and working conditions were actively involved in reporting attacks on staff and material damages. All the company's staff were informed in real time of incidents happening in the network through messages on the radio and information put up on notice boards. Transparent communication with all the company's staff was carried out.

**Results:** Since 2002 the preventive measures have begun to show positive results, both in terms of the number of attacks observed and the frequency of broken windows. Social dialogue within the company also benefited from the implementation of the prevention plan.

**Source (URL):** Prevention of psychosocial risks and stress at work in practice EU-OSHA Report (2002)

<http://osha.europa.eu/en/publications/reports/104>

### ***CS 13 - 'Work culture agreement' to tackle harassment, bullying and discrimination***

**Country:** Italy

**Organisation:** ATM – SATTI, FILT – CGIL, UIL – Trasporti, FIT - CISL

**Activity:** provide public transport and mobility services

**Main risks:** violence and harassment of staff

**Main problem:** harassment and violence was not being managed effectively

**Main action:** development of a collective agreement covering prevention and dealing with complaints.

**Main worker participation measures:**

- Employee representatives
- Collective agreement

**Description of worker participation:** collective agreement was developed and introduced with the participation of employees and their representatives. It was decided that action needed to be taken by a collective agreement to cover internal work culture issues, to introduce a fair and informed approach and to cover difficulties in reporting, investigation of complaints etc. The 'work culture' agreement was developed and introduced as part of a general approach of developing effective human resource management. The agreement was developed in partnership with trade unions and the Equal Opportunities Commission, and involved working with the entire workforce.

**Results:** the agreement made interpersonal relations clearer and more transparent, and sent out a clear message about the attitude and values of the service both to existing employees and to potential new recruits.

**Source (URL):** Prevention of psychosocial risks and stress at work in practice EU-OSHA Report (2002)

<http://osha.europa.eu/en/publications/reports/104>

### ***CS 14 - Guidelines on prevention of psychological violence and intervention measures***

**Country:** Finland

**Organisation:** Outokumpu Poricopper Oy

**Activity:** involved in base metal industry, where the percentage of male employees is 80%

**Main risks:** mental strain

**Main problem:** bullying, harassment and discrimination within the company

**Main action:** Introduction of procedure, guidance and training

**Main worker participation measures:**

- working group
- staff consultation
- joint management – worker representative training

**Description of worker participation:** Consultation was made with various groups of employees when drawing up the guidelines. Training sessions were arranged for supervisors, shop stewards, safety representatives in helping managers and employees recognising the warning signs, dealing with the issue immediately and the practical measures for resolving it. Employee health services were

provided to employees. Information on bullying was published on weekly bulletin and was distributed to all members of staff.

**Results:** The guidelines were incorporated into the company's general regulations, which bond everyone to act in an agreed manner. Employees and management learnt to work better together and in turn it lead to improved productivity.

**Source (URL):** Prevention of psychosocial risks and stress at work in practice EU-OSHA Report (2002)

<http://osha.europa.eu/en/publications/reports/104>

## **CS 15 - 'Work positive' – piloting the use of a work stress audit tool suitable for SMEs**

**Country:** Ireland

**Organisation:** Midland Health Board

**Activity:** a regional health service body

**Main risks:** multiple risks

**Main problem:** quality of working life needs to be improved

**Main action:** The Health Board teamed up with the Health and Safety Authority to carry out a joint initiative. The plan was the development and piloting of an easy to use risk assessment tool. 'Work Positive' 5-step process for managing workplace stress, as follows: 1) raising awareness, demonstrating and generating commitment; 2) benchmarking; 3) identification of risks, using risk assessment questionnaire; 4) identifying and implementing solutions; 5) evaluating the solutions and reviewing the risks. A pilot project in a hospital was used to test the tool's use for risk assessment and identification of solutions.

**Main worker participation measures:**

- Questionnaire survey
- Focus group interviews
- Workshop sessions

**Description of worker participation:** all staff were informed before commencement of the project about its objects and the steps that would take place. Workshop sessions were given by Health and Safety Authority inspectors to all staff where basic information on stress at work and the sort of actions that could be taken to prevent stress, both at the individual and organisational level. Questionnaires were then completed anonymously by all staff to identify three main priority issues. Focus groups were held with staff, with the involvement of the Board's health promotion officer, to validate the findings and prioritise the issues. Staff were consulted on how to move the project forward after the success of the project. As a result, a resource pack was produced for use in other workplaces. The system included a structured framework for communication and consultation, within which to identify, prevent and manage work-related stress.

**Results:** After the piloting study, levels of social engagement with the workplace increased dramatically – activities which occur outside the working week were highly attended, work activities, participation in focus groups and group approaches to change also increased. After consultation with staff, a decision was made to roll out the project across the entire health board area's 16,000 employees.

**Source (URL):** Prevention of psychosocial risks and stress at work in practice EU-OSHA Report (2002)

<http://osha.europa.eu/en/publications/reports/104>

## **CS 16 - 'Work positive' – a stress management approach for SMEs – HEBS and HSA joint commission**

**Country:** United Kingdom

**Organisation:** ENTEC UK

**Activity:** consultancy company

**Main risks:** multiple psychological and physical health risks

**Main problem:** work-related stress

**Main action:** the Health Education Board in Scotland (HEBS) and the Health and Safety Authority (HSA) in Ireland commissioned a consultancy company ENTEC UK to develop a self-administered tool for small and medium-sized enterprises (SMEs). The project consisted of two phases. At phase 1, a benchmark tool was developed as part of the risk assessment. This tool allowed the organisation to assess which systems that are in place can act as controls to manage workplace stress. A risk-assessment tool was then developed in the form of a questionnaire. All employees were invited to complete the questionnaire in order to investigate the presence or absence of known organisational stressors and the individuals were required to rate their responses to each particular issue. The risk-assessment and benchmarking tools were piloted in 14 organisations across a range of sectors and sizes of organisations with an emphasis on SMEs. A coordinator was appointed at each site to facilitate the completion of the questionnaires. Researchers then visited each organisation to carry out interview-based risk assessment in order to determine the validity of the questionnaire. The tools were then developed based on the outcomes of the pilot process. A five-step process of risk management and guidance were developed for inclusion in 'Work positive'. At phase 2, guidance and tools for the process were developed into a draft resource pack, which was then piloted in 10 organisations, 5 in Scotland and 5 in Ireland.

**Main worker participation measures:**

- benchmarking and risk-assessment questionnaire
- interview-based risk assessment

**Description of worker participation:** all employees were invited to complete the questionnaires. Interviews carried out among some of the employees.

**Results:** 97% of coordinators found the benchmark questionnaire was useful in identifying improvements in systems to reduce stress. 64% of all those who completed the risk-assessment questionnaire thought the questionnaire covered all the potential sources of stress in their organisation. Very positive response was generated from the piloting companies.

**Source (URL):** How to tackle psychosocial issues and reduce work-related stress (2002)

<http://osha.europa.eu/en/publications/reports/309>

## **CS 17 - Tackling work-related stress – the risk-management approach as applied among nursing staff at a National Health Service trust**

**Country:** United Kingdom

**Organisation:** Institute of Work, Health and Organisations (I-WHO), National Health Service trust

**Activity:** the work of health care staff whose workload involved direct care, clinical work and managerial tasks.

**Main risks:** multiple psychological and physical risks

**Main problem:** work-related stress

**Main action:** risk assessment and introduction of stress reduction measures. A six-step risk reduction process was then carried out: identifying the underlying issues; deciding on what can be achieved;

selecting the intervention strategy; identifying the target; planning the implementation; setting timescales and objectives.

**Main worker participation measures:**

- Steering group
- Risk assessment survey
- Evaluation interviews
- Staff meetings
- Workshops

**Description of worker participation:** first, risk-assessment was carried in the department. During this process, a steering group was established, whose responsibilities were overseeing and facilitating each step of the project, whose members were selected to reflect the support of the management in various aspects of the working environment. The project was publicised and promoted. All staff were continuously informed of the progress and reminded of their ownership. Several implementation tools were used for example workshops and staff meetings. The interventions were then evaluated by interviews with staff and managers, surveys and audits of organisational data. Evaluation data were collected six months after implementation of the interventions. In summary, employees were actively involved in the project from the very early stage. They were informed regularly on the progress of the project and they were reminded of their ownership. Employees also involved in risk assessment and intervention evaluation.

**Results:** Overall very positive feedback from the managers and staff was received. Staff well-being improved, job satisfaction increased, intention to leave decreased in the higher grades. There were large reductions in the proportion of staff reporting all problems. Members of staff were very satisfied with the interventions and the new working conditions. However there was unexpected increase in musculoskeletal pain.

**Source (URL):** How to tackle psychosocial issues and reduce work-related stress (2002)

<http://osha.europa.eu/en/publications/reports/309>

## ***CS 18 - Health circles – a participative approach to improve health-related working condition***

**Country:** Germany

**Organisation:** Bundesverband der Betriebskrankenkassen (BKK) – the Federal Association of Company Health Insurance Funds

**Activity:** health insurance company

**Main risks:** multiple psychological and physical health risks

**Main problem:** high absenteeism, high dissatisfaction with work and working conditions

**Main action:** use of health circles to help identify problems and intervention measures

**Main worker participation measures:**

- an agreement between labour and management
- health circle meeting
- steering committee
- staff representative survey

**Description of worker participation:** a contract was signed between labour and management to guarantee commitment. A steering committee comprised of all persons responsible for safety and health was then formed to oversee the process. A health surveillance report was then produced using health insurance information on overall absenteeism rates and diseases. Health circles were formed by 10 to 15 participants, half of which were employees and half company representatives who can contribute to identifying health-related problems and finding appropriate solutions. A moderator was

appointed to facilitate the process. Health circles normally met 6 to 10 times over several months. Suggestions generated from the group meetings were then implemented. Final survey then carried out to assess satisfaction with the health circle and an evaluation meeting was held out about six months after the last circle meeting. The entire process normally took 15 months to complete. Employees were continuously involved through all phases of the health circle project (planning, implementation, results) and they were continuously informed on the progress of the project. Employees were encouraged to give their opinions on what the problems are and how to improve their conditions.

**Results:** Strong indications that these interventions have a positive effect on workers' health, satisfaction and motivation, while leading to a more efficient work process through improved workflow and communication.

**Source (URL):** How to tackle psychosocial issues and reduce work-related stress (2002)

<http://osha.europa.eu/en/publications/reports/309>

## **CS 19 - Naoussa Spinning Mills SA – workplace health protection programme**

**Country:** Greece

**Organisation:** Naoussa Spinning Mills SA

**Activity:** the largest private employer in northern Greece in the textile industry and among the largest in the area in the EU. In 2002, the company employed 1000 employees distributed in 10 production units that produce cotton and blended yarns.

**Main risks:** multiple psychological and physical health risks

**Main problem:** work-home interactions, high work demands, job design, musculoskeletal/physical demands, relationships with colleagues, work-related stress

**Main action:** introduction of a global health protection programme

**Main worker participation measures:**

- Consultation with labour councils and employees' representatives
- Meetings with employees
- Employee survey
- Group discussion
- Interview

**Description of worker participation:** the executive management first introduced the workplace health protection programme to the labour union executive councils and then had a long consultation with the employees' groups of representatives, for approval. Positive feedback was received. A broader marketing of the programme then took place on all managerial levels, as well as among the employees. The programme was then took place in five production units following 4 steps: problem identification by 1) analysis of organisation records, or 2) with assessment of the risks to the health of employees, or 3) in discussions with employee representatives; further consultation with employee representatives; determine the risk factors and target groups of the action; marketing the actions that had been decided up in the form of group discussions, announcements, talks with occupational doctors and training sessions. In summary, workers were actively involved in the problem identification and action implementation to address all physical, psychosocial and work problems. Surveys and interviews were carried out to seek employee's opinions. Group discussions also facilitated the share of information. Workers were also fully informed about the progress of the programme.

**Results:** the programme has been successful since its start in 1986. Naoussa Spinning Mills SA received an award for their programme at the European network in May 1999.

**Source (URL):** How to tackle psychosocial issues and reduce work-related stress (2002)

<http://osha.europa.eu/en/publications/reports/309>



## **CS 20 - Intervention project on absence and well-being**

**Country:** Denmark

**Organisation:** Novo Nordisk and Novosymes, Kobenhavns Kommune, municipal nursing homes

**Activity:** Novo Nordisk and Novosymes is a large pharmaceutical company; Kobenhavns Kommune is a municipal technical services of Copenhagen

**Main risks:** multiple psychological and physical health risks

**Main problem:** perceived stress, absence from work, job dissatisfaction, high labour turnover

**Main action:** programme to reduce absence and improve well-being

**Main worker participation measures:**

- Employee representatives
- Self-reported survey
- Workplace meetings
- Interviews
- Project committees

**Description of worker participation:** meetings with representatives from the worksites were carried out and it was decided to conduct a common project so-called 'Intervention project on absence and well-being' (IPAW). Three project committees, consisting of representatives from management and employees on each of the three occupational sectors were established. A questionnaire was developed and administered to obtain self-reported measures in five basic dimensions of work stressors: psychological demands, control, meaning, predictability and social support. Absence data was collected from organisational records. Workplace meetings were carried out to prioritise problems and develop solutions. It followed by measures implementation supported by process consultants. Post-intervention surveys took place two and five years after the start. Workers were actively involved in providing their opinions on the existing problems at the organisational and the individual-organisational interface level and on interventions by means of completing questionnaires, attending workplace meetings, interviews.

**Results:** improvements were achieved to very different degrees in different workplaces. Overall, it was reported that the psychosocial work environment was improved, absence rate dropped, productivity and service quality improved.

**Source (URL):** How to tackle psychosocial issues and reduce work-related stress (2002)

<http://osha.europa.eu/en/publications/reports/309>

## **CS 21 - StRes.Moderator – A stress management method**

**Country:** Austria

**Organisation:** Austrian social insurance organisation (AUVA)

**Activity:** social insurance organisation

**Main risks:** multiple psychological and physical health risks

**Main problem:** psychosocial factors of stress

**Main action:** in March 2001, AUVA commissioned the Vienna University of Technology to develop a method which could identify and analyse psychosocial factors of stress in the enterprise. The method was named 'StRes'. Advice, support and the coordination of all actions by a professional were the essential aspects of application of the method. The professional must come from outside the department/division being audited and should follow a three-day training course provided by the AUVA. The role of the moderator also included: assess the motivation of the people concerned, obtain management and works council approval, present the methods and its content, establish the general conditions, invite the employees convened in groups to express themselves, inform management

concerning work progress, invite management to react to the proposals made by the employees, apply the final proposals, evaluate the process.

**Main worker participation measures:** group discussion

**Description of worker participation:** employees were invited in groups to express themselves and to discuss the awareness of their problems and the foreseeable solutions.

**Results:** to the date of the report, two applications made of the method: one in a administrative department with 18 people in a large energy firm, and the other in a technical services enterprise of eight people. Due to the small number of concrete applications, there was not any real evaluation of the instrument.

**Source (URL):** How to tackle psychosocial issues and reduce work-related stress (2002)

<http://osha.europa.eu/en/publications/reports/309>

## ***CS 22 - Stress management policy in the Belgian federal police force***

**Country:** Belgium

**Organisation:** Belgian federal police force

**Activity:** police force

**Main risks:** multiple psychological and physical health risks

**Main problem:** post-traumatic stress

**Main action:** the stress management policy was implemented with a twofold approach, namely proactive and reactive. Proactive approach provided general and occupational information to raise police officers' awareness of stress. Proactive approach also by means of questionnaire tried to know better the factors of institutional and organisational stress and its effects in order to develop policies to support the stress management policy. In addition, three-day stress management seminar was offered to employees. Coupled with this seminar were optional sessions of individual follow-up with the psychologist designed for participants face with a particular problem. Reactive approach was in the case of a traumatic event psychological aid was provided in real time, round-the-clock.

**Main worker participation measures:**

- Stress team
- well-being questionnaire

**Description of worker participation:** the implementation of the policy on stress was entrusted to a "stress team". It was a flexible, multidisciplinary team consisting of a permanent core of 17 people (officers, psychologists, social workers and communications specialists; 10% were police officers and 90% civilians). The stress team designed a questionnaire with more than 200 questions to determine the causes of stress in the sections and units. All the members of a unit filled in the questionnaire.

**Results:** a questionnaire was sent to the people in charge by the stress team; 80% of them say they would use this same structure again. The stress team's action led to the return to work of many police officers who were on sick leave. Moreover, a decline in the rate of suicides among police officers has been observed in recent years.

**Source (URL):** How to tackle psychosocial issues and reduce work-related stress (2002)

<http://osha.europa.eu/en/publications/reports/309>

## ***CS 23 - Road access and bus drivers' working environment***

**Country:** Sweden

**Organisation:** Stockholm municipal transit agency; Stockholm Community Road Administration

**Activity:** not mentioned in the report

**Main risks:** multiple psychological and physical health risks

**Main problem:** work-related stress

**Main action:** in order to increase the speed of transit traffic, improve the service quality to the customers and to provide a safer and better roadway driving conditions, physical design changes in the bus route and technological innovation were made in Stockholm urban environment.

**Main worker participation measures:**

- Questionnaire
- Field studies

**Description of worker participation:** During the intervention, three questionnaires were administered at different times to the drivers on the route and two field studies were conducted. The first questionnaire was administered at the beginning of the intervention prior to the major changes. The second questionnaire was administered while the intervention took place and roughly at the same time as the first field study. The third questionnaire took place after all the physical changes had been made and at the same time as the last field study. The three questionnaires were given to bus drivers working at the intervention route and to a comparison group, being a group of their colleagues working on other routes in central Stockholm. The questionnaires included items on: perceived workload, environment factors interfering with work performance, perceived effects from the different technical interventions, decision latitude, immediate psychological and physical reactions to working conditions, prevalence of various physical and health complaints, health-related behaviours and participants' evaluation of psychosocial impacts of the intervention. In addition, field studies were conducted with observation of the drivers' time delays and hassles. The drivers reported estimated strain, time pressure and road access at each terminal stop. The drivers' blood pressure and heart rates were recorded.

**Results:** the intervention group reported a reduction in perceived distress after work. A reduction in job hassles and decreased systolic blood pressure and heart rate were also reported.

**Source (URL):** How to tackle psychosocial issues and reduce work-related stress (2002)

<http://osha.europa.eu/en/publications/reports/309>

## ***CS 24 - 'Take care' – a team-based burnout intervention programme for oncology care providers***

**Country:** Netherlands

**Organisation:** 29 oncology wards

**Activity:** oncology care providers

**Main risks:** multiple psychological and physical health risks

**Main problem:** work-related stress

**Main action:**

- Questionnaire survey carried out among all staff members of the participating 29 oncology wards. The questionnaire assessed oncology care providers' perception of the most important (potential) work stressors that were identified previously by means of the national survey, as well as their perception of social and working relationships with their team.
- Nine training wards were randomly selected; the other 20 wards functioned as a comparison group.
- Implementation of the training programme
- After the end of the training programme and again six months later, staff of all the wards again filled out the questionnaire

**Main worker participation measures:**

- Questionnaire
- Staff support groups
- 'kick-off' meetings
- Problem solving teams

**Description of worker participation:** all staff members of the participating 29 oncology wards participated the questionnaire survey. As a consequence of the survey, the focus of the training was determined and so-called staff support groups were established. The aim of these groups was to increase sensitivity, support and communication for staff members, and to find solutions collectively for the most prevalent stressors in their working situation, thereby increasing their level of control over the work situation. Prior to commence of training, 'kick-off' meetings were held at each training ward. The aim of the meetings was to increase the staff's commitment to participate and to promote positive anticipatory attitudes towards the training programme. During the training sessions, small problem-solving teams were formed that collectively designed, implemented, evaluated and re-formulated plans of action to cope with the most important stressors at work. The team counsellors trained them in some more general communication and collaboration skills. The participants were their own 'agents of change' and the counsellors their 'coaches'.

**Results:** the training programme turned out to be an effective means to prevent feelings of work stress increasing. Results of a qualitative evaluation showed that participants considered the approach to be very instructive and useful to chart work stressors and to formulate and evaluate plans of action to tackle these stressor. The most appreciated part of the action was the building of a network of (social) support among colleagues, etc.

**Source (URL):** How to tackle psychosocial issues and reduce work-related stress (2002)

<http://osha.europa.eu/en/publications/reports/309>

## ***CS 25 - Prevention of physical workplace violence in the retail trade sector – Kauris method***

**Country:** Finland

**Organisation:** Finnish Institute of Occupational Health

**Activity:** not mentioned in the report

**Main risks:** multiple psychological and health risks

**Main problem:** workplace violence

**Main action:** the Finnish institute of occupational health developed a method called Kauris for the retail sector to assess and manage the risk of violence at work. The Kauris method was based on the model for the assessment and management of risk of violence at work. It is a comprehensive approach: environmental design, safety and security devices, staffing plans, work practices, guidelines and training, etc. A package of material included instructions for application, worksheets, information sheets on violence at work and on relevant legislations and training material and tools was also made available to employers. The method was applied in retail settings

**Main worker participation measures:**

- Steering group/team
- Team meetings
- Training of all employees

**Description of worker participation:** a team was formed for the implementation of the method and carrying out the necessary actions. Employees and supervisors from the store formed the team. In smaller places, it could be just two people, one representing management and one employee. In addition, the entire personnel were involved in the process. Each team started from its own situation,

and the first task of the team was to make a risk assessment by utilising a questionnaire and checklists, provided for the purpose, which were part of the workbook. The training of the entire personnel was an important part of the process, since everybody contributed to the overall safety by acting according to safety instructions.

**Results:** personnel were very satisfied when the problem of violence at work was discussed and they got instructions on how to act in violent situations. The employees said that the feeling of safety had increased.

**Source (URL):** How to tackle psychosocial issues and reduce work-related stress (2002)

<http://osha.europa.eu/en/publications/reports/309>

## ***CS 26 - From Project to Well-being Policy at Procter & Gamble***

**Country:** Belgium

**Organisation:** Procter & Gamble

**Activity:** Procter & Gamble Campus Strombeek-Bever (Belgium) is the largest European Research & Development Centre for Procter & Gamble. Approximately 1800 employees of 50 different nationalities are employed in this centre.

**Main risks:** various and multiple physical and mental health risks

**Main problem:** decreased personal well-being and health, decreased work-life balance

**Main action:** A health programme was developed on the basis of a holistic approach addressing all aspects that drive individual wellbeing and work-life balance. The concepts are for both body and mind to enable and allow employees to make their own choices. Activities are aimed at mental health, healthy nutrition, sports, social activities, and physical health. Mental health activities like yoga, Pilates, mindfulness training, and laughing therapy are offered. There is an 'employee assistance programme' for employees having personal problems. Employees can voluntarily participate in the activities during office hours.

**Main worker participation measures:**

- a working group with representatives of different key holders in the organisation
- employee ambassadors

**Description of worker participation measures:**

The health programme was developed by a working group with representatives of different key holders in the organisation: employee ambassadors, human resources department, prevention department and work council. Employee ambassadors were assigned to promote the health programme.

**Results:** Every year the work group assesses the well-being programme by evaluating the participation rates of activities and the feedback forms which can be filled in for each activity. The new adjusted health programme is launched in an information stand every year. The results of personal well-being and work-life balance in the Employee Satisfaction Survey improved over the last three years.

**Source (URL):** From Project to Well-being Policy at Procter & Gamble (2010)

<http://osha.europa.eu/data/case-studies/from-project-to-well-being-policy/view>

## ***CS 27 - Work-life Balance and Employees' Participation Programme at Oriflame***

**Country:** Poland

**Organisation:** Oriflame Poland

**Activity:** not mentioned in the report

**Main risks:** A high risk sector with various and multiple risks

**Main problem:** need to improve general mental wellbeing at work and employees' work-life balance

**Main action:** The programme consists of different emphases. One is on company culture in general. It builds on the feedback and active participation of employees on possible improvements at work. Another focus is put on the balance of private and working life. Different actions like flexible working time as well as a policy of not working overtime, etc., have been implemented. The programme also targets employees' private life and wellbeing as well as their families by offering different financial and other support measures in case of major private life events, by organising family events and by supporting children's holidays. Another aspect of the programme focuses on new employees and their good integration within the company from the very beginning.

**Main worker participation measures:** employee feedback

**Description of worker participation measures:** the company consulted employees on how to improve work-life balance and encouraged active employee participation in building organisational culture

**Results:** the participative approach revealed a lot of employees volunteering for conducting changes within Oriflame. There was for example a working group set up with the goal to change the companies' reward system. All the other changes implemented also revealed a very positive impact on employees health, wellbeing and satisfaction.

**Source (URL):** Work-life Balance and Employees' Participation Programme at Oriflame (2010)

<http://osha.europa.eu/data/case-studies/work-family-balance-and-employees-participation-programme/view>

## **CS 28 - Hedensted Kommune (Municipality of Hedensted)**

**Country:** Denmark

**Organisation:** Hedensted Kommune (Municipality of Hedensted)

**Activity:** Hedensted Kommune is a Danish municipality located in the eastern part of Jutland. It has 45,000 citizens and app. 3,500 employees in a variety of sectors including elderly care, education, children's day-care and administration.

**Main risks:** mental health risks

**Main problem:** inequality

**Main action:** Hedensted Kommune developed an employee policy in order to strengthen the psychosocial working environment across all workplaces throughout the municipality. The policy is based on story-telling. The overall policy contains two sub-policies: life stage policy, health and working environment policy. The two policies were developed in collaboration with the employees.

**Main worker participation measures:**

- Employees were encouraged to share their stories
- Participation in 'inspiration day' event with group work

**Description of worker participation measures:** In September 2007 employees across all sectors and units of the municipality were invited to an 'inspiration day' and to take part in the event. Employees were divided into small groups, in which they shared stories from their own working life and personal life that could be relevant for the development of policies within the area. Once the policies were developed, they were communicated to employees during 2008. Furthermore, a 'house author' was employed who visited workplaces/units to hear their stories. These stories were then sent to employees with the salary statement and were published on the intranet.

**Results:** the employee turnover and the absence due to illness decreased. Employee survey results in 2009 improved 6 percentage points compared to the 2008 results. Employees' participation in the decision making enabled the people at all levels in the organisation understanding the reasoning behind decisions.

**Source (URL):** Hedensted Kommune (Municipality of Hedensted) (2010)

<http://osha.europa.eu/data/case-studies/hedensted-kommune-municipality-of-hedensted/view>

**Full description of the study:** <http://osha.europa.eu/data/case-studies/hedensted-kommune-municipality-of-hedensted/Healthy-Municipality-of-Hedensted.pdf>

## **CS 29 - Creativ Company**

**Country:** Denmark

**Organisation:** Creativ Company, Holstebro; The municipality of Holstebro, Denmark

**Activity:** Creativ Company is located in Holstebro in the western part of Denmark. It sells hobby materials for private use as well as wholesale. During the past years the company has grown from 2 to 90 employees and Creativ Company also has divisions in Norway, Sweden, Finland, the Netherlands, Germany, the United Kingdom and China.

**Main risks:** to improve mental health and quality of life

**Main problem:** identifying and accommodating individual needs

**Main action:** Creativ Company strives to treat all people fairly and equally and this is integrated into daily life in a variety of ways including: flexible working hours for all employees, collaboration with an external development consultant, healthy food in the cafeteria, financial support to employees that have an alcohol or drug problem, physical training during breaks throughout the day, and weekly as well as daily meetings for all employees.

**Main worker participation measures:**

- Weekly and daily meetings for all employees
- Workplace awards

**Description of worker participation measures:** At Creativ Company 10-15% of the employees are employed under special circumstances (light jobs, etc.). The company often shapes the job to fit the applicant. Meetings are held daily as well as weekly for all employees to share weekly information and knowledge.

**Results:** The healthy workplace culture has a positive impact on the mental health of employees and has resulted in a number of workplace awards. Creativ Company is a very popular employer. The annual absence rate of Creativ Company is below the national average

**Source:** Creativ Company (2010)

<http://osha.europa.eu/data/case-studies/creativ-company/view>

**Full description of the study:** <http://osha.europa.eu/data/case-studies/creativ-company/Creativ-Company.pdf>

## **CS 30 - Healthy Fiscal Authority – Mental Health Promotion in Tax Authorities in North Rhine-Westphalia**

**Country:** Germany

**Organisation:**

- Oberfinanzdirektion Rheinland
- Unfallkasse Nordrhein-Westfalen
- Deutsches Zentrum für Luft- und Raumfahrt
- Lehrstuhl für Arbeits- und Organisationspsychologie der Ruhr-Universität Bochum

**Activity:** tax office

**Main risks:** health and well-being risks

**Main problem:** high level workload, high level complex and changing work tasks

**Main action:** The aim of the project was the development, implementation, evaluation and transfer of a holistic health management framework within the tax administration.

**Main worker participation measures:**

- Control committee
- Local steering committee
- Health survey

**Description of worker participation measures:** The starting point was an update of previous and ongoing workplace health activities and programmes at the level of local tax offices, an assessment of their outcomes, a health survey, and the participatory implementation of steering committees in each of the tax office. Platforms and information channels were set up to facilitate the communication among managers and employees. In every steering committee a senior manager, first-level managers, employees, members of the local employee committee, and health and safety representatives participated. The responsibility of the steering committee was to plan, coordinate, evaluate and improve health promotion activities. In addition to the local steering committee, there was also a central committee which included all senior managers of the tax offices, the central health and safety representatives including experts of the accident insurance, members of the central employee committee, as well as scientific consultants of the University Bochum. Information channels facilitating the communication from managers to employees (top-down) as well as the communication from employees to managers (bottom-up) were established. Platforms on health issues as well as an intranet-based communication platform called 'Healthy Fiscal Authority' were installed and internal communication processes were promoted by incentives and personal communication ownerships. A health survey was carried out, which covered different areas of health and healthy behaviour at work and focused on stress and how work organisation and how leadership behaviour was perceived. Based on survey results, trainings, courses and physical activity programmes were provided. Respective organisational policies were amended.

**Results:** Up to 70% of the workforce participated in the health surveys. The implementation and continuing improvement of the holistic health management system into the organization of the nine tax offices yielded significant and distinct improvements in the domains of the management system itself as well as in health related outcomes. Health promoting leadership was clearly improved due to feedback from the surveys, goal agreements, and specific health promotion increased by 9.2% and promotion of participation and involvement of subordinates into health promoting activities augmented by 16.4%. Additional promotion of work autonomy, i.e. of decision latitude and job variety as well as health culture and climate improved around 7%. Health resources of employees indicated by coping strategies with stress, attendance rates of health promotion activities offered by the tax offices and private health promotion activities such as physical activities, nutrition, stress management increased overwhelmingly.

**Source:** Healthy Fiscal Authority – Mental Health Promotion in Tax Authorities in North Rhine-Westphalia

<http://osha.europa.eu/data/case-studies/healthy-fiscal-authority-2013-mental-health-promotion-in-tax-authorities-in-north-rhine-westphalia/view>

**Full description of the study:** <http://osha.europa.eu/data/case-studies/healthy-fiscal-authority-2013-mental-health-promotion-in-tax-authorities-in-north-rhine-westphalia/Healthy-Fiscal-Authority.pdf>



## **CS 31 - Viva at Pro Mente - Health Management**

**Country:** Austria

**Organisation:** Pro mente

**Activity:** Pro mente Oberösterreich is a social service provider which employs 1,400 persons and supports more than 26,000 mentally handicapped and impaired persons with more than 150 institutions all over Upper Austria. It helps them to observe their human rights, to improve and ensure their care, to provide them with information and accompany them with regard to medical, psychological, social, and economic aspects.

**Main risks:**

- Employee health risks

**Main problem:** high pressure due to time and cost restrictions, high workload; employees felt qualitatively under-challenged

**Main action:** A mental health promotion project 'VIVA' was developed. The project was divided in nine project phases:

- Preparatory meeting
- Launching of the steering committee
- Data collection
- Health report
- Health circles
- Discussion about measures
- Decision making regarding the measures
- Efficient implementation of measures
- Informative meeting

**Main worker participation measures:**

- Workers' council
- Steering committee
- Health circles
- Survey

**Description of worker participation measures:** the steering committee consisted of the manager, the project leader, other members of the educational institute, the workers' council, the department manager related to job training, an employee of housing and care for mentally handicapped and impaired persons, the company physician, and external counsellors. In order to assess the actual health condition of the pro mente employees, available data from earlier employee attitude surveys were consulted and an employee health survey was carried out. The results of the survey were written as a report and were provided to all employees as well as presented at the staff meeting. Every health circle consisted of five to seven members of a specific department. They met three to four times and discussed the health situation with regard to their working environment, working conditions and other problems within their specific department. In addition, they defined aims, suggested solutions and decided on a responsible person caring for a specific problem. The measures were then presented to the steering committee, the management, the managing board, the responsible person for the district and the coordinates of the departments in a meeting.

**Results:** employee attitude survey in 2005 suggested that the health situation of the employees had improved and employees felt they were more appreciated by their company than other companies would do.

**Source:** Viva at Pro Mente - Health Management (2010)

<http://osha.europa.eu/data/case-studies/viva-at-pro-mente-health-management/view>

**Full description of the study:** <http://osha.europa.eu/data/case-studies/viva-at-pro-mente-health-management/Viva-at-Pro-Mente-Health-Management.pdf>

## **CS 32 - Top on Job!**

**Country:** Germany

**Organisation:**

- Betriebliche Suchtprävention Miehle
- Landescaritasverband Bayern
- BKK Landesverband Bayern
- MAN Diesel SE

**Activity:** MAN Diesel is the world's leading provider of large-bore diesel engines for marine and power plant applications. employing over 7,700 staff, primarily in Germany, Denmark, France, the Czech Republic, India and China. The MAN training centre is the largest in Bayrisch-Schwaben, Germany, and offers 14 recognised occupations requiring formal training plus a degree programme in mechatronics in cooperation with Fachhochschule Augsburg.

**Main risks:** high-risk lifestyle

**Main problem:** alcohol and drug addiction

**Main action:** In the course of the programme, apprentices take part in a training (containing four learning modules of 60 hours in total) where they gain professional competence regarding peer work. The aim is to become a tutor for other young people in their enterprise and to be a contact point for colleagues at risk of addiction. The apprentices gain background knowledge about drug and alcohol addiction and about its prevention, and how to transfer this knowledge to other young workers in their company. They are encouraged to initiate prevention projects in the enterprise as well as to collaborate with local addiction aid institutions. The young people mainly work autonomously; however, they can refer to external advisors in case of problems. The training takes place on Fridays and Saturdays, thus partly in work and in leisure time.

**Main worker participation measures:**

- Train young people to train other people of their age

**Description of worker participation:** MAN Diesel was used as a pilot case. Young people were provided a two-day training on basic knowledge about all forms of addiction and addictive behaviour. Coaching meetings were also included in the training sessions, where young tutors were given information on local drug advisory service, coaching skills and they were given opportunities to prepare presentations for their fellow people. They also received training on personality building. After completing the training course, these young tutors went back to their own companies to train their colleagues who are in the similar age.

**Results:** the final evaluation showed that after the training, the majority of tutors employ a more responsible use of alcohol and drugs; some even stated that they totally abstained from alcohol. They were more sensitive with regard to the subject. Some of them also said that the issue alcohol/drug addiction was raised more often than before in their circle of friends, and their view on alcohol/drug consumption became more critical.

**Source (URL):** Top on job!

<http://osha.europa.eu/data/case-studies/top-on-job/view>

**Full case description:** <http://osha.europa.eu/data/case-studies/top-on-job/Top-on-job.pdf>

## CS 33 - Young professionals

**Country:** Switzerland

**Organisation:**

- Siemens Transportation Systems
- The Diversity Consult Network

**Activity:** Siemens Transportation Systems in Graz is the world's leading engineering and production plant for the manufacture of bogies for trams, underground trains and locomotive vehicles.

**Main risks:** multiple health risks

**Main problem:** work-related stress

**Main action:** first, the Swiss SALSA questionnaire was used to acknowledge the attitudes and opinions of the apprentices and the instructors towards the workplace. Areas needing to be improved were defined based on the questionnaire results. Experience Exchange Groups and Quality Circles were then set up and ran regularly as part of a participation system in order to encourage apprentices, their instructors and managers to share their opinions on the necessary elements for a healthy working environment. Alongside the participation system, a seminar programme with a wide range of health themes, from the fundamental principles of promoting health to teamwork and leadership was carried out. In cooperation with the Institute of Sport Science of the University of Graz, a regular sport programme for the apprentices and instructors was designed. Structured feedback for apprentices and supervisors was collected and reported annually using specifically designed, tailored-made questionnaires. The resulting feedback was analysed and used for introducing improvement measures.

**Main worker participation measures:**

- Swiss SALSA questionnaire – to evaluate feeling towards the workplace
- Experience exchange groups
- Quality circles
- Tailor made questionnaires to obtain annual feedback
- Participation system

**Description of worker participation:** Swiss SALSA questionnaire (Salutogenetic Subjective Analysis of the Work Place) was distributed among apprentices and their instructors to evaluate their feelings towards the workplace, such as working areas, meeting rooms, the canteen, changing rooms and so on. Experience Exchange Groups comprising the apprentices where they were empowered and encouraged to exchange their experiences concerning the workplace and the team, and define possible improvements. Quality Circles comprising delegates appointed from apprentices, their instructors and managers were set up to resolve and organise the required improvements or changes. Both Experience Exchange Groups and Quality Circles held scheduled meetings every month for one and a half hours.

**Results:** A positive change of attitude towards health and health behaviour from the apprentices was received. Physical condition of the apprentices was improved. Regular seminars and workshops concerning health were held. There was a sustainable integration of female apprentices into a previously 100% male working environment in the bogie production. Participation system and quality management education for the health enhancement of the apprentices were designed and implemented.

**Source (URL):** Young professionals

<http://osha.europa.eu/data/case-studies/young-professionals/view>

**Full case description:** <http://osha.europa.eu/data/case-studies/young-professionals/Young-professionals.pdf>

## **CS 34 - “Healthy youth” – A project to promote safe and healthy lifestyles for young workers**

**Country:** Italy

**Organisation:**

- National Institute of Health
- Ministry of Labour and Social Security

**Activity:** not mentioned in the report

**Main risks:** multiple health risks

**Main problem:** unhealthy lifestyles

**Main action:** development of a toolbox on health promotion for young workers for circulations to companies

**Main worker participation measures:**

- Survey

**Description of worker participation:** An initial survey of young workers was conducted in various public and private companies in a number of Italian cities. The survey was conducted using a structured questionnaire organised in such a way as to cover each individual’s entire day: from breakfast to work, from physical activity to going out in the evening. Following the results of the evaluation of 2551 questionnaires addressed to workers (including young workers), a tool box was produced containing four small booklets related to the issues covered by the project (diet, exercise, alcohol, smoking). The survey made it possible to discover how young workers live and perceive their own lifestyles. Four issues emerged from the survey results: smoking, healthy food consumption, alcohol consumption at weekend, and physical exercise. Four booklets were then produced, one for each topic, and were distributed to 5800 young workers from the companies involved in the project. 2000 additional booklet cases were then distributed during conventions on the topic of good health and healthy lifestyles.

**Results:** young people who participated in the project had a better knowledge of which types of lifestyles can be considered healthy. There was a strong tendency among the young workers to change some of their unhealthy behaviours at the workplace and outside.

**Source (URL):** “Healthy youth” – A project to promote safe and healthy lifestyles for young workers

<http://osha.europa.eu/data/case-studies/healthy-youth-a-project-to-promote-safe-and-healthy-lifestyles-for-young-workers/view>

**Full case description:** <http://osha.europa.eu/data/case-studies/healthy-youth-a-project-to-promote-safe-and-healthy-lifestyles-for-young-workers/Healthy-Youth-Project-to-promote-safe-and-healthy.pdf>

## **CS 35 - Meeting new demands – Apprenticeships/I-VET for young workers in HHM**

**Country:** Denmark

**Organisation:**

- HHM A/S

**Activity:** a private enterprise with 165 employees in the building and construction sector, carries out commercial and residential construction projects in addition to offering service concepts for maintenance, remodelling and extensions. They employ craftsmen from various disciplines and pay special attention to young workers in initial vocational training and education (I-VET)/apprenticeships.

**Main risks:** multiple health and safety risks

**Main problem:** high accident rates; high prevalence of fatal accidents

**Main action:** various measures to support young workers: to meet the practical and psychosocial needs of young workers, HHM has endeavoured to open communication both vertically and horizontally in the enterprise. Communication has been opened horizontally by organizing a network of young employees, and the vertical communication has been increased by assigning two hosts per young worker in I-VET. All HHM employees are offered an internal course on working conditions in different environments, annual employee development interviews and an open and transparent policy for dealing with bullying, harassment and threats. These measures represent an approach that integrates the physical and psychosocial aspects that make up the working environment.

**Main worker participation measures:**

- Apprentices network
- Apprentice hosting
- Annual employee development interviews
- Open and transparent policy for dealing with bullying, harassment and threats

**Description of worker participation:** HHM launched a networking system, named Apprentice Club, for first and second year apprentices. The network affords apprentices with informal peer-to-peer counselling and a variety of social arrangements throughout the year. In order to address the practical needs and physical and mental well-being of new workers, HHM assigned two hosts for each new worker. The hosts were given the responsibility to satisfy the young workers' more immediate needs, such as finding suitable working clothes or equipment, and to address general concerns, such as understanding wages, working time registration and the nature of the job. Beyond these two specific initiatives, HHM also offered annual employee development interviews..

**Results:** a better integration of young workers in the enterprise was observed. Workers' well-being level increased and sickness absence levels decreased.

**Source (URL):** Meeting new demands - Apprenticeships/I-Vet for young workers in HHM

<http://osha.europa.eu/data/case-studies/meeting-new-demands-apprenticeships-i-vet-for-young-workers-in-hhm/view>

**Full case description:** <http://osha.europa.eu/data/case-studies/meeting-new-demands-apprenticeships-i-vet-for-young-workers-in-hhm/Meeting-new-demands.pdf>

## **CS 36 - Active and healthy – apprentices in Linz**

**Country:** Austria

**Organisation:**

- ASKÖ Oberösterreich (Project leadership)
- "Fonds gesundes Österreich" and "Fit für Österreich"
- Arbeiterkammer Oberösterreich (AK OÖ),
- Oberösterreichische Gebietskrankenkasse (OÖGKK),
- Arbeitsmedizinischer Dienst (AMD),
- Institut für Suchtprävention (Kooperationspartner)
- Linz AG,
- ÖBB,
- Keba,
- Seniorenzentren Linz

**Activity:** cross industry

**Main risks:** multiple health risks

**Main problem:** unhealthy lifestyles

**Main action:** various participatory actions on young workers' health promotion: the project was divided into 6 steps. The first step consisted of the creation of a network and a new structure, which would invest in the future and health of apprentices. In the second step a survey about the workload, work environment and bio-psycho-social issues among all 275 apprentices was conducted. In the third step the health panels were established as a heart of the project. During these health panels, apprentices determined health-damaging and dangerous work situations and processes. In the fourth step workshops and keynote speeches on related topics took place in every company. The following priorities and contents of the workshops and keynote speeches enabled the target group to achieve a better personal and technical competence:

- Drug dependence;
- Bio-psycho-social health;
- Information about exercise programmes and development of exercise programmes.

In the fifth step a dexterity test was performed. The last step was called "In-house health day". During the health days, the apprentices had an opportunity to demonstrate their knowledge about healthy lifestyle, to achieve recognition and to establish new contacts with co-workers.

**Main worker participation measures:**

- Survey
- In-house steering committee
- Health panels
- Health day

**Description of worker participation:** As the project started, a survey about the workload, work environment and bio-psycho-social issues among all 275 apprentices was conducted. In addition, a special health questionnaire was distributed among the target group of young workers. Health panels were set up and apprentices determined health-damaging and dangerous work situations and processes. The results were then presented to company's in-house steering committee which consists of work councils, occupational physicians, and apprentices' representatives. The steering committee gathered together regularly to discuss the existing common health problems and solutions. Health days were arranged where the apprentices had an opportunity to demonstrate their knowledge about healthy lifestyle, to achieve recognition and to establish new contact with co-workers.

**Results:** The preliminary results of the project show that the apprentices are more concerned about their own health and are reconsidering their behaviour and actions. During the project, it was ascertained that it is very important that someone in the company manages and controls the course of the project. The ongoing communication is essential.

**Source (URL):** Active and healthy – apprentices in Linz

<http://osha.europa.eu/data/case-studies/active-and-healthy-apprentices-in-linz/view>

**Full case description:** <http://osha.europa.eu/data/case-studies/active-and-healthy-apprentices-in-linz/Active-and-healthy-apprentices-in-Linz.pdf>

## ***CS 37 - Söderhamm Municipality - Introduction programme for newly qualified teachers***

**Country:** Sweden

**Organisation:**

- Söderhamm Municipality
- University of Gävle

**Activity:** Söderhamm Municipality has 26,000 inhabitants and is located on the East Coast of Sweden, in the Gävlegorg Region. This region has a low level of education and high unemployment. Schools are considered to be very important for developing the region.

**Main risks:** multiple health risks

**Main problem:** high level work-related stress

**Main action:** In order to prevent newly qualified teachers from becoming overstrained when starting their new job, Söderhamn Municipality has participated in a research programme at the University of Gävle that focused on the introduction of newly qualified teachers into the labour market.

The programme was designed to prevent them from feeling stressed and inadequate in their new profession, to help ease the transition from student to teacher, and thus to promote the well-being of this group of employees.

**Main worker participation measures:**

- Survey
- In-house steering committee
- Health panels
- Health day

**Description of worker participation:** all newly qualified teachers who had worked as teachers less than two years were invited to participate in a series of dialogue meetings.

As part of the programme, the newly qualified teachers received an introduction to their new profession and to their new workplace, and a workplace advisor offers them practical advice. This practical part of the introduction consists of information- and knowledge sharing on a number of relevant issues. The main emphasis was on a mentorship, which lasted throughout the first year. The mentors were experienced teachers, and were recruited internally. As the project started, a survey about the workload, work environment and bio-psycho-social issues among all 275 apprentices was conducted. In addition, a special health questionnaire was distributed among the target group of young workers. Health panels were set up and apprentices determined health-damaging and dangerous work situations and processes. The results were then presented to company's in-house steering committee which consists of work councils, occupational physicians, and apprentices' representatives. The steering committee gathered together regularly to discuss the existing common health problems and solutions. Health days were arranged where the apprentices had an opportunity to demonstrate their knowledge about healthy lifestyle, to achieve recognition and to establish new contact with co-workers.

**Results:** There was a substantial decrease in stress levels among newly qualified teachers. Zero sick leaves caused by stress-related problems. Young teachers reported increased confidence and improved ability to inspire and motivate their students. Söderhamn municipality became the preferred employer for a number of new teachers due to the introduction programme and the mentorship programme.

Source (URL): Söderhamn Municipality - Introduction programme for newly qualified teachers

<http://osha.europa.eu/data/case-studies/soederhamm-municipality-introduction-programme-for-newly-qualified-teachers/view>

**Full case description:** <http://osha.europa.eu/data/case-studies/soederhamm-municipality-introduction-programme-for-newly-qualified-teachers/Soederhamm-municipality-introduction-programme-for.pdf>

## ***CS 38 - Workplace health promotion for young workers – pilot project U21***

**Country:** Austria

**Organisation:**

- OÖ Gebietskrankenkasse
- NÖ Gebietskrankenkasse
- Salzburger Gebietskrankenkasse
- Scheuch GmbH

- BRP-Rotax GmbH & Co. KG
- Lenzing Aktiengesellschaft
- M-Real Hallein
- Sparkasse Niederoesterreich Mitte West AG

**Activity:** five model enterprises in the provinces of Oberösterreich, Salzburg and Niederösterreich in Austria

**Main risks:** high-risk lifestyle

**Main problem:** pressure from different aspects of life

**Main action:** The pilot project U 21 is based on theoretical and practical principles of workplace health promotion. Five companies from different sectors together with 330 participants - apprentices and young employees - have been involved.

All of the participating enterprises went through the following project phases:

- Organisation of a project team in the enterprise;
- Kick-off workshops with young workers;
- Written survey through specially developed questionnaires, and analysis of absenteeism data;
- Health workshops to develop ideas on how to improve health, and ideas for implementation;
- Feedback to the project team and to the participants;
- Implementation phase (workshops, presentations, quality circle meetings);
- Concluding survey and analysis workshop.

**Main worker participation measures:**

- Health questionnaire
- Group discussion
- Workshops

**Description of worker participation:** In order to introduce the project, kick-off workshops were held in forms of large group conference, and combined information phases and work modules. Targeted group of young workers were asked to complete a special health questionnaire to provide information on the aspects of training needs. Small groups of young workers were then gathered to develop ideas and action plans in externally moderated health workshops. The proposed measures included:

- Measures for continuous integration of young employees in the social environment of the company (mentoring systems, personal presentation, activities between classes...);
- Establishment of class representatives and confidants;
- Development of a transparent appraisal system for young workers;
- Development of a continuous feedback system supported by apprentice trainers and education management;
- Continuous dissemination of information about possible future career and coordinated monitoring during career entry and transitional phases

**Results:** The scheme of the project enables active participation of young employees in the improvement of the work environment. It was confirmed that the programme is tailored to make young people aware of health-promoting actions and to motivate them with attractive offers.

**Source (URL):** Workplace health promotion for young workers – pilot project U21

<http://osha.europa.eu/data/case-studies/workplace-health-promotion-for-young-workers-pilot-project-u-21/view>

**Full case description:** <http://osha.europa.eu/data/case-studies/workplace-health-promotion-for-young-workers-pilot-project-u-21/Workplace-health-promotion-for-young-workers-pilot.pdf>



## **CS 39 - “Battle against alcohol abuse & tobacco smoking” campaign**

**Country:** Romania

**Organisation:** S.C. Hidroelectrica S. A. (Bucharest, Romania)

**Activity:** Local authorities (local administration, environmental bodies, etc), NGO’s from the environmental area, Schools, National public & private sports authorities and associations

**Main risks:** multiple health risks

**Main problem:** alcohol abuse, tobacco smoking, high workload, work-related stress

**Main action:** Since 2008, S.C. Hidroelectrica S.A. has run the “Sports & nature against alcohol abuse & tobacco smoking” ongoing campaign to enhance workplace health promotion for young workers representing about 30% of the company’s personnel. The campaign addressed young workers facing isolated work related risks, high workload and work-related stress. The campaign aims at providing healthy alternatives for these young workers (healthier lifestyle and improved social behavior) as opposed to alcohol consumption and tobacco smoking.

**Main worker participation measures:**

- Targeted surveys
- Tests
- Questionnaires
- Group discussions
- Sports events
- Environmental protection actions
- Supporting groups
- Interactive training sessions

**Description of worker participation:** The campaign involved a three-step approach.

1. An isolated workplace risk assessment;
2. Targeted surveys run by occupational health physicians and psychologists; in addition, tests, questionnaires and discussions were used to assess the young workers’ health condition and psychological profiles.
3. Sports activities (swimming, sportive fishing, bridge contests), and environmental protection actions for those workers with less physical aptitudes.
4. Two major actions were also carried out:
5. supporting groups allowing the young workers to share experience on fighting against alcohol abuse and tobacco smoking, success/barriers faced, the changes noticed in their physical condition and psychosocial profile; and
6. training sessions on workplace health promotion (WHP) held by qualified professionals in the area, including successful cases examples, weak and strong points, with the young workers’ interactive participation and the company’s representatives.

Initially targeted surveys were carried out among all categories of workers in the company. During 2007 to 2009, the surveys focused on young workers, which represented about 30% of the total number of the company’s employees. The occupational physicians and occupational psychologists of the company checked the health condition and the psychological profile of these workers through periodical medical and psychological tests. The surveys also included anonymous questionnaires on alcohol and tobacco consumption, social relationships and communication capability, work load, job-related expectations and current versus past satisfaction levels. Sports events and environmental protection actions were also arranged in order to promote physical and mental health and to ensure healthier working conditions. Supporting groups consisted of young workers only were set up to enable young workers to express freely and openly their concerns related to alcohol consumptions and tobacco smoking as well as to improve their communication capacity within the work environment and their families. Monthly training sessions were held on the Workplace Health Promotion concept. Young workers interactively participated in the sessions as they were encouraged to present their own

evaluations on the work environment's strong and weak points, to highlight the problems faced including the communication with the hierarchical staff and to propose solutions.

**Results:** incidence of alcohol consumption and tobacco smoking reduced approximately 20%. Self-confidence and self-esteem improved through various training courses as they gained capabilities to solve various work situations. Communication and teamwork capabilities improved.

**Source (URL):** "Battle against alcohol abuse & tobacco smoking" campaign

<http://osha.europa.eu/data/case-studies/sports-and-nature-against-alcohol-abuse-and-tobacco-smoking-campaign/view>

**Full case description:** <http://osha.europa.eu/data/case-studies/sports-and-nature-against-alcohol-abuse-and-tobacco-smoking-campaign/Battle-Against-Alcohol-Abuse-and-Tobacco-Smoking.pdf>

## ***CS 40 - Redesign of a demoulding work station in the production of resin statuettes***

**Country:** Italy

**Organisation:** Occupational Medicine - LHM 7 of Siena

**Activity:** Factory of resin statuettes

**Main risks:** MSD's

**Main problem:** Manual handling of loads (MHL) is required at every step of the process in an Italian factory producing resin art statuettes.

**Main action:** The first improvement suggested to the workers and the factory was to change the way in which semi-moulds were handled by trying a different position for the trolley: not alongside the workbench but perpendicular to it, thus reducing the workload because the small movement by the worker would no longer be required.

**Main worker participation measures:**

- interviews
- meetings

**Description of worker participation:** Opinions and suggestions from workers and factory technical staff were collected in individual interviews in the workplace and at general meetings - when planning the study, when the results of the action were presented and during the discussion of the ergonomic action taken.

**Results:** The positive approach and attitude of all the social players during every stage of the ergonomic corrective action (from the analysis of the job to the identification of criticalities and possible solutions) were important to achieve positive results. The new workplace layout has not reduced the production output, but has significantly reduced risks, discomfort and complaints from workers.

**Source (URL):** Work-related musculoskeletal disorders: Prevention report

[http://osha.europa.eu/en/publications/reports/en\\_TE8107132ENC.pdf](http://osha.europa.eu/en/publications/reports/en_TE8107132ENC.pdf)

## ***CS 41 - Raised bricklaying in construction***

**Country:** Netherlands

**Organisation:** TNO

**Activity:** Construction

**Main risks:** MSD's

**Main problem:** the heavy workload of bricklayers

**Main action:** To reduce the physical workload of bricklayers, a stepwise participatory approach was applied in a two-year project by research institute, TNO Construction. The goal was to develop working methods and devices that would reduce the flexion and rotation of the bricklayer's back.

**Main worker participation measures:**

- Participation of representatives from different companies
- Discussion committees of managers, specialists and employer representatives
- Testing of solutions by workers
- Demonstrations, information days, news articles
- Social dialogue
- Working committees

**Description of worker participation:** As several companies have to cooperate in the bricklaying process and as they might have different and conflicting interests, their representatives were asked to participate in the project. This resulted in the cooperation of three Dutch organisations in this project:

- AVM - an organisation promoting the interests of bricklayers;
- KNB - an organisation promoting the interests of brick manufacturers;
- NVOB - an organisation promoting the interests of subcontractors in the construction industry.

In a first step, several committees were formed to develop and discuss solutions to reduce the workload of bricklayers. These committees consisted of executives of bricklaying companies, sector organisations, middle management of bricklaying companies, representatives of bricklayers and TNO.

Secondly, the major problems related to bricklaying work were determined. Previous analyses had shown that most complaints from bricklayers concerned the lumbar back. Therefore, it was decided to eliminate the most hazardous task for these complaints. In this context, bricklayers' most unfavourable posture during their work occurs when the bricks are located 0-50 cm above the work floor (see Figure 14).

In a third step, the committees suggested a number of solutions for this problem. After testing some solutions in practice, one functional concept was selected for further development. This concept should enable a higher placement of the bricks above the floor to prevent working 0-50 cm above the floor as much as possible.

In a fourth step, bricklayers tested prototypes of the devices at construction sites and, in a fifth step, preparations were made to produce the devices.

Finally the new working methods were introduced to the bricklaying sector via demonstrations, lectures, information days and articles in newspapers and magazines.

**Results:** The results of this study show that most of the bricklayers strongly favoured the use of raised bricklaying devices. They perceived an increase in productivity and a reduction of physical load on the back. The physical workload (measured directly at the workplace and by means of video recordings) fell significantly in the intervention group.

**Source (URL):** Work-related musculoskeletal disorders: Prevention report

[http://osha.europa.eu/en/publications/reports/en\\_TE8107132ENC.pdf](http://osha.europa.eu/en/publications/reports/en_TE8107132ENC.pdf)

## ***CS 42 - Redesign of a hand packing line in the pharmaceutical industry***

**Country:** United Kingdom

**Organisation:** a pharmaceutical plant in UK

**Activity:** pharmaceutical plant

**Main risks:** MSD's

**Main problem:** Tablets were packed into vials by hand. However, there were ergonomic problems that made the job difficult to do and increased the risk of MSDs. The nature of the job meant that most activities were carried out sitting down and required repetitive movements of the upper limbs.

**Main action:** It was accepted that the operation needed to be reorganised - based upon sound ergonomic principles - to improve the layout, storage facilities, flow of vials and transfer of items between operators.

**Main worker participation measures:**

- Training for work-team
- Work-team meetings to discuss analysis results and analysis method solutions
- Trials to test teams' proposals
- Team presents ideas to management

**Description of worker participation:** The Kanban method of workflow analysis was employed to investigate the process and make it more efficient. The six-person team working at the hand packing line attended a training course to understand the principles underpinning Kanban and the system for continuous improvement.

Following their training, the team reorganised their work area in a series of trials to remove imbalances or 'bottlenecks' in the process. They held meetings to discuss their ideas to improve the layout and made video recordings so that they could gain an overview of the workflow.

The team aimed to design a layout that allowed the vials to be passed on by hand in a comfortable and efficient manner (i.e. with no extended reaching or twisting of the body).

They also wanted to enhance communication between team members.

The team presented its proposal to managers who agreed that a budget of £5,000 (~ EUR7,500) would be provided to implement the reorganisation. Quotes were obtained from local suppliers and a local company was engaged to install the new layout.

**Results:** In addition, the workflow and productivity benefits included the following.

- Cycle time was reduced from three hours to five minutes as stock piling was avoided.
- Work in progress was reduced to 50 packs part-finished.
- Productivity targets were consistently met.
- There was a 25% increase in productive hours for the line.

**Source (URL):** Work-related musculoskeletal disorders: Prevention report

[http://osha.europa.eu/en/publications/reports/en\\_TE8107132ENC.pdf](http://osha.europa.eu/en/publications/reports/en_TE8107132ENC.pdf)

## ***CS 43 - Ergonomic Improvement Teams in the pharmaceutical industry***

**Country:** United Kingdom

**Organisation:** GlaxoSmithKline (GSK)

**Activity:** Pharmaceutical company, employs approximately 1,400 staff working in product laboratories and offices, site maintenance, warehousing and plant rooms.

**Main risks:** MSD's

**Main problem:** All lost time incidents in the previous year at a particular GSK site were caused by work related MSDs.

**Main action:** Managers at GSK implemented an Ergonomic Improvement Team (EIT) at a UK manufacturing site.

**Main worker participation measures:**

- Ergonomic improvement team
- Trials and mock-ups involving employees

- Surveys and questionnaires Involvement of engineering, maintenance, operations staff

**Description of worker participation:** Sponsorship for this initiative was obtained from senior management to ensure that appropriate resources would be made available. The use of an EIT enabled employees to participate in the improvement process by identifying ergonomic hazards and seeking solutions to reduce the risk of MSDs.

Representatives from across the site were carefully selected to join the EIT on the basis of their positive attitude, good communication skills and prior experience. The team had a relatively small number of members in order to facilitate good communication and effective management. A site champion was appointed to lead the initiative and an external ergonomics expert engaged to help the team focus on, and address, the most significant work issues.

The EIT members participated in an initial two-day training programme based upon their needs which focused on the specific ergonomics issues commonly found at work in the pharmaceutical industry.

Each team then began the systematic assessment of work systems to reduce risk factors

In addition, EIT members played a critical role in ensuring 'early reaction' to reports of individual MSD cases. An assessment was conducted to identify and address the causes of an injury when it was presented to medical staff.

Employees were included in the development of any potential improvements. Trials and mock-ups of the proposed improvement were constructed before decisions were made; this allowed 'in place' testing to determine whether the solution was viable.

Employee feedback on any trials or mock-ups was recorded using a simple survey or questionnaire. If any new mechanical devices were proposed, it was found to be essential to train the users so that they were fully conversant with them prior to the trial to ensure a realistic evaluation of the device concerned.

The EIT worked in partnership with staff from engineering, maintenance and operations to identify and agree project plans for interventions. Following their introduction, the EIT monitored the change and verified that the risk reduction solutions remained in place.

**Results:** Twelve months after the participatory ergonomics programme was initiated at the site, 31 work system improvements had been implemented

In addition, there was a 40% reduction in MSDs attended to on-site by the company physician during the year. No reduction in MSDs was observed over the same time period at a similarly sized GSK manufacturing site that did not initiate an EIT.

The use of Ergonomic Improvement Teams enabled employees to participate in the improvement process by identifying ergonomic hazards and seeking solutions to reduce the risk of MSDs. The introduction and use of the EIT also improved familiarity with the work systems, workstations and tasks that were evaluated and helped significantly in identifying practical and effective solutions. In addition, it was found to be much easier to gain employees' acceptance of workplace changes if they knew that they had come from other staff members performing the same or similar tasks.

**Source (URL):** Work-related musculoskeletal disorders: Prevention report

[http://osha.europa.eu/en/publications/reports/en\\_TE8107132ENC.pdf](http://osha.europa.eu/en/publications/reports/en_TE8107132ENC.pdf)

## ***CS 44 - Muscular fitness project in the chemical industry***

**Country:** Luxembourg

**Organisation:** DuPont de Nemours

**Activity:** Chemical industry

**Main risks:** MSD's

**Main problem:** While companies currently invest in machines to make them more ergonomic, people also need to be made aware of the benefits of being active and helped to make exercise a part of their everyday life.

**Main action:** To improve employee health and performance, DuPont Luxembourg started a 'Muscular Fitness Project' in October 2002.

**Main worker participation measures:**

- Meetings
  - Workers consultations
  - Project team
  - Workers survey
  - Pilot testing
- Description of worker participation:** The project consisted of a number of action steps through which the Six Sigma Methodology was applied.

These were:

- building up of a project team involving different competencies, including experts in the Six Sigma tool;
- installation of muscular training equipment at the plant (two sets of four machines) in January 2003;
- holding site-wide meetings with employees and handing out questionnaires in order to identify the issues (with the possibility of volunteering for a pilot test);
- selection of two groups of 20 volunteers for the pilot test by the project supervisor and plant physician;
- execution of a large-scale test with 35 people during six months from January to July 2003 supported by a fitness training consultant from Kieser Health Systems;
- analysis and evaluation of data (December 2003);
- defining the 'Vital Few' parameters - back strength, leg strength, body weight, flexibility and presence at work;
- opening in May 2004 of a plant fitness centre with seven muscular training machines, attended twice a week during four hours by trained personnel;
- development of a management system to include especially affected employees in a health programme.

**Results:** The pilot test proved that muscular training was effective in addressing the issue of employee health. In this case, the use of the Six Sigma statistical tool made it possible to convince people with a technical and scientific background that muscular training can have statistically significant results.

The plant fitness centre is attended regularly by 220 employees (close to 20% of the workforce). More than 10 cases of back problems followed up by the plant medical service were effectively addressed. In addition, employees became more aware that physical activity is useful and has a positive effect on their health.

**Source (URL):** Work-related musculoskeletal disorders: Prevention report

[http://osha.europa.eu/en/publications/reports/en\\_TE8107132ENC.pdf](http://osha.europa.eu/en/publications/reports/en_TE8107132ENC.pdf)

## ***CS 45 - Adapting a forklift truck***

**Country:** Belgium

**Organisation:** IDEWE

**Activity:** Unloading lorries and storage of packages on pallets in a warehouse

**Main risks:** MSD's, back strain, stress

**Main problem:** A forklift truck is used to unload lorries. Forklift truck drivers had reported various work-related neck and back problems to the company medical physician. Increased pressure of work in this department also needed to be resolved by organisational measures.

**Main action:** A working group was set up to make recommendations to propose changes. Since no forklift truck could be found on the market that fulfilled all the ergonomic safety and technical specifications, it was decided to adapt an existing forklift truck.

A prototype forklift was built and carefully evaluated during trial phases, with adjustments to the design being made throughout this process,

**Main worker participation measures:**

- worker survey
- individual discussions with company physician
- project group
- training
- further comments from drivers resulting in change

**Description of worker participation measures:**

A survey of mental and physical stress in the materials handling department, supplemented by data from conversations between individual employees and the physician, showed that full-time forklift truck driving was the most stressful job in this department. An ergonomic analysis was made of the work and the driver's cab.

IDEWE, an external authority for prevention and protection, implemented this project at Borealis Beringen.

A multidisciplinary project group was set up. The engineer from the Materials Handling department directed the project. Various operators from the Materials Handling department ensured participative input.

In addition to the participation of Borealis's in-house prevention department, the company doctor and the ergonomist from IDEWE – the external prevention authority – and an employee of Barlow Handling (a company that sells, hires out and adapts forklift trucks) also took part in it.

The subjective views and experiences of the Materials Handling workers were already known from the survey and the conversations with the company physician. The ergonomists used this data and ergonomic analysis of the existing situation and forklift truck, (based on the "NOVA" checklist) to assess the situation.

The project group then formulated ergonomic recommendations.

Determining the ergonomics solution also involved the use of anthropometric data of the drivers and recommendations to propose changes to the cab.

The ergonomist provided instructions to project group members on their use and driver training for these new forklifts, for example individually adjusting the driver's cab, in order to make the working position as ergonomically effective as possible and in order to be able to work efficiently. The instructions and working procedures were incorporated into work guidelines or standard operating procedures. Comments from drivers resulted in some changes being made.

**Results:**

Reduction in work-related health problems in forklift truck drivers:

- it is now very rare for there to be a need to drive backwards, as forward visibility has been greatly improved;
- exposure to vibrations and shocks have been reduced by the new ground covering;
- increase in operator participation as a result of participative approach.

**Source (URL):** Preventing MSDs in practice - 2000

<http://osha.europa.eu/en/publications/reports/101>

## ***CS 46 - Avoiding manual handling using a vacuum device to lift meat***

**Country:** Denmark

**Organisation:** Slagteriselskabet DANISH CROWN a.m.b.a.

**Activity:** Meat processing and preparation factory

**Main risks:** Back disorders due to manual handling of heavy loads of meat at high frequency in a meat processing and preparation factory.

**Main problem:** Heavy slabs of meat have to be manually lifted at high frequency. Several workplaces require the lifting of approximately 10 tons an hour per employee using inappropriate movements.

**Main action:** Design of a vacuum lifting device or 'meat magnet' for lifting slabs of meat, Realisation of a video for training purposes.

### **Main worker participation measures:**

- Worker consultation and feedback throughout the project
- Special project group
- Joint prevention committee
- Safety representatives involved in early testing
- Testing and discussions with employees

### **Description of worker participation measures:**

The involvement of employee prevention representatives and the participation of all employees played a crucial part in developing a successful solution. The project was carried out with the assistance of the external Occupational Health Service, who made regular visits, working with a special project group from within the company and with the involvement of the company's joint prevention committee. Care was taken to keep employees in the division informed of progress throughout the project. Employee prevention representatives were involved in early testing of the meat magnetic lifting aid, and afterwards all staff had the opportunity to discuss the project and test the 'meat magnet'.

### **Results:**

The 'meat magnet' has eliminated the need for heavy lifting without increasing the speed, nearly all the employees report that the equipment is suited to the task and 60% find that using the equipment reduces work stresses on the lower back, upper back, shoulders, elbows, left wrist, hand and fingers.

The interest of workers in participating in activities aimed at improving the working environment has increased and many good ideas put forward by employees for technical innovations and work organisation have been implemented. Daily interaction between staff has improved. Working with others, including on new initiatives to improve the working environment, has improved, for example in relation to both attitudes and practical issues such as setting budgets.

Training and retaining new employees has become easier;

**Source (URL):** Preventing MSDs in practice - 2000

<http://osha.europa.eu/en/publications/reports/101>

## ***CS 47 - Redesigning tram driver's working position***

**Country:** Austria

**Organisation:** Wiener Linien GesmbH & Co KG

**Activity:** Wiener Linien GmbH & Co KG, the Vienna Transport Authority, is Austria's largest local transport company, carrying more than 700 million subway, tram and bus passengers each year.

**Main risks:** MSD's and stress



**Main problem:** The company was concerned about the possible high health risks to drivers of operating old trams, resulting in time off work due to illness and early retirement on health grounds. The reasons identified included strain on the musculoskeletal and motor system, stress, irregular hours and poor climatic conditions inside the vehicle.

**Main action:** Wiener Linien decided to introduce ergonomic improvements to the driver's position when constructing new low-floor trams.

**Main worker participation measures:**

- Interviewing worker representatives
- Direct consultation with workers (drivers)

**Description of worker participation:** To decide what measures were required they questioned drivers and set up a working group that included representatives of drivers, occupational physicians and safety experts, and also used expert support from the Ergonomics Department of Vienna Technical University's Institute of Industrial Engineering, Ergonomics and Business.

**Results:** 41 vehicles incorporating improved seating and other measures to improve driving position and the other safety and health features such as improved thermal comfort, were built. There was significantly improved driver acceptance of the driving position and enhanced job satisfaction.

**Source (URL):** Preventing MSDs in practice - 2000

<http://osha.europa.eu/en/publications/reports/101>

## ***CS 48 - Ergonomics programme for SMEs***

**Country:** Finland

**Organisation:** Uusimaa Regional Institute of Occupational Health

**Activity:** Developing an ergonomic small workplace programme with 24 SMEs to assist them in the prevention of musculoskeletal disorders

**Main risks:** MSD's problems in SME's

**Main problem:** Twenty-four small businesses had previously taken part in a Small Workplace Programme on maintaining and promoting working ability, organised by the Finnish Institute of Occupational Health. A follow-up survey indicated that three out of four employees in the companies had suffered from musculoskeletal symptoms during the past 12 months. It was agreed that there was a need for improved ergonomics in the workplaces.

**Main action:** A multidisciplinary consultant group from the Uusimaa Regional Institute of Occupational Health developed ergonomics programmes in co-operation with the staff of the 24 companies.

**Main worker participation measures:**

- participatory ergonomic methods
- information exchange between workers
- consultation of workers

**Description of worker participation:**

The process to develop an ergonomics programme to prevent MSDs at small workplaces involved :

- Annual information meeting,
- Interviews and filming in participating companies,
- Setting up development groups (information exchange between groups of workers),
- Identification of issues for proposed improvement,
- Improvement measures,
- review of actions and next steps.

Thirteen companies chose to develop ergonomics together. The employees of companies were always involved in developing the ergonomic interventions, using 'participatory ergonomic methods'. Through the project companies made concrete improvements in working conditions and workstations. Some of these measures were 'small-scale' and 'immediate'. Some target areas required more substantial investments and the companies made further plans to implement them in the longer term.

**Results:**

The 'developing ergonomics' programme was successfully implemented in the companies based on the initial goals set:

- concrete improvements in working conditions and workstations were successfully implemented;
- company planning on health and safety was developed e.g. by budgeting and planning for longer term interventions;
- the project promoted employee participation in health and safety and developing ergonomics solutions;
- there was an increased awareness of ergonomics among staff and managers;
- it encouraged co-operative working between some companies on health and safety.

**Source (URL):** Preventing MSDs in practice – 2000 <http://osha.europa.eu/en/publications/reports/101>

## ***CS 49 - Introducing adjustable workstations on a packing production line***

**Country:** United Kingdom

**Organisation:** R. Twining and Company Ltd

**Activity:** Packing tea on a production line

**Main risks:** MSD's

**Main problem:** The workstation was not adjustable which proved to be a real problem for the workers, whose heights and body sizes vary considerably. It was also unsuitable for left-handed workers. Worker heights ranged from five feet to six feet three inches.

**Main action:**

- creation of a workplace team to assess risks and find solutions,
- design of a fully adjustable workstation according to ergonomic principles;
- order of fully adjustable chairs and all operators were educated in the importance of adjusting their chair and workstation at the beginning of the shift.

**Main worker participation measures:**

- Working group involved workers
- Trainings of workers in ergonomic risks to assist their participation
- Logbook for workers' ideas
- Testing of solutions by workers

**Description of worker participation:**

The project was carried out by a team from the company with expert advice provided by an ergonomist, a health and safety expert and a psychologist from the local University (Sunderland University). The workplace team comprised: four shopfloor operatives (including representatives from all three shifts), the Occupational Health Nurse, the Administration & Training Manager and the Line Manager.

Part of the solution including training a small team of shopfloor workers in ergonomic risk factors and to enable them to participate fully in risk assessment and solution generation.

The starting point was for the team to carry out an assessment of health and safety risks (with a particular focus on MSD) as required by national legislation (Management of Health & Safety at Work Regulations) on the production line where the problems were occurring.

Facilitated by the University experts the team met over a number of weeks to brainstorm possible solutions to the problems they had identified. Potential solutions were taken back to the workplace and tried out. A logbook was used by the operators to record ideas as they occurred. All those working on the production line were encouraged to become involved in putting forward ideas and testing them.

**Results:**

Each operator on the production line now has a fully adjustable workstation which fits his or her needs no matter how small or large he or she is.

The working environment is also far more pleasant as a result of the high stacks of boxes having been removed. This has had the effect of enabling operators to look around the room. A number of them have said that this had made them feel 'less bored'.

**Source (URL):** Preventing MSDs in practice - 2000

<http://osha.europa.eu/en/publications/reports/101>

## ***CS 50 - Let's have a look at loads***

**Country:** Czech Republic

**Organisation:** Alcoa Fujikura Czech s.r.o.

**Activity:** Manufacture of machinery and equipment

**Main risks:** MSDs

**Main problem:** The company's manufacturing - production of cable harnesses for the automobile industry - is largely based on manual work, which increases the risks of workers developing MSDs.

**Main action:** An ergonomics programme was set up to identify, evaluate and cut workplace risks, optimise work procedures and standardise work methods. The ultimate aim was to prevent MSDs.

**Main worker participation measures:**

- Ergonomics working group with departmental representatives

**Description of worker participation:**

Two teams addressed the problem:

- a strategic ergonomics team, composed of management representatives and occupational safety and health experts, was responsible for strategic decisions;
- an operational ergonomics team, composed of departmental representatives, focused on searching for and evaluating ergonomic risks in the workplace.

The company also assigned one employee to be responsible for ergonomics. His tasks included coordination of solutions to ergonomics problems, assistance with the investigation of work-related illnesses and work with the company doctor and an external expert. The employee also carried out field investigations, helped the ergonomics teams work together and communicated relevant information to management.

**Results:**

The number of work-related illnesses has been cut. Compared to 2003, there were 28 fewer cases of established work-related illnesses in the following year. Complaints related to the excessive loads on employees' upper limbs also decreased.

**Source (URL):** Prevention of MSDs in practice – 2007

<http://osha.europa.eu/en/publications/reports/TE7606536ENC>

## ***CS 51 - The ergonomic design of workplaces and work organisation in a small to medium size enterprise***

**Country:** Germany

**Organisation:** Keulahütte GmbH

**Activity:** Manufacture of machinery and equipment

**Main risks:** MSD's

**Main problem:** An analysis of the company's workplace showed that fitters have to bend forwards to perform many of their tasks and they have to handle heavy loads (18-20 kg).

**Main action:** A programme to improve working postures and reduce the manual handling of heavy loads

**Main worker participation measures:**

- Worker survey
- Worker' workshop
- Interdisciplinary team involving workers

**Description of worker participation:**

Complementary methods were used to assess the strains, including:

- a worker survey;
- a workers' workshop to analyse the work process, complemented by analyses based on photographs and video.

Preventive measures were developed by an interdisciplinary team made up of safety representatives, members of the staff committee, workers, an occupational physician, representatives from the statutory accident insurance and social security body, and occupational and safety experts.

Workers were given time to familiarise themselves with their new working conditions and were offered support from the team. Further analyses and measurements were performed to ensure that the measures had improved the working conditions without introducing new strains.

**Results:** Bending postures at an angle of more than 20° and the manual handling of heavy loads have been almost eliminated.

**Source (URL):** [Prevention of MSDs in practice – 2007](#)

<http://osha.europa.eu/en/publications/reports/TE7606536ENC>

## ***CS 52 - Reduction of lifting through smart design***

**Country:** Netherlands

**Organisation:** City of Delft

**Activity:** Road construction

**Main risks:** MSD's, Physical stress

**Main problem:** The City of Delft employs about 40 road workers and service employees in its maintenance department. Workers were known to be exposed to high levels of physical stress, with back and knee complaints particularly prevalent.

**Main action:** Reducing the high levels of physical stress, back and knee complaints suffered by road workers.

**Main worker participation measures:**

- Working group including workers

- Training of workers

**Description of worker participation:**

A working group was set up comprising affected workers and supervisors and given training on physical stress. The group was able to use the visual aids in its search for solutions.

A plan of attack was prepared on three levels:

- ergonomics - tools were provided to prevent physical stress such as custom-fitted kerb grippers;
- the content and organisation of tasks - the logistics of the work were examined, particularly during the project preparation phase, to prevent the need to handle materials over long distances;
- behaviour and working techniques - workers were trained in techniques by the company physiotherapist; working agreements were formulated with the employees and documented in the form of a “working techniques protocol”.

**Results:** The City of Delft has more than earned back its investment, thanks to a reduction of 3.9% in absence due to illness. More importantly, the status and motivation of the workers were enhanced because they felt a sense of “ownership” over the measures.

**Source (URL):** Prevention of MSDs in practice – 2007

<http://osha.europa.eu/en/publications/reports/TE7606536ENC>

### ***CS 53 - Replacement of wooden pallets by incorporating a recessed component into the product***

**Country:** Netherlands

**Organisation:** Dycore BV, Lelystad Branch

**Activity:** Manufacture of non-metallic mineral products

**Main risks:** MSD's

**Main problem:** The company manufactures ribbed floor components. It uses a wooden pallet system to transport these products, in which workers have to handle awkwardly shaped pallet blocks weighing around 25kg when dry.

**Main action:** Potential solutions included changing the design or materials of the pallets and using mechanical lifting aids. However, the company concluded that the best solution was to get rid of the pallets altogether.

**Main worker participation measures:**

- Workers consultations
- Brainstorming with workers

**Description of worker participation:**

A brainstorming session with the employees identified the solution: incorporating a recessed element into the ribbed floor components themselves, rendering the wooden pallets redundant.

The feasibility of this solution was tested, in particular, whether the redesigned components maintained the required quality and construction standards.

The result is that neither Dycore employees nor other workers, such as sub-contracted drivers, have to expend physical effort handling pallets and risk injury.

**Results:** Improved handling capabilities. Other benefits include a cut in noise as nail guns are no longer needed to repair pallets and quicker deliveries on site because there is no need to load pallets onto trucks.

**Source (URL):** [Prevention of MSDs in practice – 2007](http://osha.europa.eu/en/publications/reports/TE7606536ENC)

<http://osha.europa.eu/en/publications/reports/TE7606536ENC>

## ***CS 54 - A comprehensive approach to reduce the risk of MSDs***

**Country:** Slovenia

**Organisation:** Savatech d.o.o.

**Activity:** Manufacture of rubber and plastic products

**Main risks:** MSD's, Physical strains

**Main problem:** Rubber manufacturing is a heavy industry characterised by high levels of physical strain and repetitive movement. The load on a worker's musculoskeletal system is high.

**Main action:** Workplace measures to prevent MSDs, including technical improvements to reduce manual handling, bending and repetitive movements.

**Main worker participation measures:** Working group involving workers

**Description of worker participation:** A multidisciplinary team involving management, workers, OSH experts, occupational health doctors, construction designers and other specialists assessed the ergonomic problems, proposed solutions and monitored their implementation.

**Results:** This initiative cut sick leave by 28.8% from 2004 to 2007 and improved workers' satisfaction.

**Source (URL):** [Prevention of MSDs in practice – 2007](#)

<http://osha.europa.eu/en/publications/reports/TE7606536ENC>

## ***CS 55 - Dealing with the musculoskeletal problems of guide dog trainers and mobility instructors***

**Country:** United Kingdom

**Organisation:** The Guide Dog for the Blind Association - Health and Safety Team

**Activity:** Health and social work/ Activities of membership organisations NEC

**Main risks:** MSD's, Absenteeism

**Main problem:**

- Training dogs for blind and partially sighted persons is a lefthanded job, creating one-sided loads on dog trainers/clients' mobility instructors.
- A high prevalence of MSDs and absenteeism was noticed, yet trainers/instructors were rarely aware of the risks. They enjoyed their jobs and considered "aches and pains" a part of it, which led to a high level of under-reporting of illness.

**Main action:** Tackling the high prevalence of MSDs and absenteeism among trainers

**Main worker participation measures:** Workers participation in risk assessment

**Description of worker participation:**

Together with dog trainers/instructors, risks were assessed and the following measures developed:

- providing different types and lengths of leads and handles to allow workers to match their stature to the dog's height and demeanour;
- rejecting, as early as possible, boisterous dogs which do not respond to training;
- monitoring workers' health;
- providing training targeted at the manual handling issues specific to dog training;
- producing three self-help leaflets;
- stressing the importance of reporting incidents and MSDs to allow better risk identification and prevention.

**Results:** The feedback from the staff was positive. They felt that “someone” who understood their work and knew about MSDs was listening to them. Their awareness of MSD risks and how to tackle them has increased. As a consequence, more incidents are now reported.

**Source (URL):** [Prevention of MSDs in practice – 2007](#)

<http://osha.europa.eu/en/publications/reports/TE7606536ENC>

## ***CS 56 - Use of participatory ergonomics to identify and solve high-risk tasks***

**Country:** United Kingdom

**Organisation:** GlaxoSmithKline - Employee Health Management

**Activity:** Manufacture of chemicals and chemical products

**Main risks:** MSD's

**Main problem:** MSDs were affecting workers at a pharmaceutical plant.

**Main action:** Forming an Ergonomic Improvement Team to tackle MSDs affecting workers at a pharmaceutical plant

**Main worker participation measures:**

- Working group of workers
- Participation of workers

**Description of worker participation:**

A dozen experienced manual handling assessors were trained and formed into an Ergonomic Improvement Team (EIT) to lead the initiative. They were assisted by an ergonomics expert. The team met regularly and sub-groups were formed to investigate improvements and share best practice, with site management providing support.

The EIT investigated ergonomic problems in a variety of work settings, including pallet lifting, repetitive work using poor hand tools in laboratories, cylinder lifting, loading and unloading storing plugs, packaging boxes, working in isolators, hand tool redesign and operating high rise trucks.

A variety of risk analysis techniques were used, including video observation analysis.

Measures were launched with the full participation of the workers concerned. The company also ran a communication programme to raise awareness of the issue. About 90% of the ergonomic challenges identified were solved “in-house” without the use of an external expert.

**Results:** Within a year of initiating the project, 31 work system improvements had been achieved. Twenty-five reduced workers' exposure to multiple risk factors through the introduction of new work equipment and ways of working or modifications to the existing equipment or work layout. A 40% reduction in the number of MSDs attended to on site by the company physician was achieved.

**Source (URL):** [Prevention of MSDs in practice – 2007](#)

<http://osha.europa.eu/en/publications/reports/TE7606536EN>

## ***CS 57 - Assistance in the cleavage and grading of stone material***

**Country:** Italy

**Organisation:** The Joint Health and Environment Committee

**Activity:** Mining and quarrying

**Main risks:** MSD's

**Main problem:** In the porphyry working process, stone is extracted using explosives before the material is split and graded. These latter two operations put workers at risk from MSDs; from having to work with the trunk bent and handling stone that typically weighs from 7-30kg. In addition the work is carried out on uneven quarry ground and workers are exposed to the elements.

**Main action:** Improving working positions and introducing extra lifting equipment to reduce the handling of large loads

**Main worker participation measures:**

- Participative approach involving worker representatives
- Worker's consultation

**Description of worker participation:**

Taking a participative, tripartite approach involving workers' representatives, employers, and experts, a system for material processing was designed to improve the working positions of the workers.

Extra lifting equipment was put in place to facilitate the movement of stones. Currently, there are more than 20 models of this system in place, with more due to be installed.

**Results:** The results of the measures introduced in this difficult industry sector are clear: workers' exposure to MSDs has been cut by almost half. This in turn has led to less absenteeism. The system also allows the employment of workers with disabilities.

**Source (URL):** [Prevention of MSDs in practice – 2007](#)

<http://osha.europa.eu/en/publications/reports/TE7606536ENC>

## ***CS 58 - Participative development of work methods (SATKE, Taske)***

**Country:** Finland

**Organisation:**

- Finnish Institute of Occupational Health
- Enerke Oy (LTD) et al.

**Activity:** Construction

**Main risks:** MSD's

**Main problem:** Electricians, heating engineers, plumbers, air-conditioning mechanics and other similar workers have to operate in many workplaces and during different construction phases, often together with workers from other enterprises. These technicians are exposed to MSD risks, including awkward work postures and physical strain that affects the neck and upper limbs, lumbar region and lower limbs.

**Main action:** Tackling MSDs, including awkward work postures and physical strain that affects the neck and upper limbs, lumbar region and lower limbs of construction workers

**Main worker participation measures:**

- Participation of trade union representatives
- Direct consultation with workers
- Development groups
- Testing of options

**Description of worker participation:**

The initiative relied on bringing together many different actors in the power network construction industry, along with those in technical building services, and including trades unions and employers' organisations, information on risks was gathered through risk assessment and analysis of past accidents.



Workers were also asked about their working conditions. The work methods were videoed and photographed so they could be assessed at a later date.

A special device was introduced to protect knees. The device also functions as a stool.

Development groups then discussed their challenges at work, selecting some for closer examination. Potential solutions included the development of new work methods, using existing products and tools and thorough training. The best ideas were taken forward for further development. Participants in the project then built and tested prototypes of new equipment.

The solutions identified included the use of a drawstring bag for hoisting tools up a pole, which removed the need for workers to carry them while climbing, and a device to protect the knees when working. It can also work as a stool, reducing strain in the legs.

**Results:** Bringing together so many participants, each with the common goal of reducing work-related injuries, was crucially important to the success of the project. This sharing of knowledge and cooperation allowed the development of creative responses to MSDs in a challenging work environment.

The programme projects lasted between 18 months and two years, involving between three and 10 people in each. In total, more than 45 potential solutions were identified. Reduced sickness absence and hence lower costs and improved work quality are anticipated

**Source (URL):** [Prevention of MSDs in practice – 2007](#)

<http://osha.europa.eu/en/publications/reports/TE7606536ENC>

## **CS 59 - 'My back is devilishly important' ('Mijn rug is verdievelde goud waard')**

**Country:** Netherlands

**Organisation:** Van Dievel

**Activity:** The full-load transport company delivers goods within a 500 km radius of Brussels, to and from the Netherlands, Luxembourg, Germany and France.

**Main risks:** Manual handling of loads

**Main problem:** Workers often complained about back problems.

**Main action:** Van Dievel Transport provides training (a course and a booklet) designed to prevent musculoskeletal disorders in drivers.

**Main worker participation measures:**

- Toolbox meetings
- Illustration of the booklet
- Involvement in the selection of trailers

**Description of worker participation:** The company used toolbox meetings and individual feedback to encourage workers to give their views, and in doing so, identified hazards and the appropriate corrective action to avoid them. The occupational health physician, in close collaboration with an external ergonomist and eight company drivers, produced a special training programme and mainly pictorial brochure for drivers showing them how to work safely and to prevent musculoskeletal disorders. Workers helped illustrate the mainly pictorial booklet. The company also involves drivers in the selection of trailers.

**Results:** In 2002 the company won the European Health Club 'Health and Enterprise' award for its action.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TWE11002ENN/view)

## **CS 60 - Knowledge-sharing among drivers to prevent non-traffic related work accidents**

**Country:** Denmark

**Organisation:** The National Research Centre for the Working Environment (NRCWE) and Arla Foods, Denmark

**Activity:** producer/distributor of milk and dairy products.

**Main risks:** Poor access, uneven surfaces, limited space and a general lack of housekeeping

**Main problem:**

- Inexperienced new drivers or subcontractors could not utilise the knowledge of experienced drivers.
- Goods transport drivers had elevated rates of superficial injuries, dislocations/sprains/strains, fractures and concussion.
- Common incidents: fall from height, overexertion, crush injuries and slips/falls.

**Main action:** Managers, in collaboration with drivers, have developed a scheme (participatory design), which was subsequently used to gather information about working conditions in over 500 different loading areas. This information has been integrated into the company's IT system so that the information is available to drivers when they print out their daily route.

**Main worker participation measures:**

- Interviews with drivers
- Participation of employee representatives
- Work group ( monthly meetings for a period of a year)
- System to share experiences between workers

**Description of worker participation:** Interviews with managers and drivers revealed that the most common risk to drivers' safety was the physical conditions of the loading areas where they were required to work.

A working group included three drivers with various levels of experience. The group concentrated on the issue of knowledge-sharing and how to extract the tacit knowledge of experienced drivers for the benefit of inexperienced drivers and subcontractors. Employee representatives all emphasised that the success of the project was dependent on taking the needs and abilities of drivers into account. Levels of literacy are an issue here, since the profession attracts people who are either poorly equipped, or poorly disposed, to work with many documents or other written material. Time pressure was another important issue, as route planning was based on a strict formula, allowing drivers a set amount of time to reach and deliver to different locations.

Part one consisted of making the knowledge of experienced drivers explicit. To this end, a scheme was developed in which drivers could provide critical information about the working conditions on their routes. The scheme was designed to avoid the need for long written descriptions, with pre-defined items, representing the most important types of risk, crossed off in accordance with the conditions in a specific location. The items on the scheme were discussed at length in the early work group meetings. NRCWE wrote a first draft, which was then amended by the work group. The next draft was piloted with a driver from the work group and researcher from NRCWE trying the scheme out on his route. This experience provided more minor amendments resulting in the final draft, which was used in the project.

In order to reduce the amount of information drivers need to handle, the work group analysed information about the working conditions in the various delivery locations.

The work group initiated to include these interpreted results of the destinations (good/potential risk/definite risk) into the daily starting IT briefings where drivers get information about their daily route.

**Results:** The instrument pays a great deal of attention to the drivers' perspective. The overall quality of the information was significantly enhanced by the contribution of the work group members

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## ***CS 61 - Shell's Quality Health Safety Security and Environmental (QHSSE) system, Denmark***

**Country:** Denmark

**Organisation:** A/S Dansk Shell Distribution

**Activity:** distribution of petroleum and natural gas with outsourced contractors

**Main risks:** Outsourcing

**Main problem:** There had been a relatively high frequency of accidents, both to staff and materials.

**Main action:** Small and medium-sized enterprises (contractors) adopted the safety standards of a large, high-profile organisation (contracting organisation).

**Main worker participation measures:**

- Companies and drivers are generally encouraged to be proactive about safety
- Reporting system for contractors
- Safety meetings with contractors

**Description of worker participation:** Demonstrating an awareness of safety issues, by reporting near-misses or highlighting concerns with particular delivery locations, is recognised in the scoring system.

The required regular safety meetings encouraged the drivers and management of a contracting company to discuss safety issues more, something that they would not have thought of doing without being exposed to the Shell way of working.

**Results:** During the period 1999–2007 there was a significant improvement in all areas of safety and a notable improvement in all of the main measures by which the safety performance is assessed within the QHSSE system.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## ***CS 62 - Driver's Manual***

**Country:** Finland

**Organisation:** ADR-Haanpää Ltd

**Activity:** haulage of liquid chemicals in Scandinavia and the Baltic region.

**Main risks:** safety at work

**Main problem:** The company wanted that the drivers to have a manual covering the quality, safety and environmental issues relevant to their work.

**Main action:** The transport company ADR-Haanpää introduced the Driver's Manual in order to make the company's quality, environmental and safety issues visible in everyday work and to provide a useful tool for drivers.

**Main worker participation measures:**

- Involvement in developing and updating the manual

**Description of worker participation:** Since it was first produced ADR-Haanpää's Driver's Manual has been updated twice, in collaboration with management, traffic coordinators and the drivers

themselves. The need to update the Driver's Manual has arisen from feedback given by drivers, and also new regulations and knowledge regarding quality and safety in chemical transport.

**Results:** The manual helps drivers increase their professional knowledge regarding occupational and traffic safety, and hence to deal more effectively with problems at work. It was found extremely useful and it serves further purposes (marketing, orientation and training) too.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TWE11002ENN/view)

## **CS 63 - DocStop**

**Country:** Germany

**Organisation:** DocStop für Europäer e.V.

**Activity:** long distance passenger transport and haulage

**Main risks:**

- Working far away from home
- Time pressure

**Main problem:** Heavy goods vehicle and bus drivers rarely consult a doctor during their journeys because it would put their schedules into disarray.

**Main action:** Rest areas serve as DocStop centres, which have a network of doctors that are convenient for drivers to consult while on the road, without this causing undue disturbance to their schedules.

**Main worker participation measures:**

- Surveys among the drivers

**Description of worker participation:** European road safety expert Rainer Bernickel attended regular informal exchange meetings (stammtisch) with drivers, where he heard about this particular problem and decided to act. He carried out a survey among long-distance drivers to obtain more information about their needs.

**Results:** DocStop is well accepted by the drivers, as well as by a number of entrepreneurs, employers, liability insurance associations, trade unions, etc.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TWE11002ENN/view)

## **CS 64 - The risk of occupational fatigue in road transport – a coordinated prevention initiative**

**Country:** Spain

**Organisation:** Trade Union Federation of communication and transport of CCOO (Federación de Comunicación y Transporte de CCOO)

**Activity:** road transport

**Main risks:** Fatigue

**Main problem:** Drivers are twice as likely to have an accident if they are tired

**Main action:** A Spanish trade union federation carried out a government-funded study on the influence of driver fatigue on road traffic accidents in Spain. It comprised a literature search and discussions with drivers and looked at causes and solutions. A campaign was initiated to raise public

awareness of the problem and a number of sector-specific publications were produced, including guidance for the road haulage sector.

**Main worker participation measures:**

- Participation in group discussions

**Description of worker participation:** The methodology used in the study was qualitative. Researchers formed groups of 5–10 workers, who did not know one another, to discuss the topic (fatigue). Workers were encouraged to talk freely about the causes of the problem and potential solutions. The coordinator of the group had a passive role and listened to the discussions, requesting clarification as and when necessary. The researchers selected the topics and group numbers. The discussions were recorded and analysed by the researchers.

**Results:** The study demonstrated that fatigue is a very important risk factor for drivers. Fatigue is now recognised by Spanish drivers and the media as an important factor in road accidents. It is now taken into account in collective agreements and the negotiations with the government.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## **CS 65 - John Lewis Partnership**

**Country:** United Kingdom

**Organisation:** John Lewis Partnership

**Activity:** transport service for supermarkets, department stores, manufacturing and farming.

**Main risks:**

- Road accidents, manual handling etc.

**Main problem:** the reduction of road accidents

**Main action:** The John Lewis Partnership developed and implemented a series of work-related driving policies and procedures in an attempt to improve overall driving safety and reduce the organisation's accident statistics. These included handbooks for drivers, guides for managers, comprehensive incident assessment and driver assessments.

**Main worker participation measures:**

- Steering group meetings
- Discussion during training seminars
- Drivers' feedback as part of evaluation

**Description of worker participation:**

Employees' opinions were taken into account in the development and review of the policy and procedures. A steering group of employees was formed by the assistant fleet engineer to review the recommendations. Discussions also took place during a Defensive Driver training seminar. The information was then used to further develop and enhance the intervention.

As a part of the policy, when there was an accident, the 'motor accident/damage report form' had to be completed by the driver and the manager. The form detailed all the circumstances and conditions of the accident. The manager interviewed the driver, identified the cause, who was to blame, and the lesson learnt. The driver recorded the circumstances and conditions of the accident (i.e. the weather, road signs, speed limit, speed driven, involvement of police, third-party details, sketch of the accident, any injury that occurred, any passengers/witness details). Once the manager finished his or her assessment of the accident, the driver could add additional comments if necessary.

The effectiveness of the initiative was evaluated by objective statistics as well as drivers' feedback.

**Results:**

Drivers were generally positive about the initiative, stating that they were more aware of the risks when driving and had thus become more careful. This also had a positive impact on their personal driving. The only aspect of the initiative drivers found problematic was the Driver Risk Ratings, in which drivers were awarded one point even in a 'blame-free' accident.

Statistics showed that the number of accidents, accident severity and accident costs had all been reduced.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## ***CS 66 - Royal Mail Network Health and Safety Management System***

**Country:** United Kingdom

**Organisation:** Royal Mail Network

**Activity:** Royal Mail collects and delivers letters and packages throughout the UK.

**Main risks:** Accident risks

**Main problem:** Compulsory training with requirements for LGV drivers.

**Main action:** The policies, procedures and initiative include: driver training and assessment – including the use of experienced drivers as coaches; vehicle maintenance policies, and the Concept Truck programme in which a bespoke 'safety truck' was designed and manufactured. The truck design included new safety features for driving and measures to prevent falls from tail-lifts.

**Main worker participation measures:** Experienced drivers as coaches

**Description of worker participation:**

A driver training and coaching manager position was created to improve initial and ongoing training for Royal Mail drivers. The manager's responsibility is to develop cross-network driver training and ongoing coaching requirements and to cascade them to driver coaches, ensuring consistency of deployment.

In addition to the driver training and coaching manager, 41 coaches were recruited from within Royal Mail's existing workforce of professional drivers and deployed across the Royal Mail Network – this equates to one coach per 68 drivers (including agency drivers). These were full-time coaches but they can return to driving duties at seasonal peaks and times of manpower shortages. Each coach was given training to help them develop the necessary skills for their role. The training consisted of:

- Workplace coach induction courses covering:
- Presentational skills
- Tools and techniques for coaching
- All coaches attended a 'simple vehicle maintenance' course delivered by Garage Network.
- Coaches attended the driving assessors' course (pass/fail course) of accident prevention NGO RoSPA.

With its team of coaches in place, Royal Mail then set about implementing a number of driver training and safety initiatives.

Early reporting of faults is encouraged and drivers are permitted to perform an agreed selection of minor repairs. Royal Mail drivers are trained on how to carry out the agreed repairs safely. All repairs must be carried out using the associated Safe System of Work.

Training is provided by experienced vehicle services technicians who have a 'Trained Trainer' qualification and who have been pre-trained on the agreed course format/content. The training will be specific to the vehicle type/manufacturer and limited to those minor repair operations that have been

agreed. Only trained drivers who feel capable of completing the task should attempt or undertake a repair.

The agreed vehicle minor repair operations that can be undertaken by trained drivers are as follows:

- Light bulbs – changing all accessible light bulbs
- Fuses – change a like-for-like rated fuse in line with training
- Wiper blades – changing accessible wiper blades
- ISO leads – change ISO leads that are not hard wired
- Trailer retaining straps – remove and replace trailer straps.

To ensure that all procedures are being followed and that drivers have appropriate skills, each driver undergoes a driver assessment at least once a year. This involves the coach accompanying the driver as they carry out their scheduled daily work. Drivers are assessed against predetermined criteria that cover the condition and roadworthiness of the vehicle, access to the vehicle, coupling and uncoupling, as well as driving skills and driving behaviours. At the end of the duty the coach and driver spend some time discussing the findings and any suggested plans for improvement. All findings and recommendations are recorded on a check sheet, one copy of which is issued to the driver, another to the driver's line manager and a third filed in the driver's records by the coach. Any serious lapses in the driver's ability are raised with the driver's line manager immediately for further investigation and action.

**Results:** The benefits for Royal Mail:

- Improved professionalism amongst its drivers
- Level of ongoing training now comparable with the best in industry
- Reduced vehicle maintenance (unfair wear and tear)
- Improved fuel consumption
- Reduction in road traffic accidents
- Prepared for European Directive 2003/59/EC
- A well informed, motivated driving force kept up to date with new vehicle technology and changes in legislation through ongoing training/coaching.

The 2007–2008 targets were all successfully achieved, with a reduction in reportable occupational accidents and road traffic accidents. Royal Mail has also achieved a reduction in tachograph infringements, and prohibition notices are down year on year.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## ***CS 67 - Ergonomically correct seatbelt adjustment***

**Country:** Germany

**Organisation:** Berufsgenossenschaft für Fahrzeughaltungen (BGF)

**Activity:** transport

**Main risks:** Accident risk

**Main problem:**

- Conventional commercial vehicle seats do not allow for seatbelt adjustment.
- A high number of drivers do not use the seatbelt because of comfort reasons.
- The danger of fatal accidents is increased when driving without the seatbelt.

**Main action:** Following a survey the BGF ordered a seat manufacturing company to design and produce a new generation of commercial vehicle comfort seats. The BGF informs drivers about the dangers of driving without a seatbelt and the heightened personal protection and comfort provided by the newly designed seats.

**Main worker participation measures:**

- Participation in the survey

**Description of worker participation:**

The BGF – together with the Verkehrsakademie (Traffic Academy) – conducted a survey among drivers of commercial vehicles. With the help of an extensive questionnaire and a prototype seat with a scaled adjustment, the ideal seatbelt position of each driver was determined and recorded.

**Results:** The new seat was presented at the International Commercial Vehicle Fair in Germany.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## ***CS 68 - Hoyer Safe Driver Policy***

**Country:** United Kingdom

**Organisation:** Hoyer Haulage UK Ltd.

**Activity:** Hoyer is an international transport company, transporting chemicals, food and mineral oils.

**Main risks:** Accident risk

**Main problem:** The company felt there was a need for a comprehensive road safety policy.

**Main action:** The company developed the company policy and specific safety procedures.

**Main worker participation measures:** Feedback for amendment

**Description of worker participation:** The policy is communicated to all employees (every member of staff has a copy of the health and safety policy and there is ongoing communication of amendments and updates).

Drivers are encouraged to report incidents (including near-misses) and to air any concerns they may have about particular delivery locations.

**Results:** There has been a significant improvement in the indicators over recent years.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## ***CS 69 - Simple improvements to make loading easier***

**Country:** United Kingdom

**Organisation:** British Health and Safety Executive (HSE)

**Activity:** transport of large rolls of material

**Main risks:** Manual handling of loads

**Main problem:** Neck and shoulder pain.

**Main action:** Risk assessment identified the cause of musculoskeletal complaints. A focus group proposed the use of stable temporary platform to stand on.

**Main worker participation measures:** Focus group to find solutions

**Description of worker participation:** A risk assessment was conducted in order to identify physical risks to drivers while loading and unloading materials. As part of this risk assessment process, managers and workers set up a focus group to consider solutions to the identified risks. It was found the nature of the load enabled a stable temporary platform to be formed within the container by placing



boards on part of the bottom layer of rolls. A worker standing on this could load rolls up to roof height with much less effort than before.

**Results:** Staff using the new method no longer suffered neck and shoulder pains. Beneficial side effect: a net saving of over £48,000 per annum in transport costs.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## ***CS 70 - The working conditions of women in road transport, international***

**Country:** International

**Organisation:** International Transport Workers Federation (ITF)

**Activity:** transport

**Main risks:** Gender risks

**Main problem:** There is a growing number of women in the sector while driving is still considered as a male profession.

**Main action:** ITF organised a meeting of women road transport workers who met for the first time in London in September 2005.

**Main worker participation measures:** Participation in the survey

**Description of worker participation:** As a result of the meetings, some new initiatives were developed for the Road Transport Section of ITF. One of these was a survey of women in the industry focusing on health and safety issues, carried out between 2006 and 2007.

**Results:** The ITF produced a report on the findings entitled 'Women on the road to a safe and healthy working environment'. This guide has been prepared for trade unions in the transport sector, with the object of encouraging them to work closely with women workers in the sector, also detailing how to consult and involve women workers.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## ***CS 71 - Get on at the Front, Belgium***

**Country:** Belgium

**Organisation:** MIVB-STIB

**Activity:** Brussels public transport company

**Main risks:** Violence from the public

**Main problem:** There were a lot of passengers who didn't pay, and who got on the bus towards the rear, away from the driver.

**Main action:** Transport operator MIVB-STIB has made it obligatory for bus passengers in Brussels to get on at the front, rather than using doors further down the bus. The new rule was communicated to drivers and travellers by a number of methods designed to gain the acceptance of drivers and passengers.

**Main worker participation measures:** Participatory discussion

**Description of worker participation:** Interactive training involved discussion of the new rule among the drivers taking part in the training, and the sessions were run by their direct managers rather than unknown professional trainers. Working out for themselves that the new rule would improve their working lives made it easier for them to accept it.

**Results:** Passengers are more polite and the atmosphere is more relaxed. There is less vandalism. Fewer passengers try to avoid paying their fares.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## **CS 72 - Stress on public passenger transport drivers**

**Country:** Germany

**Organisation:** Bayerische Gewerbeaufsicht, Coburg (Bavarian Labour Inspectorate, Coburg)

**Activity:** public passenger transport

**Main risks:** Work-related stress

**Main problem:** Levels of absenteeism, early retirement and impaired health, higher than many other occupations, hinted at high levels of work-related stress among public passenger transport drivers.

**Main action:** The Bavarian Labour Inspectorate, Bayerische Gewerbeaufsicht, implemented a campaign about stress recognition, prevention and reduction. Public transport companies were investigated and stressful situations identified. Agreements were then reached on stress-reduction targets and measures to reduce stress.

**Main worker participation measures:**

- Discussions with members of staff
- Questionnaire
- Subjective views of the stresses from a given list.

**Description of worker participation:**

Bus drivers were observed as they worked, and common rooms and depots were inspected. The SPA-S method ('Screening psychischer Arbeitsbelastungen'), a monitoring/ interview method of screening for stress, was used to assess the levels of stress suffered by bus drivers. This is a method can be used to review performance over time.

A questionnaire, 'Psycho-mental disorders in bus drivers of public passenger transport' ("Psychomentele Fehlbelastungen bei Busfahrern im ÖPNV"), was developed for interviewing employees within the companies concerned. It consisted of a series of questions about the following:

- OSH management in the company
- Working hours, and driving and rest times
- Questions about work organisation and ergonomics
- Absenteeism, health and driving ability
- Measures for stress optimisation/reduction and health promotion.

Drivers were then asked to rate the main causes of stress that had been identified through prior investigation, for example: climatic conditions (heat, cold), time pressures, responsibility for the passengers, etc. The bus drivers classified their stress as 'low', 'average', 'high' or 'very high'.

**Results:** This project identified a high level of stress among public passenger transport drivers. As a result of the on-site investigations and discussions with management and bus drivers, 37 of the 39 companies signed up to target agreements which set out concrete steps and measures for relieving stressful situations, including surveying and consulting employees.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## **CS 73 - The workplace (cab) of urban bus drivers**

**Country:** Germany

**Organisation:** Berufsgenossenschaft der Strassen-, U-Bahnen und Eisenbahnen (BG Bahnen)

**Activity:** urban public transport

**Main risks:** Poor ergonomics of the area around the steering wheel of urban buses, including the design of the seat, the placing of equipment and controls and the amount of space allotted to the driving area.

**Main problem:** High levels of physical and mental stress.

**Main action:** A specification sheet setting out ergonomic and technical specifications for the driver's cab was developed and tested in partnership with research institutes, vehicle makers, transport companies, associations and insurance institutions.

Main worker participation measures:

- Initial identification of problems
- Testing new specifications

**Description of worker participation:** The test version was used on scheduled services by drivers who were asked to evaluate it from their point of view. One year after adopting the new driving area, transport companies had many observations to make based on drivers' first-hand experience. Modifications and additions to the specification sheet were made as a result of discussions.

**Results:** The transport companies are convinced that contented drivers in an optimised working environment work better and more effectively. The experience in the transport companies is that the rate of absenteeism will decrease with the improvement of working conditions.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TWE11002ENN/view)

## **CS 74 - Holistic risk assessment of drivers in the public transport sector – evaluating driver competence tests**

**Country:** Greece

**Organisation:** ELINYAE

**Activity:** urban public transport

**Main risks:** Drivers are involved in a variety of accidents and exposed to various health and safety hazards.

**Main problem:** There is a general debate in Greece about the efficiency of the country's current system for controlling competence and fitness to drive.

**Main action:** The Hellenic Institute for Occupational Health and Safety (ELINYAE) investigated the health and safety hazards in the urban transport sector, with the aim of developing a model risk assessment.

**Main worker participation measures:**

- Completion of subjective questionnaires
- Participation in medical examination and tests

**Description of worker participation:** A questionnaire asking personnel to report their perceptions of OSH hazards in their working environment was distributed to 140 bus drivers in Thessaloniki.

During the study's third phase, a sample group of drivers took part in medical and laboratory tests:

- Blood tests were taken for a biological indicator of the presence of carbon monoxide in the body.

- Spirometry tests were carried out to investigate potential damage to the respiratory tract.
- Tests for obstructive sleep apnoea syndrome were also conducted for a selected sample.

**Results:** A significant percentage (75%) of workers stated that there was inadequate information and a general lack of training on matters of health and safety at their workplace. 85% of workers reported that the pace of work was intense. A high percentage (79%) felt they had many other responsibilities in addition to their driving duties. Almost 36% reported occasionally suffering from mental stress and 46% reported constant mental stress. Extremely high percentage of workers suffered from insomnia (49%). The study revealed that almost 42% of drivers of all ages have health problems incompatible with driving. 44% of drivers suffered mild symptoms and 38% severe symptoms of obstructive sleep apnoea syndrome.

Following the risk assessment, recommendations were made to improve working conditions. In one participating company test for sleep apnoea syndrome became part of the medical fitness examination.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## ***CS 75 - Renovating bus terminals for comfort***

**Country:** Hungary

**Organisation:** Budapest Transport Ltd.

**Activity:** urban public transport

**Main risks:** Welfare provision

**Main problem:** The comfort of terminals has an important effect on how satisfied bus drivers are with their working circumstances.

**Main action:** The management of the Budapest Transport Company and workers' representatives have agreed on a development budget for the renovation of old terminals, in order to comply with legislation on workers' welfare and workplace amenities. The company has introduced standards for bus terminals and workers' representatives are involved in the work process at specific locations.

**Main worker participation measures:** Workers involvement in the development of renovation plan

**Description of worker participation:** Between 2007 and 2008 an agreement was drawn up between the company management and trade unions about the main criteria for the redevelopment of the bus terminals. Company and workers' representatives agree on which schemes fit the available budget. Workers' input is used in the identification of 'hot spots' that need urgent attention and priority setting.

**Results:** During 2007–2008 six terminals were completely renovated.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## ***CS 76 - Implementation of RoadRISK Tool***

**Country:** Netherlands

**Organisation:** Connexxion

**Activity:** public transport

**Main risks:** Transport accidents

**Main problem:** The company wanted to increase passenger and driver safety and reduce the damage to buses. This would also decrease drivers' stress.

**Main action:** Connexion introduced the RoadRisk Tool because they wanted their bus drivers to change their driving style. The test offers an analysis of the driving style of bus drivers.

**Main worker participation measures:**

- Participation in pilot tests
- Coaching and training by senior drivers

**Description of worker participation:**

The two-week pilot programme in Zeist involved 118 bus drivers who completed the test. Some members of the employee council and four bus drivers were then interviewed to find out how the test and the RoadRISK Tool could best be used.

Members of the employee council argued that it was important for bus drivers to be given clear instructions about how the test worked before they took it. Furthermore, they said that the target 'pass rate' chosen was too high (80%). This was considerably higher than the average score during the pilot (55%). It was also observed that the test gave only general feedback on each topic, where drivers would have welcomed more specific information about how they had answered each individual question within the topic. Attention was drawn to the need for special facilities for dyslexic people and those who are not native Dutch speakers so that all participants could be judged fairly by the test. Finally, good communication about the pilot and the use of the RoadRISK Tool with other divisions of Connexion Public Transport was considered very important.

The bus drivers also mentioned some organisational aspects that need improvement. For example, the bus drivers felt that a clearer introduction to the test was needed, and that it was important to be able to take the test in a quiet environment. They also commented on some aspects of the content of the test, saying that some of the photos were not clear enough. Questions on medical fitness to drive should be added, they said, in order to check the period of valid medical certificates. One driver agreed that the RoadRISK Tool would change his driving style. The others claimed that their driving style would not be affected, although one mentioned that it had been good to test existing knowledge.

The drivers were also interviewed about more general topics. They thought that it was important to keep their professional skills up-to-date, but they all preferred practical training methods such as training on the job.

**Results:** Results regarding accident prevention were not available at the time of writing, but bus company Arriva used the same software application in England with 40% reduction in traffic-related bus damage.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TWE11002ENN/view)

## ***CS 77 - An intervention focusing on psychosocial factors in a private transport company***

**Country:** Spain

**Organisation:** Psychometrics Research Unit (PRU), TUSGSAL (Barcelona Bus Company)

**Activity:** urban public transport

**Main risks:** Psychosocial risks

**Main problem:** Psychosocial risks and poor safety behaviours have been identified as two major sources of risk in passenger road transport organisations.

**Main action:** The psychosocial and behavioural risk assessment and intervention was carried out using the MARC methodology developed by the University of Valencia. It included the selection of target variables according to the preventive needs of the company, the introduction of a segment analysis, an ergonomic study, and assessment of the results using an economic tool.

**Main worker participation measures:** Questionnaires and interviews

**Description of worker participation:** The participation of employees in the assessment procedure, carried out by questionnaire and interview, was voluntary, anonymous and confidential. The TUSGSAL Risk Prevention Department performed all the fieldwork, distributing questionnaires to workers in the least intrusive way while making sure that participants had a good understanding of the scales they were being asked to use. These were usually discussed in work meetings or training sessions. The TUSGSAL staff also received written instructions and support at all times.

**Results:** The results showed that TUSGSAL was generally a healthy organisation that nevertheless had areas in which there was room for improvement.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TWE11002ENN/view)

## **CS 78 - 'The School Run' driver training**

**Country:** United Kingdom

**Organisation:** Department for Transport (DfT) and Crime Concern (Now known as Catch22)

**Activity:** urban public transport

**Main risks:** Violence from the public

**Main problem:**

Poor mutual perceptions on the part of drivers and children are a major cause of behavioural problems on both sides. Problems are:

- Driver stress and poor morale
- Danger to school passengers, other passengers and (especially in the case of missiles being thrown from buses) to other road users
- Loss of goodwill and public image, leading to a loss in revenue and revenue potential
- Heavy and ongoing costs because of damaged and soiled buses, loss of revenue through fraudulent travel, and legal costs incurred when bus companies become involved in civil or criminal court proceedings.

**Main action:** In addition to staff training, educational sessions for primary and secondary schoolchildren were developed and an organisational 'best practice' checklist was designed to give guidance to schools, bus companies and PTEs on measures they could take to support drivers. Guidelines were developed for schools, bus companies, transport companies, etc., about how to support drivers.

**Main worker participation measures:** Training course and forum

**Description of worker participation:** The training course provides a forum where, through participation in exercises leading to open discussion, drivers could arrive at their own conclusions. Some drivers had developed techniques and strategies of their own which were highly effective, and which were incorporated into the training programme.

A range of measures were suggested by course participants for responding to these problems, or for preventing them happening in the first place. These included:

- Try to get the same drivers covering the same route more often so that friendly relationships, based on mutual respect, can develop.
- Get more support from schools. Some schools take responsibility for the behaviour of pupils on buses and deal with problems immediately: 'If school staff cooperate, problems can be nipped in the bud.' Other schools wash their hands of the problem, leaving drivers and the company to cope on their own: 'Managers should sometimes carry out the threat not to carry pupils from schools which won't cooperate.' There should be an incentive scheme for schools to encourage them to get to the top of a 'fair play' league.

- Make sure that the company provides the necessary resources – radio or telephone contact with base; sufficient staff to enable a quick response if problems arise; video cameras; PA systems; buses which aren't in such a poor state that they invite damage.
- Be clear and consistent about when to let things go, and where to draw the line.
- Provide training for drivers, not just at induction but throughout their career. 'It may take years to develop the skills to handle incidents better.' 'Treat them right and they'll treat you right. Talk to them, say hello, use names, say please and thank you.' 'Don't swear or lose your temper.'
- Use school prefects or an adult volunteer to keep an eye on things. 'It helps to have had your own kids and found out the hard way what works.'

When managerial or organisational issues were raised during the training which had merit, but were inappropriate for discussion on the course, they were recorded and incorporated later into the recommended guidelines for organisations.

**Results:** The initial evaluation of the pilot programme found that drivers were positive about the course, with the majority finding it relevant, useful and enjoyable. Most felt they had learnt new ways to change their approach or practices, and had been given increased confidence in dealing with situations. They felt this would make a difference to the frequency and seriousness of incidents on board their buses.

Further, the number of incidents reported in which drivers experienced problems with the behaviour of schoolchildren dropped in the two months following the course compared with the two months immediately before it.

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## ***CS 79 - A checklist for bus drivers***

**Country:** Austria

**Organisation:** The International Road Haulage Association (IRU) and member organisations (in Austria: die Autobusunternehmer AISÖ)

**Activity:** bus transport

**Main risks:** Accident risk

**Main problem:** The association wanted help in making sure that no safety precaution had been overlooked.

**Main action:** The checklist was developed by the IRU in order to make the job of bus drivers simpler.

**Main worker participation measures:** Checklist

**Description of worker participation:** The idea behind the checklist is that drivers are professionals and show their professionalism by preparing thoroughly for each journey. The driver has to ensure that the appropriate preparations are made before driving off and the checklist serves as a comprehensive reminder.

**Results:** N/A

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## **CS 80 - Urban and inter-urban bus-drivers: Psychosocial risk factors, and the development of suitable working clothes for women bus drivers**

**Country:** Spain

**Organisation:**

- Trade Union Federation of communication and transport of CCOO (Federación de Comunicación y Transporte de CCOO)
- FENE-Bus (Federación Nacional Empresarial de Transporte en Autobús)(National Business Federation for Bus Transport)
- Trade Union Federation of transport, communications and marine (UGT) (Federación de Transportes, Comunicaciones y Mar de UGT)
- Foundation for the Prevention of Occupational Risks (Fundación para la Prevención de Riesgos Laborales)

**Activity:** bus transport

**Main risks:**

- Gender issues
- Psychosocial risks

**Main problem:** The organisations wanted appropriate prevention measures for psychosocial risks and suitable clothing for female bus drivers.

**Main action:** Drivers were surveyed. Prevention measures and type of uniform offered to female drivers were suggested. A short prevention guideline was developed based on the results of the study. It is in two parts: psychosocial risks; female uniform.

**Main worker participation measures:** Interview with drivers

**Description of worker participation:** An interview-based study was carried out among eight groups of urban and inter-urban women bus drivers in five Spanish cities. Male drivers also took part in this study in three of these groups. Safety engineers and personnel managers were also interviewed.

**Results:** N/A

**Source (URL):** Managing risks to drivers in road transport

[http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

## **CS 81 - Renault, analysis of risk situations**

**Country:** France

**Organisation:** CRAM Normandy

**Activity:** maintenance in the manufacture of automobiles

**Main risks:** Diverse and variable corrective maintenance operations.

**Main problem:** Risk analysis and assessment is difficult to carry out.

**Main action:** A steering group of the project was set up. Operators were interviewed about the operating procedures they actually used. Information was analysed to identify the risks to which operators were exposed. Appropriate preventive measures were proposed. The identified measures were implemented.

**Main worker participation measures:**

- Involvement of workers, through discussions and communication
- Interviews



- Steering group

**Description of worker participation:** The steering group members were chosen to include department managers from maintenance and manufacturing; engineers and technicians from the safety and working conditions departments and from the various workplaces involved in the machine centres. The interviews were distributed among interviewers according to their own expertise. For example, maintenance technicians were questioned by an interviewer from the maintenance section who was familiar with the work they do day by day.

The analyses were carried out by the steering group. Ideas for solving the problems were collected from the interviews and from the steering group during analysis of the results. Following these analyses, the group proposed preventive measures which were either technical or organisational. They were described to the operating personnel and tested. Validation of the measures proposed by the group gave rise to a formal agreement in which everyone involved was able to offer their opinion about the effectiveness of the implemented solutions and follow-up measures for the initiative in progress.

**Results:** The interviews showed that the operators were not aware of the risks involved in the work they were doing. They mentioned matters of ergonomics, such as carrying heavy loads and slipping, but were not aware of the risks while working with live machinery. Out of 45 identified operations, fifteen had been performed on live equipment and 10 of them were performed with downgraded protection. Now, through the analysis of the tasks, it had been shown that only three of the 10 operations required downgrading of the protection. In such cases, alternative preventive measures had to be defined. As a solution, the “ISEPA” concept – “Intervention Sous Energie Avec Protection Alternative” (operations on live equipment with alternative protection) has been introduced. In effect this means using protective measures that were not devised at the machine design stage.

Some measures that were adopted, such as handling systems, also saved a lot of time on maintenance operations and were therefore immediately profitable. Tangible results appeared rapidly, such as use of scaffolding together with a hoist for raising heavy loads, and a trolley for the handling of electric spindles. Improving safety has brought gains in time, ergonomics, comfort, safety and mental well-being.

The programme brings significant improvements in productivity and reduced machine downtime, and promotes improvements in new equipment purchase specifications. It also encourages the development of healthy communication culture between maintenance and production personnel.

**Source (URL):** Case studies database

<http://osha.europa.eu/data/case-studies/renault-analysis-of-risk-situations/view>

## ***CS 82 - Air France Industries: a virtual tool to plan in advance for real-world defects***

**Country:** France

**Organisation:** Air France KLM

**Activity:** maintenance of aeroplanes

**Main risks:** accident risks, especially workplace traffic

**Main problem:** The new workshop had to be able to receive jet engines 3.5 metres in diameter, whereas the equipment had previously been designed for engines 2.2 metres in diameter.

It was proving difficult to assess the 2D drawings and identify any production, safety and ergonomics issues.

**Main action:** Air France Industries reorganised one of its maintenance workshops. Risk prevention and safety questions were re-examined on site. Partners involved in this project decided to use a three-dimensional interactive computer model, and asked for the help of the French national research and safety institute INRS. The INRS developed a tool specific to these needs and modelled the

building, the machines, the handling devices (trolleys, pallet jacks, etc.) and the items of furniture. The simulation was recorded on CDs that were then distributed to the workshop employees.

**Main worker participation measures:**

- Workers were involved from the start of the project
- Workers provided feedback on the design of the workshop Unit meetings

**Description of worker participation:** Air France Industries wanted to involve all the personnel affected by the reorganisation in the process of designing this new workshop to enlist their support for the changes and enhance risk prevention. Everyone was able to take a virtual tour of their future work area. Feedback showed the model was well-received by the personnel. One month after distribution of the simulations, meetings were organised by each processing unit to gather comments. This information was summarised and analysed by a project monitoring group.

**Results:** The virtual model was a great help in furthering understanding of the project. Being able to view movements within the workshop made it possible to detect and correct certain ergonomics and safety problems in the proposed layout of the premises, such as a poorly located column and doors opening in the wrong direction. The main difficulties identified concerned traffic lanes and difficult access to certain work stations because storage areas nearby for bulky parts were not large enough. Working conditions at the re-designed premises have been improved, in particular in safer circulation around the premises and safer access to work areas for maintenance workers. The model is continued to be used to train new recruits about the operation of the workshop and raise awareness about possible risks.

**Source (URL):** Case studies database

<http://osha.europa.eu/data/case-studies/air-france-industries-a-virtual-tool-to-plan-in-advance-for-real-world-defects/view>

### ***CS 83 - Taking risks with asbestos: What influences the behaviour of maintenance workers?***

**Country:** United Kingdom

**Organisation:** Institute for Employment Studies

**Activity:** maintenance in the construction sector

**Main risks:** Asbestos exposure

**Main problem:** Maintenance workers do not always follow HSE guidance.

**Main action:** Workers in the construction sector were asked to participate in the survey. The interviews were all fully transcribed and analysed.

**Main worker participation measures:** Workers were encouraged to discuss their attitudes, awareness, knowledge and behaviour around asbestos.

**Description of worker participation:** Workers were invited to share their personal experiences of working with asbestos, how they dealt with it, how they felt about the situation, and other related issues. They were also asked to rate how knowledgeable they felt they were about a range of asbestos-related issues. Four options were provided: (a) You know about it and understand it pretty well; (b) You know a little bit about it but are not confident you know enough; (c) You don't know but feel you should, and (d) You don't know and you don't need to know.

**Results:** The study showed that there is a complex range of factors that influence individual behaviours. The report identified a several issues that affect an individual's safe behaviour around asbestos in the following categories:

- technical issues relating to the complexity of messages about asbestos, its effects and how to deal with it effectively;

- psychological issues concerning an individual's attitudes towards risk, health and the specific risks posed by asbestos;
- cultural factors such as pressures from employers, clients, co-workers etc., which are largely driven by economic as well as social pressures;
- control factors, namely how much individuals feel that they are in control of their work environment. These are related to the nature of the employment contract an individual has, and their labour market capital.

**Source (URL):** Case studies database

<http://osha.europa.eu/data/case-studies/taking-risks-with-asbestos-what-influences-the-behaviour-of-maintenance-workers/view>

## ***CS 84 - Solutions to reduce stress in occupational maintenance***

**Country:** Germany

**Organisation:** Accident prevention and insurance association for the metal working industry ("Berufsgenossenschaft Metall Nord Süd")

**Activity:** maintenance in the manufacture of automobiles

**Main risks:**

- diverse hazards associated with maintenance activities
- psychosocial hazards such as high job demands and time pressure

**Main problem:** The exposure to stress-generating factors may lead to an increase in occupational accidents and may also trigger occupational diseases among maintenance workers in the long term.

Twenty percent of all fatal occupational accidents are related to maintenance or corrective maintenance activities.

**Main action:** A two-day workshop was held for workers at a German automobile manufacturing company.

**Main worker participation measures:**

- The workshop was run three times and each time around 15 employees from lorry production department took part and discussed issues.
- Workers proposed amendments to the work environment and organisation via an intermediary moderator.
- Joint critical appraisal of proposals for presenting risks

**Description of worker participation:** Two moderators led the workshop, but the primary method of training was through group discussion and presentation. The workshop content was carefully structured. At the beginning, three maintenance accidents were described by the moderators. Maintenance workers were then asked to think about their work, focusing on critical and safety-relevant situations that might give rise to occupational risks of various kinds during maintenance activities. Their observations were summarized and presented on specific boards and they were asked to propose solutions and discuss various approaches to the prevention or reduction of the risks they had identified. Managers concerned were invited to participate only in the final session of the workshop during which the results of the workers' discussions were presented to them by the two moderators. Then, through a joint critical appraisal involving both workers and managers, the proposed approaches to reduce or prevent risk were discussed.

**Results:** Risks and problems related to maintenance were thoroughly identified from time pressure to outsourcing and insufficient communication. Managers were not aware of many of these risks identified by the workers.

Time pressures associated with machine and system failures can be reduced by the establishment of what is known as a “mitigation plan”. In the first instance, the manager describes the task to be done in a meeting attended by all workers who will be involved in the process. Specific tasks are discussed and final decisions made by the managers to cover every situation which might arise during the maintenance work. The creation of this mitigation plan gives workers the confidence to be able to handle the situation.

**Source (URL):** Case studies database

<http://osha.europa.eu/data/case-studies/solutions-to-reduce-stress-in-occupational-maintenance/view>

### ***CS 85 - A source-oriented strategy to reduce workplace risks during the maintenance process of trains***

**Country:** Netherlands

**Organisation:** NedTrain

**Activity:** cleaning and overhaul of rolling stock and the servicing of components such as bogies and wheels, engines and entire trains. Maintenance work for high-speed trains.

**Main risks:**

- accident risks including electrocution
- ergonomic risks

**Main problem:** The company needed a maintenance plant able to tackle future challenges and with a high degree of flexibility. All maintenance activities will be scheduled to be carried out overnight and must be completed by the following day.

**Main action:** The company designed and constructed a train repair workshop.

**Main worker participation measures:**

- Throughout the entire design phase of the project employees were consulted
- Joint risk assessment
- Joint brain storming

**Description of worker participation:** The project manager of the new workshop, formed a “sounding board group” to assist in the design and construction of the site, made up of various employees from all NedTrain sites. Employees and management jointly carried out a risk assessment, a crucial step in the design phase, and the employees provided useful advice on the new equipment. They were mainly interested in good posture at work. NedTrain always regards it as important to involve mechanics in the purchase of equipment. The workshop was created through joint brainstorming of all parties, particularly the employees.

**Results:** The workshop is flexible and can be adjusted according to needs of the company and technological innovations. Everyone is very satisfied with the new workshop and the implemented safety measures. A multitude of innovations have been introduced in the workshop design to boost employees’ safety. Even the showers and the tiling were selected based on the employees’ wishes and tastes.

**Source (URL):** Case studies database

<http://osha.europa.eu/data/case-studies/a-source-oriented-strategy-to-reduce-workplace-risks-during-the-maintenance-process-of-trains/view>

## **CS 86 - Preventing needle-in-finger injuries in the clothing and textile industry – the case of William Baird**

**Country:** United Kingdom

**Organisation:** William Baird

**Activity:** Inspection, maintenance and exploitation of inland waterways in Northern Belgium. Public organisation, 500 employees.

**Main risks:** Needle in finger injuries during sewing operations

**Main problem:** high accident rate, painful accidents and associated compensation costs. At the time, the standard guarding for sewing machines did not fully protect the operator.

**Main action:** The accidents were almost completely eliminated by a small item designed in cooperation by the social-partners. Now guards encapsulate the needle

**Main worker participation measures:**

- Company approached the trade union to work with them on a solution
- Development of a guard took place in a local company involving local union safety reps.
- Guard development team included trade union representatives
- Local machinists involved in testing the prototypes
- National trade union helped promote the new guards and supported getting it recognised as a CEN standard

**Description of worker participation measures:** The company decided to initiate action because for many of these types of accidents, the GMB Trade Union supported civil worker compensation claims, the settlement of which was costly.

The company had informally approached the GMB about taking an initiative to reduce the occurrence of such accidents. During these discussions, the redesign of existing guarding standards was one of the options considered. The company then set out to design an effective guard. Rather than look at a national project, the company identified a factory that had the highest incidence of needle-in-finger injuries. The local safety committee was asked to develop a suitable guard. As the GMB trade union are organised in William Baird factories, the local GMB safety representatives became involved in the project.

A small team was established in the factory and included two GMB safety representatives, an engineer and a supervisor. The engineer developed ideas into practical guards, which were then tested on production machines. An effective guard that did not hinder sewing operations was needed. It took six months of modifications to achieve the first prototype guard, which had to be evaluated under production conditions. There were several problems, including initial wariness of operators. But their involvement overcame this and enabled solutions to problems with the prototype to be found.

The company then took the prototype guard to a local engineering company and asked them to manufacture it. This they did and they also became involved in modifying the prototype to fit other types of sewing machine.

Once a suitable guard was available the GMB agreed with William Baird to promote the guarding solution within the industry. The Union launched a campaign, highlighting the injuries caused by sewing machines. The GMB encouraged all safety representatives in the clothing sector to use the guard. Seminars were arranged during which videos of existing guards compared to the new one were shown, and the Health and Safety Executive also started encouraging its use.

The GMB subsequently worked with other companies. They have continuously promoted the guarding options and many thousands have been fitted.

William Baird and the Health and Safety Executive, with support from the GMB, were successful in having the encapsulating guard adopted as a new CEN standard. However, the key feature is that a guard developed in a William Baird factory, involving GMB machinists, has become the basis of a

European standard. It provides an excellent example of effective solutions being found by involving people using equipment in the design of guarding.

**Results and success factors:** Within two years of the first guard being fitted, needle-in-finger accidents dropped from around 500 to 40. Within the first year of fitting guards, the company's insurance premium was cut by 50%. This item was promoted by the unions and it is now widely used by the clothing industry and all industries using sewing machines. This concept has been the basis of a new sewing machine safety standard adopted by CEN.

The project was also a success for communication and cooperation in that the development work was all done at factory level. Prototype guards were designed and made by on-site engineers. They worked with machinists who were involved with testing the prototypes and giving feedback on their use under production pressures.

The importance of workforce and trade union involvement was a key to success. The following have been the key experiences in the initiative:

- Involving people who work on the machines with those designing the guard led to an effective solution that everybody was happy with.
- Once a guarding solution was found, demand was created not only in

William Baird but also within the whole clothing sector — indeed, where any sewing machines are used.

**Source (URL):** 'How to reduce workplace accidents', EU-OSHA Report (2001)

<http://osha.europa.eu/en/publications/reports/306/view>

## ***CS 87 - Navigable inland waterways in Belgium. Cutting accident figures down by implementing a systematic safety policy***

**Country:** Belgium

**Organisation:** Dienst voor de Scheepvaart (Navigation Office).

**Activity:** Inspection, maintenance and exploitation of inland waterways in Northern Belgium. Public organisation, 500 employees.

**Main risks:**

- Falling, slipping, stumbling.
- Wounds by use of tools, equipment.
- Assaults, violence from public – increasing stress.

**Main problem:** high accident rate

**Main action:** revised accident prevention policy covering prevention and health promotion measures; accident registration system; improved, systematic consultation, particularly for analysing accidents and determining measures

**Main worker participation measures:**

- Consultation committee on prevention and protection: with representatives of workers and employers + independent safety consultant.
- Collect accident figures - Investigate causes - Take measures.
- Visits all locations and meets every six weeks to discuss accidents.

**Description of worker participation measures:**

Part of the programme was to set up a consultation committee on prevention and protection with representatives of employers and employees (unions). An independent safety consultant supported the committee. Between 1985 and 1989, a safety consultant was selected, appointed and trained. The

main activity of the committee was to collect accident figures, investigate the causes and take measures. From 1996, the independent safety consultant had to be part of an internal or external service for prevention and protection. These services were set up all over the country. For the public sector internal services had to be set up.

Every six weeks, the committee (CPP) meets according to a fixed schedule. The accidents are discussed. Furthermore, the committee visits all the spots (once every one or two years), which represents eight workdays a year altogether. The results of the inspection reports are part of the agenda of the meeting.

The effectiveness of the safety policy is dependent on the willingness and the commitment of the parties. The driving force of the safety consultant highly contributes to the positive effect. Therefore, the role of the safety committee, together with the safety consultant, appears to be very important.

The reduction of accident figures is mainly due to increased attention at all organisation levels.

The committee has also taken many concrete measures on the improvement of working conditions:

- Introduction of collective and personal protective equipment:
- Special equipment has to be worn to prevent falls from a height when working in sluices. When sluices are emptied out in order to carry out maintenance, there is a severe risk of falling from a height (10 m or more).
- Saw-trousers must be worn when using a chainsaw.
- Increased surveillance of the working place. The public is kept out by fences. Camera surveillance has been introduced.
- Improvement of machinery and equipment:
- All machinery and equipment has been adapted to the 'Machinery guideline'. For instance: emergency stops and zero voltage connections have been installed.

Places where there is cutting and squeezing danger, such as the screening of cogwheels, have been safeguarded.

**Results:** The systematic approach of the committee has led to a decrease in the total number of accidents as well as in their frequency and severity.

- Continuous attention to safety problems ->improvement of working methods, tools and equipment -> safer working environment.
- More than 60% reduction -between 1988 and 2000- in total number of accidents, frequency (no. accidents/total working hours) and severity (lost days/total working hours).

**Source (URL):** 'How to reduce workplace accidents', EU-OSHA Report (2001)

<http://osha.europa.eu/en/publications/reports/306/view>

### ***CS 88 - Work at height – fall protection during roof work a partnership approach between client and contractor***

**Country:** United Kingdom

**Organisation:** Interbrew UK Ltd; Felton Construction Ltd

**Activity:** Interbrew UK Ltd is a brewing company

**Main risks:** multiple construction-related safety and consumer-related safety issues

**Main problem:** falling objects onto employees and production lines below; falls from height; employee exposure to asbestos; beer quality control

**Main action:** potential principal contractors were required to present their preferred solutions to the Project Engineers and Safety Managers. Felton Construction Ltd was selected based on the most cost-effective solution on control the health, safety and food quality risks. Fully decked, moveable platforms over all 'live' production areas were used. The platforms were rail-mounted on an extensive

scaffolding system that was designed and erected around existing plant and machinery. All platform moves are fully co-ordinated with the client's production teams working below.

**Main worker participation measures:**

- Employee liaison
- Project implementation group including worker safety representatives
- Communication route for employee OSH concerns

**Description of worker participation:** A project implementation group was established to ensure that all parties co-ordinated their activities to minimise risk and to ensure that employees were fully involved. The group consisted of representatives from: client project engineers, principal contractor and their sub-contractors, employee safety representatives, and managers from the warehouse and packaging departments. The group initially met weekly and then every two weeks once the work was established. This was supported by a published 'project communication strategy' which provided employees and their safety representatives with a transparent and simple route for communicating any health and safety concerns during the project.

**Results:** To the date of the report was published, there had been no lost time accidents if either client or contractor employees and there had been no accidents. There had been no quality issues with the beer production as a result of contamination from the construction work.

**Source (URL):** Prevention of risks in construction in practice EU-OSHA Report (2004)

<http://osha.europa.eu/en/publications/reports/108>

## ***CS 89 - Promotion of health and safety in construction by a partnership process***

**Country:** Denmark

**Organisation:** DR – DR BYEN

**Activity:** Denmarks Radio (DR)

**Main risks:** multiple health and safety risks

**Main problem:** to ensure health and safety on construction site; to ensure effective management of risks

**Main action:** a partnership process between client, consultants and contractors was established during project organisation. Worker satisfaction as well as health and safety on site were taken into account with the concern about time, finance and quality objectives. DR prepared an overall working environment policy and targets were set in key performance areas such as training, attendance at safety meetings and monitoring of safe working practices. Targets were used as for on-going monitoring performance and corrections were made whenever it was necessary.

**Main worker participation measures:**

- Health and safety training
- Appointed 'ambassador'
- Staff satisfactory survey
- Communication via newsletters, notice boards, staff satisfaction surveys, campaigns

**Description of worker participation:** a health and safety team was developed, which comprised safety manager, safety coordinator, quality control officer and site coordinator. The health and safety team was responsible for planning, implementation, and evaluation of health and safety activities as well as coordination on site. An 'ambassador' was appointed to maintain contact with workers on site and to receive informal feedback on areas that are working well or need improvement. All employees received compulsory safety training in order to gain access to the construction site. Staff must pass a written examination. In addition, DR carried out a number of other safety training courses. DR promoted health and safety working through regular coordination meetings and weekly inspections.



There were also different forms of communication being developed, e.g. newsletters, notice boards, staff satisfaction surveys, and campaigns in relation to specific precautions to be taken at risk areas on site.

**Results:** individual members of staff were very satisfied with the health and safety on the site. More near-miss incidents were reported. After approximately 800,000 working hours, the frequency of accidents is below the average in the Danish construction industry, a total of 19 minor accidents in two years.

**Source (URL):** Prevention of risks in construction in practice EU-OSHA Report (2004)

<http://osha.europa.eu/en/publications/reports/108>

## ***CS 90 - Managing safety in road construction from the client's perspective***

**Country:** Portugal

**Organisation:** Instituto das Estradas de Portugal (Portuguese Road Institute)

**Activity:** develop and implement a worker safety management system for new road construction projects

**Main risks:** multiple health and safety risks

**Main problem:** falls; being hit by objects

**Main action:** the Portuguese Road Institute (IEP) established a health and safety department to coordinate its health and safety management activities in all construction projects initiated. Safety experts were employed in each project management department and the technical support department. The health and safety department prepared a comprehensive health and safety manual. A health and safety management system was established and implemented through full compliance from project management board with the manual and employee participation in the construction process.

**Main worker participation measures:**

- Employee health and safety training
- Employee taking designated safety responsibilities

**Description of worker participation:** internal consultation was sought from different departments within the organisation for the development of safety manual and health and safety management plan. Health and safety management system involved employees at different levels. Training was provided to employees.

**Results:** accident rates were reduced by 30-40%; seriousness of accidents and the number of days of absence were reduced.

**Source (URL):** Prevention of risks in construction in practice EU-OSHA Report (2004)

<http://osha.europa.eu/en/publications/reports/108>

## ***CS 91 - Improvement of safety when carrying out work at height***

**Country:** Latvia

**Organisation:** Arcers Ltd.

**Activity:** a major construction company in Latvia

**Main risks:** multiple health and safety issues

**Main problem:** falls from height

**Main action:** external experts were invited to carry out detailed analysis of problems and to recommend solutions. An effective health and safety management system was then established.

**Main worker participation measures:**

- Employee health and safety training
- Workers consultation on risks and measures

**Description of worker participation:** specific training relevant to their job and tasks they perform was provided to all supervisors and employees. Workers were consulted on their experience of working at height and the risks involved as well as their recommended measures to tackle the issue.

**Results:** during the period from the year 2003 until June 2004, there were no accidents concerning the use of cranes. Safety inspections showed that employees comply with regulations concerning using PPE effectively.

**Source (URL):** Prevention of risks in construction in practice EU-OSHA Report (2004)

<http://osha.europa.eu/en/publications/reports/108>

## ***CS 92 - Achieving employee participation in health and safety management systems***

**Country:** Germany

**Organisation:** A. Frauenrath Bauunternehmen GmbH and Frauenrath Works Council

**Activity:** Frauenrath is a medium-sized general building contractor with a multi-skilled workforce

**Main risks:** safety at workplace

**Main problem:** to improve health and safety at work and working conditions; to promote staff participation and competence in health and safety

**Main action:** A project named AF2010 was launched with the purpose of promoting active participation among employees and upgrading their skills through continuing training. Workshops were arranged to analyse the current situation in terms of what the problems are with communication, information flows and participation, and how to improve the situation. Four small troubleshooting groups were then developed following the workshops to analyse the causes of the problems and to propose solutions. A process coordination team was developed to decide which measures to implement and how to implement as well as to communicate the decision to employees. When it was necessary an ad hoc working group was formed to either work on a specific issue in the short-term or long-term. Weekly meetings between foremen and their teams on construction sites were carried out. Training sessions were provided to employees on a needs basis, such as negotiating, communication skills, conflict management and time management.

**Main worker participation measures:**

- Weekly discussion meetings
- Weekly training sessions
- Workshops
- Company event involving employee and their family and friends
- Works council

**Description of worker participation:** a project launch event was organised in which all project partners participated, and employees, family and their friends were invited. Employees were invited to attend workshops to discuss the current existing problems and to suggest solutions. Employees were consulted during the measures implementation process. Weekly discussion meetings and weekly training sessions involved employees to provide their own ideas and suggestions for improvement. Employees acted as 'think-tanks'. Different training sessions were provided to employees on the needs basis.

**Results:** the communication process became routine and positive feedback was given by employees. The company believed that their policy of employee involvement helped to keep the company competitive economically and boosted employee motivation and job satisfaction

**Source (URL):** Prevention of risks in construction in practice EU-OSHA Report (2004)

<http://osha.europa.eu/en/publications/reports/108>

### ***CS 93 - Introducing an integrated safety management system***

**Country:** Czech Republic

**Organisation:** ŽS Brno, a.s.

**Activity:** a large civil engineering and plant construction company

**Main risks:** multiple risks

**Main problem:** high level turnover and accident

**Main action:** senior management instigated the whole initiative to improve safety and health at work. It built on previous management initiatives, including achievement of OHSAS 18001, and improvements in safety and health was made an integral part of top management actions. Employees were consulted in a number of ways on health and safety management. Changes were made following consultation. Each year health and safety objectives were set for the following year. Specific programmes were set to implement the objectives with specific members of staff given responsibility for the implementation. Broader 'health at work' initiatives were carried out, which included healthy diet options in the canteen and subsidised hot meals for construction site workers, and an influenza immunisation programme. The company also used the European week campaign on safety in construction in various ways to support its own activities on safety. The company's actions on health and safety were made public, for example at trade fairs and on its website, which resulted in coverage in the regional press and television.

**Main worker participation measures:**

- Training sessions
- Consultation
- Annual meetings
- Transparent communication channels

**Description of worker participation:** Employees were informed fully on new health and safety management system. Employees were consulted in a number of ways, including during training sessions, during workplace inspections by the company safety technicians and during the regular reviews and monitoring processes. Health and safety issues were discussed with employees from all the company's centres in the annual meetings. Health and safety annual objectives were set on the basis of consultation with staff and managers.

**Results:** a reduction in accidents and sick leave; an improvement in worker satisfaction, particularly regarding improvements in work equipment and raised worker awareness about the importance of health and safety; good publicity for the company and enhancement of its public image.

**Source (URL):** Prevention of risks in construction in practice EU-OSHA Report (2004)

<http://osha.europa.eu/en/publications/reports/108>

### ***CS 94 - Construction safety partnership plan***

**Country:** Ireland

**Organisation:** the Construction Safety Partnership (CSP)

**Activity:** a tripartite body which encompass the Irish government, the Health and Safety Authority, the Irish Congress of Trade Unions, and the Construction Industry Federation; aims to achieve lasting improvements in safety and health on construction sites.

**Main risks:** accidents on sites

**Main problem:** high fatality and serious injury rate

**Main action:** In 1999 the Construction Safety Partnership (CSP) was formed. CSP produced a construction industry action plan to achieve lasting improvements in safety and health on construction sites. The plan and the new Irish regulations which came into force following the recommendation made in the plan showed their effectiveness during the initial part of the initiative. However the fatal accident rate increased in 2002 and new plan was needed. In the new plan, CSP established and implemented a pre-qualification system with a standardised weighting system focus on safety. The plan required a register of competent project supervisors design stage (PSDS) and project supervisors construction stage (PSCS) to be established. This ensured that only those who had the necessary qualifications, experience and resources could be recognised as competent to undertake the key duty-holder positions. In the plan, there were also clear requirements for the timescales of the design stage of construction projects, safety file preparation and for the selection of contractors. In addition, Construction Skills Certification Scheme was introduced to ensure that only qualified workers could carry out key tasks. In the plan, a safety management system was suggested and guidelines were provided. Workers consultation was promoted in the plan. Further education and training for construction project managers was considered as an ongoing priority in the plan.

**Main worker participation measures:** site safety representative facilitation programme

**Description of worker participation:** workers consultation was promoted in the plan

**Results:** not available in the report

**Source (URL):** Achieving better safety and health in construction (2004)

<http://osha.europa.eu/en/publications/reports/314>

## ***CS 95 - Actions to improve OSH management at company level***

**Country:** Poland

**Organisation:** Ilawa Building Company

**Activity:** Construction company of the Warmia and Mazuria region. By the time the report was written, the company had 282 employees working in respective branches of the company's activity. In total, 213 people were employed in manual jobs.

**Main risks:** multiple health and safety risks at work

**Main problem:** exposure to harmful, dangerous or strenuous factors

**Main action:** the company developed a global occupational health and safety system covering different issues of occupational safety and health (OSH) in order to reduce occupational injuries and diseases. In the system, there was an OSH officer who exclusively handled occupational safety and health issues such as occupational risk analysis and assessment, injury and diseases documentation, OSH training, drafting OSH protection plan etc. The system also included a procedure for managing occupational risks. Employees at every level took part in analysing and assessing the occupational risks. To enhance the system, construction sites were regularly monitored by unit manager. In addition, training in both OSH regulations and qualification training were provided to workers. The company also enhanced the system for coordinating subcontractors' adherence to OSH at construction sites.

**Main worker participation measures:** employees consultation over risks assessment, workstation data sheet

**Description of worker participation:** employees at different level took part in analysing and assessing existing occupational risks. Lowest-level employees were consulted when developing a

workstation data sheet, including time of exposure to harmful, dangerous and strenuous factors involved in the work process, details of the means of projection used. Employees were also consulted to identify sources of risk and harmful, dangerous and strenuous factors involved in work processes.

**Results:** there was a noticeable increase in workers' awareness of occupational risks. The workers reported that their working conditions and both personal and collective means of protection were improved.

**Source (URL):** Achieving better safety and health in construction (2004)

<http://osha.europa.eu/en/publications/reports/314>

## ***CS 96 - The Mourik safety, health, environment and quality management system***

**Country:** Netherlands

**Organisation:** Mourik

**Activity:** a Dutch construction company with a number of services related to construction, such as environmental technologies and industrial cleaning. The Mourik group consists of a number of specialised subcompanies for certain services. The company had 1,100 employees when the report was published.

**Main risks:** multiple health and safety risks

**Main problem:** accidents at work

**Main action:** Mourik integrated quality management into safety management. Their quality management documents defined the following steps: planning, risk assessment, determination of measures, carrying out of measures, instruction of new employees, issuing safety equipment, inspection report, incident summary, and toolbox meetings to discuss the inspection report and the incident summary.

**Main worker participation measures:**

- toolbox meeting
- safety instruction and safety training
- checklist for self-control
- observation form

**Description of worker participation:** All employees at a department or construction site participated in toolbox meetings which are safety meetings where health and safety issues are discussed regularly. In addition, all employees received necessary safety instructions and safety training. The company also developed a behavioural safety programme. Part of the programme is a checklist and an observation form. It was obligatory to fill in the checklist for self-control and the observation card used to record the unsafe behaviour of others.

**Results:** the company achieved impressive low accident rate

**Source (URL):** Achieving better safety and health in construction (2004)

<http://osha.europa.eu/en/publications/reports/314>

## ***CS 97 - 'TR' safety observation method***

**Country:** Finland

**Organisation:** multiple construction sites

**Activity:** construction

**Main risks:** multiple health and safety risks

**Main problem:** work-related accidents

**Main action:** the TR safety observation method was introduced in 1992 to measure the safety level of building sites in Finland. The method is an easy-to-use and reliable method. The measurement is carried out by touring the entire site and making entries for correct/incorrect observations on the inspection sheet, using the five bar gate system. For a precise and reliable result, it is suggested to make large number of observations. All the main aspects bearing on construction site are grouped under 6 headings on the evaluation form: working habits, scaffolding and ladders, machinery and equipment, protection against falling, electricity and lighting, order and tidiness. People who perform the measurement must have sufficient knowledge and experience. In addition, the representatives of the main contractor and the workers' representatives should be gathered together to prepare the ground rules to be followed on the site. The ground rules need to be discussed with and agreed by all staff on sites. Feedback of measurements needs to be reported to everyone on sites.

**Main worker participation measures:** consultative meeting

**Description of worker participation:** a consultative meeting should be held for all staff on site to discuss and prepare the ground rules as well as the manner in which measures are carried out and how feedback is to be given. Up to date measurements and feedback need to be available for all employees.

**Results:** on the pilot building sites, the consultative meeting, weekly site observations and posting the results on a feedback board raised the safety level of the building sites from 60% to over 80% in a few weeks.

**Source (URL):** Achieving better safety and health in construction (2004)

<http://osha.europa.eu/en/publications/reports/314>

## ***CS 98 - Health and safety at the restoration works of the Acropolis monuments***

**Country:** Greece

**Organisation:** Hellenic Institute for Occupational Health and Safety

**Activity:** a bipartite, non-profit organisation established in 1992. Its purpose is to provide scientific and technical support to all those involved in occupational health and safety, as well as to contribute to the improvement of occupational health and safety by advising the policy-makers and legislators in Greece.

**Main risks:** multiple safety risks

**Main problem:** work-related accidents, especially falls from height, noise, dust, the presence of BTEX compounds (benzene, toluene, ethyl-benzene, xylenes)

**Main action:** questionnaires were distributed to all workers that addressed risks for safety, health and ergonomic risks as well as symptoms. The risks discovered were then documented. Medical examinations (audiometry and spirometry) were conducted on a sample of workers exposed to noise and dust (108 workers with an average of 10 working years). In total five worksites were investigated. At the end of the project, improvement suggestions were provided and a special 'safety and health plan' and 'file' for restoration works were developed.

**Main worker participation measures:**

- questionnaire
- medical examination

**Description of worker participation:** all workers participated in completing questionnaires on risks for safety issues. A sample of workers participated medical examinations.

**Results:** a large number of employees participated in the study. This enabled the data obtained to be statistically significant. The study paved the way to study the work conditions of conservers and maintainers of archaeological marbles and the associated exposures and risk factors.

**Source (URL):** Achieving better safety and health in construction (2004)

<http://osha.europa.eu/en/publications/reports/314>

### ***CS 99 - Effective safety representatives mean safe sites***

**Country:** United Kingdom

**Organisation:** Bovis Lend Lease

**Activity:** construction - project management and construction services

**Main risks:** multiple health and safety risks at work

**Main problem:** insufficient communication between employer/principal contractor and workers; work-related risks and accidents

**Main action:** A Trade union convenor was appointed for the project who was responsible for consultations between management and workers and was also someone who played a significant role in promoting and enforcing safe working practices amongst all the workers on site. The appointed person was not an employee of the trade union but undertook a full-time union role while continuing to be paid by his employer.

**Main worker participation measures:** designated spokesperson for the workers and contacts with the enforcing authorities

**Description of worker participation:** Mr. Dowling, the appointed Trade union convenor, acted as a facilitator by encouraging workers to raise safety problems with him. His mobile phone number was printed on posters around the site and he held a weekly meeting in the canteen which workers were invited to attend.

**Results:** Mr Dowling received 'No 1 Worker' award and Bovis overcame its initial concerns

**Source (URL):** Achieving better safety and health in construction (2004)

<http://osha.europa.eu/en/publications/reports/314>

### ***CS 100 - Integrated safety project for the installation of special systems in the St Francis complex***

**Country:** Italy

**Organisation:** St Francis complex; CMR; Quasco

**Activity:** construction

**Main risks:** work-related accidents

**Main problem:** interference with other activities (presence of the public and administrative personnel); presence of water pipes and electrical cables in the floors and walls; high areas

**Main action:** During the work planning stage, a survey was carried out on the site by Qasco. This involved taking photos of all the workplaces where would be under construction, consulting with the municipality, contracting authority, and the works manager. During the work performance stage, follow-up was conducted by the occupational health and safety coordinator through weekly field surveys, in cooperation with the works manager. The workers were trained in the risks and the measures adopted to prevent them. Precautions were undertaken to deal with various obstacles during work.

**Main worker participation measures:** survey

**Description of worker participation:** survey was carried out at the planning stage of the work to ensure the feasibility of the work and proposed precaution measures.

**Results:** positive result was achieved for Quasco. Coordination of this construction site made it possible to reduce the risks incurred by the employees and to carry out the work in the best possible conditions.

**Source (URL):** Achieving better safety and health in construction (2004)

<http://osha.europa.eu/en/publications/reports/314>

## **CS 101 - Safety at work now and always**

**Country:** Spain

**Organisation:** Industrias Serva SA

**Activity:** Manufacturing of engine sealing elements (gaskets and joints).

**Main risks:**

- Slips, trips and falls, and mishaps. Problems include:
- Glare/reflections from excessive sunlight causing bumps, mishaps and falls
- Slippery/unsafe floors
- Excessive use of step ladders
- Use of inadequate footwear
- Need for window and general cleaning

**Main problem:** High incidence of workplace accidents and incidents.

**Main action:** Company produced a targeted prevention plan to reduce slips and trips. This formed part of their general prevention plan. This covered risk assessment and accident analyses, inspections for tidiness and cleaning, training and communication with staff and trade unions, and a preventative maintenance plan.

**Main worker participation measures:**

- Meetings between supervisors and staff to discuss preventative measures and results
- Daily meetings with staff
- Use of in-house magazine and emails to communicate to staff
- An ideas system to establish improvements
- Joint management-worker safety committee and working groups to tackle specific issues
- Trade union/ worker prevention delegates

**Description of worker participation measures:**

The process of ongoing health and safety forms part of the company's quality management process. All accidents are analysed, the process of which involves supervisors calling meetings with relevant staff members to discuss results and possible preventative measures.

At the core of the company's general approach to risk prevention is consulting with workers on health and safety matters. A number of methods are employed to involve workers in health and safety decision-making. Short daily meetings are held with staff to discuss safety issues before work begins. Worker prevention delegates, directors and technicians take part in these meetings. An ideas system has also been implemented to elicit staff views on health and safety improvements that could be made within the company. These issues are discussed in the joint safety committee and working groups are established to tackle specific health and safety matters. Other than holding regular face-to-face meetings, management make use of an in-house magazine and the email system to keep staff up-to-date on health and safety.

This process involving workers has produced a comprehensive set of slips, trips and falls prevention measures. Examples include:



- Improved lighting conditions (e.g. fitting blinds, repainting the factory, centralised lighting, changing skylights)
- Improved work surfaces (e.g. non-slip steps in offices, grating floor areas that got dirty easily or where there were spills)
- Placing trays under machinery (e.g. hydraulic presses) to prevent spills
- Implementation of waste management measures (e.g. bins for specific wastes)
- Introduction of safety (non-slip) footwear
- Improving signage as to where trolleys must not be left
- Relocating storage areas to reduce use of ladders, and including proper ladder maintenance in the preventative maintenance plan
- Moving machines to create access zones for maintenance

**Results and success factors:**

These preventative measures designed with workers were considered a success. Accidents rates between 1997-2000 dropped by 70%. More specifically, by the year 2000, the company noted the following:

- A 70% decrease in the number of accidents per million hours worked
- A 55% reduction in the number of days lost per thousand hours worked
- A 71% reduction in the number of accidents per thousand workers

**Source:** Accident Prevention in Practice, EU-OSHA Report (2001)

<http://osha.europa.eu/en/publications/reports/103>

## ***CS 102 - Automating for safety – without creating maintenance problems***

**Country:** Ireland

**Organisation:** Abott Ireland

**Activity:** Small component assembly line work during the production of internal feeding sets used in hospitals.

**Main risks:** Exposure to solvents used to bind components. Whilst the decision was taken to remove the hazard by automating the process, the company did not want to replace one hazard with another through potentially introducing new hazards (i.e. noise and maintenance risks) linked to the automated machinery.

**Main problem:** The new automated process greatly reduced the number of operators exposed to solvents, but the problem of safe maintenance had to be addressed prior to implementation. The risk of accidents through defeating interlocking systems on machines to isolate the source of a problem whilst the machine is in operation required attention.

**Main action:** The solution to automate the assembly line work was developed as part of a programme of measures to improve health and safety. A task team was established to resolve the matter.

**Main worker participation measures:**

- Involvement of machinery operators and maintenance personnel to develop the new, automated process
- A task team (operators, maintenance staff and engineers) was established for finding a solution to reduce the risk of accidents associated with machinery maintenance

**Description of worker participation measures:** A proactive approach involving workers was used to address both the needs and concerns of machinery operators and maintenance personnel. A task team including operators, maintenance staff and engineers was established. To solve the maintenance risks, the task team developed the following machinery design and engineering solutions:

- Installation of a system whereby the doors have to be disarmed with a key switch, the machine switched to 'jog mode' and a special hand-held job button plugged in
- Building in an emergency stop into the job button. When the button is pressed harder by operatives, which is a natural response in emergency situations, the machine automatically stops
- Designing the machine for easy access to the motor cabinet through the interlocked door to facilitate regular cleaning of debris (critical for preventing fire hazards through build up of debris)
- Fitting lights to the lower chassis of the machine to improve visibility during maintenance

**Results and success factors:** The solutions were approved both by the company health and safety officer and the environment officer. Success metrics included a safer working environment for both assembly workers and maintenance staff, improved productivity and improved morale as a result in involving workers in the problem solving process.

**Source (URL):** Accident Prevention in Practice, EU-OSHA Report (2001)  
<http://osha.europa.eu/en/publications/reports/103>

### ***CS 103 - Cooperative problem-solving process – Fork lift truck safety barrier***

**Country:** United Kingdom

**Organisation:** Ford Motor Car Company – Bridgend Engine Plant

**Activity:** Removing engine from vehicle manufacture assembly line and placing onto engine rack. Multinational organisation.

**Main risks:** Risk of collision between operators loading engines onto the assembly line and fork lift trucks simultaneously removing the engine racks when full.

**Main problem:** Several accidents in the last 10 years involving pedestrians and the movement of fork lift trucks within the company's plants.

**Main action:** A systematic process was followed to develop a solution involving staff, managers and experts. A physical barrier was put in place to prevent forklift trucks from entering a work area until operators had moved to the next bay. Installation of an audio and visual alarm system ensures that operators do not enter the area once the barrier has been lifted and signals to the forklift truck drivers that it is safe to enter that particular work area.

**Main worker participation measures:**

- Worker-led initiative – the company allowed shop floor workers to develop a safe idea from start to finish
- Use of team meetings to enable discussion in order to agree the way forward
- Management support and collaboration throughout the process
- Involvement of trade union safety representatives and joint safety committee

**Description of worker participation measures:** The factory workers themselves were the main protagonists to developing a solution, in collaboration with management. The prevention process involved seven stages as outlined below from hazard identification to final agreement on implementation, all of which were driven by the workforce.

**Stage 1 – Hazard identification:** Workers initially brought the problem to the attention of management. A team of operators and maintenance personnel at one plant identified the need to reduce the risk of crushing injury whilst forklift trucks were operating in the area.

**Stage 2 – Risk assessment:** Completed for this particular work task during a team meeting initiated by the group leader. The results showed a very high risk of accidents. The team set a goal together to reduce the risk of injury to a minimum (zero accidents).

**Stage 3 – Search for prevention measures:** After completing the risk assessment, team members were asked for their ideas to reduce the risk. The chosen solution was suggested by maintenance

staff and agreed by all team members. The maintenance staff were given the responsibility of designing the barrier and presenting it to the team at the next meeting.

**Stage 4 – Developing a prevention measure:** A model was presented to the team by the maintenance personnel and accepted by all team members. The team decided that a full-scale model should be build to see the barrier in operation.

**Stage 5 – Getting agreement on implementing the prevention measure:** Health and safety committee representatives and members from various other departments, including senior plant management, were invited to the next meeting to see the solution in operation. Following agreement by all that the solution was valid, the maintenance team were asked to build a working model.

**Stage 6 – Testing and modifying the solution:** Use of the device during a test period to identify any problems. Feedback was given to maintenance staff from forklift truck drivers and team members. Following necessary modifications the device was installed. Design engineers were involved to ensure that the device could be tailored to any site.

**Stage 7 – Final agreement on implementation:** Workers secured agreement for implementation of the device from trade union health and safety representatives and senior plant management.

**Results and success factors:** The method used (i.e. worker-led project) to develop the prevention measure has proved to be a powerful and successful example of employee involvement. Success factors include a safer working environment, reduction in the risk of injury, and less stress experienced by operators due to confidence in the effectiveness of the safety barrier. Following this successful outcome, plans are in place to introduce the device to other plants.

**Source (URL):** 'Accident Prevention in Practice, EU-OSHA Report (2001)

<http://osha.europa.eu/en/publications/reports/103>

## **CS 104 - Protocol for safe building renovation**

**Country:** Italy

**Organisation:** Unità Funzionale di Prevenzione Igiene e Sicurezza nei Luoghi di Lavoro Alta Val d'Elsa, Azienda USL 7 di Siena

**Activity:** Renovation of a historic 14<sup>th</sup> century country house and its buildings to create a large, luxury hotel complex and the creation of a business centre for the farm's production activities.

**Main risks:** Possible unknown safety and health risks to workers due to the age of the buildings.

**Main problem:** High accident rates in building work compounded by the age of the buildings. Also, the use of small, specialist craft firms with limited safety resources meant that careful project planning and coordination was necessary to protect worker health and safety.

**Main action:** Health and safety planning and coordination of the building work, which is a legal requirement.

**Main worker participation measures:**

- Involvement of the Commune of Casole d'Elsa<sup>1</sup>, the Local Health Unit, companies, and technical agencies to plan and coordinate the building work
- Involvement of workers and their representatives in designing the intervention
- Involvement of all workers (including contractors) throughout the safety project
- Use of the Local Health Unit, companies and site technicians to develop worker training
- Involvement of trade union organisations

**Description of worker participation measures:** To implement health and safety planning and coordination of the building work a protocol agreement sponsored by the Commune of Casole d'Elsa

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<sup>1</sup> Casole d'Elsa is a comune (municipality) in the Province of Siena in the Italian region Tuscany.

was designed that involved the supervisory body (The Local Health Unit Enterprise), the workers and their representatives, the companies, the contractors and their technical agencies. This protocol proposed a series of measures, work methods and documentation in order to involve:

- all persons working on the building site (including contractors) in the safety project to ensure coordination between all companies on site and compliance with accident prevention principles; and
- workers and their representatives in the design stage of the intervention in order to bring the characteristics of the work itself, the operations that have to be carried out and the risks to their safety to the knowledge of the people who actually do the work.

The Local Health Unit, companies and site technicians were involved in developing training on occupational safety and health and productive aspects based on the assumption that if workers know how to work well, they are able to reduce the work risks at the same time. The training helped to make workers from different companies part of a collective team.

The occupational health experts from the Local Health Unit, together with the Commune of Casole d'Elsa and trade union organisations were involved in developing the project.

**Results and success factors:** Better management and organisation of work on site helped to improve the organisation of the work in general between different companies on site. This enabled work times to be reduced and the quality of work to be improved. Accident rates were also considerably lower than the average for Italian building sites.

**Source (URL):** Accident Prevention in Practice, EU-OSHA Report (2001)

<http://osha.europa.eu/en/publications/reports/103>

## ***CS 105 - Training and staff involvement – In a long-term accident prevention programme***

**Country:** Greece

**Organisation:** Titan Cement Co S.A.

**Activity:** Cement production.

**Main risks:** High accident rates during cement production.

**Main problem:** A high number of days off work due to workplace accidents and significant direct and indirect costs incurred by company.

**Main action:** Training activities as part of a long-term prevention programme to improve occupational safety and health. Initial measures to improve the working environment resulted in reduced severity of accidents, but the company realised that a training programme was also required to train staff in prevention measures.

**Main worker participation measures:**

- Joint prevention committees were set up in local factories to reduce risks,
- Support of trade unions
- The key means of securing worker engagement in accident prevention was through a programme of training.
- Use of awards and competitions

**Description of worker participation measures:** The training programme was developed by human resource personnel in collaboration with safety officers to ensure the inclusion of appropriate measures.

Implementation involved factory safety committees and the support of trade union representatives. Training and staff motivation activities included:

- Offering workers the opportunity of continuous training to maintain their competence (e.g. training seminars)
- Producing supporting training materials (e.g. posters, leaflets, books, audiovisual material)
- Rewarding the company's factory with the best annual safety performance
- Running poster or motto contests for staff, to which family members may also participate
- Encouraging the transfer of experience and good health and safety attitudes from mature employees to new, young recruits

**Results and success factors:** A significant drop in accident rates during the project time period and stable levels since then. This is believed to be the result of actively engaging staff in safety issues in this way. As a result of this success, a common system has been disseminated to other factories for implementation.

**Source (URL):** Accident Prevention in Practice, EU-OSHA Report (2001)

<http://osha.europa.eu/en/publications/reports/103>

## ***CS 106 - Employer and trade union partnership***

**Country:** United Kingdom

**Organisation:** Hickson & Welch Limited

**Activity:** Chemical manufacturing organisation engaged with high-risk operations with chemicals. Production is carried out by 400 employees using shift work.

**Main risks:** High accident rate in 1992 accompanied by a serious on-site accident.

**Main problem:** The trade union representative and employer were not collaborating on safety matters and employees viewed profit as the driving force of the company, not safety.

**Main action:** Collaboration and joint working between the unions and management to improve safety within the organisation. Partnership working was established on safety and health ten years ago, enabled by the determination of both parties to achieve a safe working environment.

**Main worker participation measures:**

- Joint development and conduct of all facets of safety management by management and union representatives
- Empowering teams with the responsibility for safety
- Involvement of trade unions representatives and managers in health and safety training
- Active involvement of trade union members in the Safety, Health, Environment and Quality committee
- Worker participation sought through monthly safety briefings, asking them to review new/revised work procedures, input during incident investigations where appropriate, and provide annual feedback through line managers

**Description of worker participation measures:** The company's Partnership Programme has a number of elements that encourage participation from management, trade union representatives and workers at all levels. These include:

- Assigning a new responsibility for safety communication to the senior union representative in the safety department. In collaboration with other union safety representatives he started a system of monthly 'safety briefings', given to all staff.
- Empowering teams with the responsibility for all aspects of plant operation, including safety. These teams carry out regular plant general inspections and safety audits, and record findings in a central database. Taking action on any issues raised in this database meant that thousands of potential hazards were removed before they could potentially caused harm of loss.

- Using officials from the regional union organisation to train all union safety representatives and first line managers in health and safety. This joint training helps to ensure that there is common understanding of health and safety issues and reduces misunderstandings.
- Affording an active role of the joint management and trade union Safety, Health, Environment and Quality committee in the safety management system. Trade union representatives from all parts of the workforce form at least 50% of the committee's membership. The committee meets monthly, and is co-chaired by the senior trade union representative and site safety manager. It approves the introduction and modification of each part of the safety management system, which has been developed to actively involve the trade union.
- Involving trade union safety representatives in all aspects of the safety management system. Examples include accident investigations and modifications to plant and operations. The safety representatives involve operators wherever possible. For example, asking plant operators to check the operating instructions when they are introduced or revised.
- Ensuring trade union input into development of the company's Injury Care Management scheme and the ongoing involvement of:
  - the site medical team to assess and care for injuries;
  - company managers to ensure appropriate treatment is provided and necessary follow-up visits take place with injured workers; and
  - the injured workers themselves during the incident investigation
- Obtaining further feedback from workers through annual discussions with line managers during performance assessments where individual safety performance goals are assessed. These help to identify good and poor practice within the organisation.
- Establishment of a Safety Award Scheme designed by a joint team of management and trade union representatives.

**Results and success factors:** Joint commitment from both management and trade unions are believed to underlie the sharp reduction in accident rates observed on site. In addition, the partnership system contributes to the low level of absenteeism (currently running at 1% to 2% in the company). Only by maintaining it – with commitment from both sides – will the site be able to sustain its present high standards.

The company recognises the importance of senior management commitment to partnership and safety improvement. Senior managers are expected to show active involvement in the safety management process (e.g. attending safety committees, carrying out safety audits).

**Source (URL):** Accident Prevention in Practice, EU-OSHA Report (2001)

<http://osha.europa.eu/en/publications/reports/103>

## **CS 107 - Using near-miss accident analyses**

**Country:** Austria

**Organisation:** RHI AG

**Activity:** Production line work during the manufacturing of fire resistant materials and noise proofing equipment. An international industrial group with 180 production and service locations spanning five continents.

**Main risks:** Rise in workplace accidents for production line work.

**Main problem:** Accidents during production line work are believed to derive from its heavy physical nature, other physical stresses (e.g. noise, high temperatures) and night shifts. However, differences between locations showed a potential for accident prevention.

**Main action:** Analysis of near-miss accidents to improve prevention of production line accidents.

**Main worker participation measures:**

- Involvement of workers through the safety committee at the outset to establish a preventive service
- Good cooperation and communication between all parties, including ongoing communication/feedback from senior management to workers
- Giving workers' immediate supervisor the responsibility of engaging their workers in accident prevention

**Description of worker participation measures:** A participatory project (called 'return means investment') involving all staff was established to examine and discuss the causes of near-miss accidents and minor incidents, generating lessons learned from these with particular focus on changes required to working procedures and/or worker behaviour to prevent future accidents.

Project initiation: Occurred through the general safety committee (involving employer and employee representatives, safety engineers, occupational doctors and safety personnel). The committee produced a project plan describing the next steps for all workplaces and working groups. The plan was published in the employee newspaper coupled with promotion activities (e.g. posters).

Development of a preventative service: In consultation with staff, the safety committee members developed a form to be completed after each accident, incident or near miss.

Ongoing consultation with staff about the preventative service: All accidents, incidents and near misses are evaluated in discussions between staff and management. Managers are required to discuss safety and health at work issues with their staff on a regular basis. Senior management (including the director) have been trained in effective communication with staff to ensure that meetings are productive.

**Results and success factors:**

The company recognises the importance of active participation of their workforce in preventing accidents. The knowledge of experts alone within the preventative service is not enough for sustainable success.

Accident statistics confirm a decrease in the number of workplace accidents and accidents outside of work (in workers own time). A return on investment in the project is expected due to reduced absence levels. Other positive outcomes include a more motivated workforce, a better working climate, and a better understanding of working procedures by management.

**Source (URL):** Accident Prevention in Practice, EU-OSHA Report (2001)

<http://osha.europa.eu/en/publications/reports/103>

## ***CS 108 - Future 'competence skills' improve apprentice safety***

**Country:** Austria

**Organisation:** RHI A.G., Veitsch/Radex GmbH & Co

**Activity:** A construction company that takes on apprentices to become fitters, electricians, mechanical/electronics engineers, etc.

**Main risks:** The increased vulnerability of new, young employees to workplace accidents.

**Main problem:** Increased rates of workplace accidents amongst young workers / apprentices.

**Main action:** Promoting risk awareness whilst also supporting young employees in their personal development.

**Main worker participation measures:**

- Raising young workers' knowledge, awareness and competence in health and safety matters through formal training courses and use of experienced employees to pass on their know-how
- Use of interactive / hands-on training approaches to encourage engagement

**Description of worker participation measures:** A 'lifelong learning' philosophy was adopted, which encourages the development of technical, health and safety and personal competence skills. Increased knowledge, awareness and competence of health and safety issues are achieved through the training that apprentices receive during their apprenticeship scheme. This includes the following:

Safety competence: Apprentices are actively involved in dealing with safety issues at work. They take photographs of workplace situations, which are then analysed by the team and any problems resolved under expert guidance. The Works Council was involved in introducing this part of the programme in order to explain to workers the reason for the cameras and get their agreement.

Health competence: In their second year apprentices are given a 'PRO-FIT lifestyle week' (as named by the company) which is specifically tailored to their age group. Example topics include healthy backs, stress management, occupational health and safety, etc.

Technical competence: Senior employees (e.g. craftsmen, foremen) lead this knowledge exchange process by passing on their own know-how to new employees.

Additional training to engage young workers with health and safety includes:

- Two annual safety days (the first covering machine / skin / electrical protection, first aid / fire procedures and the second PPE, general work and environment protection measures, safety data sheets, handling hazardous substances)
- Master craftsmen training sessions (2-3 days every 3 years)
- First aid training
- A health circle<sup>2</sup> for all young employees

**Results and success factors:** The following benefits emerged:

- A considerable reduction in the number of accidents involving young people; currently lower than the accident rate for older workers
- Improved communication between younger and older workers
- Transference of skills outside of the workplace
- Increased tolerance of disadvantaged young people amongst teams

**Source (URL):** A safe start for young workers in practice, EU-OSHA Report (2006)

<http://osha.europa.eu/en/publications/reports/GPB06>

## **CS 109 - Apprentices teach apprentices**

**Country:** Germany

**Organisation:** RWE Westfalen-Weser-Ems AG

**Activity:** Typical work processes include sawing and welding. Energy Sector company with around 250 apprentices being trained in different professions at various locations.

**Main risks:**

- Majority of accidents amongst new trainees occurs during the practice of basic skills (welding, sawing, etc.).
- These basic skills are taught in the first year of apprenticeships at an in-house training centre accompanied by professional instruction. Accidents occur when practicing these skills in the second year within organisations, typically characterised by changing workplace conditions.

**Main problem:** The company continually seeks to improve industrial safety performance.

**Main action:** Apprentices use their own experiences to pass on health and safety lessons to their newer colleagues.

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<sup>2</sup> A mechanism for workers to discuss company health issues as a group.



### **Main worker participation measures:**

- A peer-approach to train new apprentices, using experienced apprentices to encourage the assimilation of health and safety issues and uptake of preventative measures
- Use of interactive / hands-on training approaches to encourage engagement
- Feedback mechanisms in place for new apprentices as they undertake projects
- Discussion opportunities with senior members of staff to promote knowledge exchange
- Real workplace problems/solutions identified by second-year apprentices fed into the risk management system.

**Description of worker participation measures:** The project 'Apprentices teach apprentices' was set up in 2004 as an additional component of safety training. It follows a 'peer approach' to training new apprentices with those who have completed their second year delivering the training. This approach is considered more effective for relaying important health and safety information to new apprentices than traditional training methods.

An interactive training programme was developed, led by the experienced apprentices, to raise awareness of health and safety amongst newer recruits. This involves four stages:

- Identification of issues by senior apprentices: Presentation to new apprentices on the occupational safety issues surrounding their day-to-day job based on the experiences and knowledge of experienced apprentices in relation to incidents and accidents.
- Project work (2-3 months): Two or three new apprentices work as a team to deal with topics of their choosing with support from instructors and the occupational safety unit. The output is a 30-minute company-wide briefing.
- Practice briefing session: A dry run presentation to instructors and occupational safety staff. This is followed by a 'feedback' discussion.
- Company presentation: Presentation to company representatives from all levels, occupational health and safety professionals and works council members. This encourages staff to share their experiences with new apprentices.

**Results:** Due to the success of an initial pilot project according to the opinions of participants involved, this is now a core component of the company's training programme. The company has benefited through:

- Updated risk assessments from the project work undertaken by more experienced apprentices actively involved in improving their own safety at work
- The accident rate for apprentices was 40% lower in 2005 (after year 1 of the project) compared with 2004
- Low cost incurred by being incorporated into the apprenticeship training programme, and apprentices working with resources available to them
- Exchange of experience between old and young staff
- Occupational safety issues and tasks now communicated to individual departments through new channels

**Source (URL):** A safe start for young workers in practice, EU-OSHA Report (2006)

<http://osha.europa.eu/en/publications/reports/GPB06>

## **CS 110 - Demolition safety**

**Country:** Greece

**Organisation:** DEMCON – Papasavas Nikos Explosive and Conventional Demolitions

**Activity:** DEMCON are demolition contractors involved in explosives and conventional demolition projects.

**Main risks:** A high-risk sector characterised by hazardous work tasks and multiple risks.

**Main problem:** Young and new workers being unfamiliar with the world of work are prone to health and safety risks and therefore require adequate training about safety policy, procedures and their role to ensure their safety competence.

**Main action:** Systematic training and support for young workers on safety and health standards in demolition work, integrated into the overall company policy on risk prevention and health and safety promotion.

**Main young worker participation measures:**

- Training – a comprehensive training programme delivered to all young and new workers upon starting employment. The company takes a staged approach to training over several weeks, making use of:
  - theoretical and supervised on-the-job training;
  - meeting the needs of each new worker (through consultation during risk assessments and training needs analysis) and;
  - use of a buddying system run by experienced mentors.

**Description of worker participation measures:** Training forms part of the company's overall policy on risk prevention and health and safety promotion. Being dedicated to the special needs of young and new workers, the company has integrated a specific programme into general health and safety policy and programmes.

Key elements of the young worker/new starter health and safety programme:

- Based on a training needs analysis and risk assessment of potential dangers facing new and young employees. As such, the programme was not developed in isolation from young and new workers, but in consultation with them
- Incorporates educational seminars and practical exercises
- Covers a safe system of work whereby workers are only permitted to carry out work tasks when they have been assessed as competent
- Responsibility is given to supervisors/Foremen to supervise and educate new and young workers. In addition, each worker is assigned their own 'experienced worker' who acts as their mentor

Only two trainees undertake the training at any one time as more than this would compromise the safety of the whole team due to the time and attention required on the part of supervisors and mentors. Areas covered in the training broadly cover general standards, hazard communication, work with contractors and use of personal protective equipment (PPE). Young and new workers are not only trained about specific safety instructions (relating to dangerous substances, interpreting product safety labels, which PPE to use and how to use such kit, etc.), but also about the company's safety policy and their role in implementing this. The training for new and young workers takes a minimum of 40 days and includes: theoretical training, simulated high risk situations, on-the-job-training, assessment of skills and knowledge and further training as necessary.

Involvement of supervisors/Foremen: Supervisors are trained in the safety procedures and measures that they must supervise and how they must carry out this role (e.g. communications and instruction methods, what to do if they spot problems). This covers both directly employed and sub-contracted staff.

Involvement of mentors: Mentors are those staff with the most experience and longest tenure within the company. They have the know-how to educate young and new workers to help them in their work and the knowledge to predict dangers and deal with them. Mentors receive special training (for 2 days) to learn how to educate young and new workers (e.g. how to treat them, what to expect from them, how to communicate knowledge, and how to keep them interested/motivated).

**Results:**

- The company has achieved a very low accident record (zero working accidents in 1,865 days of work). The integration of a specific programme for young and new workers is considered to play a significant role in obtaining this record.

- The proper training of staff (communicating the importance of safety in demolition work, using experienced mentors to guide new and young workers, specific guidance for supervisors) has resulted in improved working standards.
- The company has also gained the respect of international companies, which is considered to be a key business benefit.

**Source (URL):** A safe start for young workers in practice, EU-OSHA Report (2006)

<http://osha.europa.eu/en/publications/reports/GPB06>

## **CS 111 - Preparing new pharmaceutical workers: In-house and with education establishments**

**Country:** Latvia

**Organisation:** Joint Stock Company “Grindeks”

**Activity:** The handling and manipulation of dangerous chemicals and substances.

**Main risks:** The chemical and pharmaceutical sector contains a range of occupational safety and working environment risk factors. In particular, risks from working with dangerous chemicals (e.g. mixing substances).

**Main problem:** To ensure that young workers have knowledge of the risks associated with the industry and their job. Special attention needs to be paid to young people with no previous work experience who often come into the industry with little/no knowledge of health and safety risks.

**Main action:** Ensuring that suitable health and safety arrangements are in place for new workers and students on work placements or carrying out research projects within the company and promoting a safety culture. Activity includes training and mentoring for new employees, partnerships with schools, universities and relevant ministries to improve the knowledge and practical skills of young workers.

### **Main worker participation measures:**

- Early engagement with young people (budding scientists – chemists, electricians, mechanics, etc.) through promotion of the development of relevant university and vocational training/education
- Participatory training approach for new workers (including those on placements) to ensure that they know how to safely carry out work tasks independently
- Use of a mixture of training methods to engage young workers in learning about Occupational Safety and Health (OSH) and environmental matters
- Involvement in ongoing risk assessments
- Giving experienced staff the responsibility of mentoring new and young workers and encouraging them to deliver university/college seminars
- Listening to young workers ideas for potential improvements through a company established assessment commission

**Description of worker participation measures:** In order to ensure that suitable health and safety arrangements are in place for new workers and students on work placements or carrying out research projects within the company, a step-by-step approach was developed to prepare new and young workers for safe working. A mixture of methods is used (instruction, hands on practice, etc.) to ensure that young workers achieve a thorough knowledge of essential work rules and how to follow them in practice. This involves seven steps as follows:

- **Induction** – Initial instruction and introductory training of new/placement workers by OSH specialists. A reminder, describing general requirements in the field of occupational health and environment protection is handed out to each worker.
- **Theory, practice and mentoring** – Experienced colleagues are given the responsibility of acting as a ‘mentor’ and overseeing three-months of theoretical and practical training. Through hands-on practice and discussion, young workers acquire the necessary knowledge and practical skills

needed for working with technological equipment. For example, they are given instruction on how to perform all manufacturing and maintenance procedures and operations (circa 1,000), how to prevent mishaps turning into serious accidents, 57 general instructions for environmental protection and safe work (e.g. working with acids, individual protection measures).

- **Assessment** – An assessment commission (involving the unit head, technologist, OSH specialist and trustee) checks the ability of a worker to perform tasks independently. Assessment criteria cover knowledge acquired in their specialist area and relating to workplace health and safety. The assessment follows an interactive process in which workers are encouraged to ask questions to make certain of their knowledge. Assessors actively encourage discussion. In addition, workers are encouraged to voice their opinions of potential improvements that could be made to existing working conditions.
- **Follow-up and additional training** – Different forms of theoretical and practical training sessions for workers are organised by the company's OSH unit. This may involve collaboration with external organisations – for example, participation in simulated emergency cases of conflagration or leaks in chemical agents in collaboration with the State Fire –fighting and Rescue Service.
- **Additional lectures and seminars** – New workers participate in seminars internal and external to the company for about 12 hours per year. A special, monthly information day for new workers is organised by the company to familiarise/refresh awareness of safety, environment and production requirements, and to promote a 'feeling of belonging' to the company. A handbook is being prepared for new employees containing a brief explanation of the principles of an OSH system.
- **Risk assessment and control:** Young workers are invited by OSH specialists to participate in carrying out regular risk assessments, with specific attention given to risks to young workers.
- **Sharing knowledge with students:** Students undergoing pre-diploma work placements offered by the company frequently dedicate their diploma papers to a relevant OSH topic. Grindeks has also offered a course to educational establishments 'On good manufacturing practice' and encourage its specialist members of staff to deliver lectures to university students as well as being responsible for introducing them to the company should they choose to work for Grindeks.

**Results:** This two-pronged approach to educating young workers about OSH through (1) a participatory training programme developed by the company itself coupled with (2) partnerships with various education establishments has realised the following benefits:

- The involvement of students and new specialists in investigation and tackling labour protection problems, and their active involvement in OSH matters
- Ensuring that students returning to work at Grindeks have a good grounding in OSH and a positive attitude towards the company and their profession
- Comparatively small number of occupational accidents, retention of worker health, improvement of professional skills and work efficiency

**Source (URL):** A safe start for young workers in practice, EU-OSHA Report (2006)

<http://osha.europa.eu/en/publications/reports/GPB06>

## **CS 112 - A safe start in motor vehicle manufacturing**

**Country:** Portugal

**Organisation:** Salvador Caetano

**Activity:** Assembly of Toyota commercial vehicles, the treatment of metal surfaces, and the import, sales and after sales services for Toyota forklift trucks. Employs both qualified and unskilled staff in production and storage areas, especially temporary workers, and has about 1,000 workers (10% temporary).

**Main risks:** Cuts, splinters, burns, minor poisoning, skin problems, allergies and irritations of the respiratory tract resulting from improper handling of chemicals represent typical injuries to the youngest workers.

**Main problem:** Increased risk of accidents amongst new and young workers can arise due to their:

- lack of awareness to good health and safety practices at work
- lack of awareness of using PPE;
- improper use of machines and tools;
- incorrect handling of chemicals; and
- lack of knowledge relating to the manual handling of loads.

**Main action:** Induction and training processes for young and new workers integrated into the company's overall approach to health and safety, including supervision and training.

**Main worker participation measures:**

- Theoretical and practical health and safety training for new, young workers delivered by the plant safety technician and involvement of existing members of staff
- Active discussions at work stations relating to job risks, controls and accident/incident triggers
- One-to-one discussions on health and safety practices adopted and check of training needs
- Ongoing training and awareness raising of all staff through campaigns and accident/incident analysis

**Description of worker participation measures:** The health and safety induction and training programme for new and young workers includes theory as well as strong practical components in the actual working environment that encourages involvement from existing staff. This helps with the promotion of a positive safety culture, which is one of the company's core health and safety objectives.

Elements of the induction and training programme that promote the active involvement of young workers and existing members of staff to ensure good health and safety practice include:

- Introduction of the new worker to the premises and their work post by the plant safety technician
- New workers being welcomed and inducted into the company in the context of health and safety at work by designated, trained workers
- Handover of work tools and PPE to new workers by the safety technician. This process involves active discussion about work hazards and risks, risk prevention, maintenance of good health and safety practices, correct use of PPE, internal safety rules, and causes of accidents/incidents
- Close supervision, including visits to workstations by the safety technician to discuss health and safety practice and training needs
- Ongoing training and awareness raising involving all staff (e.g. awareness campaigns, analysis and feedback of any accidents)

**Results:** The strategies adopted towards new and young workers helped the company to reduce its overall accident rate. In addition, the health and safety performance of newly qualified apprentices who have passed through the training centre is of a very high standard. The induction and training programme has also resulted in the adoption of more organised and effective health and safety practices for young and new workers.

**Source (URL):** A safe start for young workers in practice, EU-OSHA Report (2006)

<http://osha.europa.eu/en/publications/reports/GPB06>

## ***CS 113 - A safe start in the pharmaceutical sector***

**Country:** Poland

**Organisation:** GlaxoSmithKline (GSK) Pharmaceuticals S.A.

**Activity:** Prescription medication. A research-based pharmaceutical company in the healthcare sector.

**Main risks:** A high-risk sector with various and multiple risks (e.g. working with chemicals). Being a high-risk sector, new recruits at GSK are exposed to safety risks as well as stress-related risks.

**Main problem:** A large proportion of the company's employees are young workers (including apprenticeships and work placements) who need to be integrated into their new working environment.

**Main action:** Safety strategy and induction to provide a safe start for new young workers and trainees, including activities on risk awareness and health promotion carried out with the local community.

**Main worker participation measures:**

- Induction training for new and young workers grounded in the strong company philosophy of worker consultation (e.g. learning in-practice)
- Cooperation between management, staff and trade unions
- Involvement of experienced, knowledgeable workers as 'guardians' (mentors)
- Young workers participation in formal health and safety training programmes to build competence
- A review/feedback process initiated by managers
- Student visits from educational establishments and other related organisations to educate and engage them with health and safety practices

**Description of worker participation measures:** GSK has set principles and launched various initiatives to help young workers to assimilate to their new work environment in order to ensure that they make a safe start in their working life. Actions are carried out within the context of the company's general policy on risk prevention, which is based on a strong philosophy of worker consultation and joint working with trade union representatives.

The company runs three key initiatives i.e., induction, student training, and educational visits to the company, to educate new and young workers in good health and safety practice. A learning-in-practice or learning on-the-job approach is taken to educate young workers. Such practical involvement enables young workers to pick up good health and safety behaviours that are exhibited by colleagues around them in a safety conscious environment.

The induction process is based around the acquisition of a core set of job competencies of which health and safety is one of these. This formal process (lasting around one year) involves learning about the workplace, the tasks they will perform, work methods, organisational customs and culture. Health and safety is integrated into all of these programme elements. To avoid overloading new workers with information and risking unnecessary stress, familiarisation with the workplace is gradual, starting with essential information and then broadened to include an introduction to the tasks performed by others in the same department and the history of the company. During the first year, young workers also attend periodic health and safety training to further develop their competence.

The induction process invites input from managers, who regularly review the programme. In addition, the process involves 'guardians' (or mentors), who have been nominated by their departmental managers to guide and support new, young workers through the induction process. Guardians possess specific skills that go beyond good knowledge of the company (e.g. technical, mentoring skills). Whilst guardians are trained in all aspects of their role, it is essential that individuals selected hold positive attitudes towards the process and their role. This is important as guardians play a key role in helping new workers to form positive impressions about the company both in the short and long-term.

**Results:** Feedback obtained from young workers indicates that they consider the induction process to be well prepared, and supportive (i.e. making their start in the workplace easier, less stressful and safer).

The company promotes safety culture not only amongst its own workforce, but also beyond this to students and the general community. A key ingredient of success is considered to reside in the fact that most of the organisational solutions and activities are designed by and implemented through the creativity and commitment of staff.

**Source (URL):** A safe start for young workers in practice, EU-OSHA Report (2006)  
<http://osha.europa.eu/en/publications/reports/GPB06>

## **CS 114 - SPAR retail academy joins Team4Kids**

**Country:** Austria

**Organisation:** SPAR

**Activity:** A retail store chain in Austria and Hungary.

**Main risks:** The increased vulnerability of new, young employees to workplace accidents, incidents and ill health.

**Main problem:** SPAR has established its own academy for the vocational training of its young apprentices and wanted to improve OSH (Occupational Safety and Health) training included in the programme.

**Main action:** Collaboration between SPAR retail store and the National Labour Inspectorate (Vienna) during their OSH campaign Team4Kids to develop a health and safety programme for the retail sector.

### **Main worker participation measures:**

- Involving apprentices in company safety audits to increase engagement and develop health and safety awareness
- Young apprentices participate in the development of material for the company's vocational training
- Using more senior and experienced apprentices to help train new ones

**Description of worker participation measures:** The Labour Inspectorate, SPAR apprentices, a safety engineer and an occupational physician worked together to develop material for the OSH training programme. The development process involved four steps:

- Labour inspectors visited SPAR stores to inform apprentices about safety and give them the experience of a safety inspection
- Apprentices were divided into small groups to carry out safety inspections in several stores and compile a report. This enabled them to put their learning from Step 1 into practice.
- In collaboration with the specialists, apprentices compiled a booklet that included photographs that was adapted and used in the vocational training of all SPAR apprentices in Austria and translated for use in Hungary.
- These apprentices are now teaching other apprentices about OSH and passing on their knowledge and experience gained from the project.

**Results and success factors:** SPAR used the project to motivate young people to take note of OSH in their working environment and to improve their perception of risks at work. Young people have learned that they are part of the safety and health system at work. Management has learned that employee participation in management processes can increase motivation. SPAR also realised that the Labour Inspectorate and the preventative service are important partners in the prevention of occupational accidents and diseases in the retail sector.

Success factors include:

- High motivation and willingness amongst all partners
- Treating young workers as responsible adults
- Using senior/experienced apprentices to train new ones
- The engagement and support of SPAR management
- Using the OSH campaign as a catalyst for change

**Source (URL):** Preventing risks to young workers: policies, programmes and workplace practices (2009)

<http://osha.europa.eu/en/publications/reports/TE3008760ENC/view>

## ***CS 115 - Getting young workers interested in Occupational Safety and Health (OSH)***

**Country:** Germany

**Organisation:** DaimlerChrysler AG Werk Mannheim

**Activity:** Motor vehicle manufacture

**Main risks:** The increased vulnerability of new, young employees to workplace accidents, incidents and ill health.

**Main problem:** Lack of engagement of young workers in workplace health and safety.

**Main action:** Adoption of an innovative approach to teaching OSH to young workers moving from a passive learning experience to active engagement in finding health and safety solutions.

**Main worker participation measures:**

- Use of a participative learning approach to engage young workers in health and safety
- Giving young workers the autonomy to find practical solutions to health and safety issues
- Collaboration between young workers and experts to implement accepted solutions

**Description of worker participation measures:** The company gave its young workers practical health and safety problems to solve rather than giving them pre-prepared material to study, as was previously the case. Young workers were tasked with finding practical solutions to OSH problems faced in the car production process. They were expected to test out a variety of solutions for each problem and test each solution in terms of cost, feasibility and acceptance. Young workers presented their results to senior management and, following management acceptance of their proposed solutions, worked with experts to implement these in the workplace.

**Results and success factors:** The company achieved a high degree of motivation amongst its young employees to tackle safety and health issues. In addition, avoiding the use of consultants reduced costs, and the workforce more willingly accepted solutions as these were seen to be firmly embedded in production structure.

Success factors include:

- Taking young workers seriously and affording them a high degree of autonomy
- Giving young workers real life problems to solve to increase engagement
- Solving problems in the context of business feasibility meant that solutions were more readily accepted by management

**Source (URL):** Preventing risks to young workers: policies, programmes and workplace practices (2009)

<http://osha.europa.eu/en/publications/reports/TE3008760ENC/view>

## ***CS 116 - Occupational Safety and Health (OSH) training in an electrical apprenticeship programme***

**Country:** United Kingdom

**Organisation:** Southern Electric Contracting (SEC)

**Activity:** Public utilities organisation with around 400 electrical apprentices aged between 16-21 years.

**Main risks:** The increased vulnerability of apprentices to workplace injuries.

**Main problem:** Between 1994-1996, 30% of the company's apprentices were treated in hospital for a work-related injury.

**Main action:** Coaching apprentices on the OSH aspects of their work during a one-week safety induction course.



**Main worker participation measures:**

- A participative approach to coaching apprentices in workplace health and safety
- Involvement of supervisors in delivering the training
- Involvement of apprentices in on-site risk assessments

**Description of worker participation measures:** The training week follows a participative approach, which emphasises coaching apprentices rather than telling them about workplace rules and standards. The training contains a mixture of classroom-based sessions and site based, practical exercises covering a range of health and safety practices (e.g. working at height, use of steps and ladders, basic scaffold awareness, safe use of hand tools, etc.).

Training and safety teams run the induction process, but involve the artisans, supervisors and managers that the apprentices will be working with in the process. The week is usually opened and closed by the senior board director speaking of the importance of safety training.

After the training apprentices are involved in completing on-site risk assessments in their workplaces.

**Results and success factors:** Since the introduction of the safety week, incidents involving apprentices are rare.

Success factors include:

- Training closely aligned with real work scenarios and the jobs apprentices will undertake
- Support and presence of senior management

**Source (URL):** Preventing risks to young workers: policies, programmes and workplace practices (2009)

<http://osha.europa.eu/en/publications/reports/TE3008760ENC/view>

## ***CS 117 - Accident causation and preventative measures in a fast food chain***

**Country:** Italy

**Organisation:** The Florence Service of Occupational Safety and Health conducted the research with involvement of three restaurants in a fast food chain (kept anonymous) located in Florence's historical centre.

**Activity:** Typical activities in the fast food industry include food preparation, cooking and cleaning.

**Main risks:** High accident rates amongst the significant proportion of teenage workers employed by the fast food industry. Common types include contusion/sprain traumas, slips and falls, burns, lesions by cutting and irritation from chemical substances.

**Main problem:** In Italy, teenage workers in the fast food industry are employed on various types of contracts, mostly temporary. This kind of employment is characterised by a fast pace of work and by flexibility in terms of shifts and tasks performed. This, coupled with the lack of direct participation of workers in the management of their own activities, is believed to contribute towards the high accident rate amongst this group.

**Main action:** Research to understand the factors that can contribute to accidents in the industry, and to identify occupational safety and health (OSH) risks, make proposals for change, and implement changes and activities.

**Main worker participation measures:**

- Company and worker representatives involved in the accident analysis process
- Workforce perceptions obtained via a questionnaire
- New staff induction training and management training
- Close collaboration between researchers (i.e. the prevention service) and employers throughout

- Meetings between management, worker representatives and the prevention service to act on research findings

#### Description of worker participation measures:

- **Researcher arranged meeting with company and workers' representatives.** A participatory approach was adopted for the research. On-the-spot investigations were carried out and meetings were held between company and workers' representatives. These meetings drew on data from the accident record book covering accidents over the previous three years. Company and workers' representatives were asked about the characteristics of the job, organisational aspects and about the ways in which training was carried out. Based on these findings, a questionnaire was subsequently developed by the researchers to elicit workforce perceptions on organisational aspects of their job and their psychosocial work environment.
- **Training.** New staff undergo 48-hour training courses when they first join the company. Of these 12 hours are devoted to safety at work (rules, principle risk factors, organisational aspects and measures for prevention and protection). Managers are also involved in safety training and attend courses that are valid at a national level. Whilst the research involved both management and workers, an observation that emerged was the apparent lack of worker participation in organisational processes. For example, a number of technical safety measures had been implemented by the fast food chain based on external advice that the company had received. Examples include anti slip floors and shoes, and moving employees' workstations to avoid obstructing passageways and exits with trolleys or supplies. Yet, no feedback had been obtained from workers relating to the effectiveness of these measures. Employees were simply told how to use such controls.

**Results and success factors:** Whilst technical interventions proved effective in reducing the incidence of certain accidents, in particular, slippages, the research highlighted the importance of worker participation to further reduce accidents and improve worker well-being. Researchers suggested that the organisation distributes a questionnaire to all workers to evaluate methods of changing the organisation. The company agreed and follow-up meetings were held involving management, workers' OSH representatives and preventive services to begin the data collection process.

Success factors include:

- Allowing workers to voice their opinions about their work environment and schedules, which is not common practice within the organisation itself
- Proposals for change based on analyses of the real situation provided to employers with recommendations as to the organisational change required to make further improvements
- Prevention service worked closely with employers in a supportive manner

**Source (URL):** Preventing risks to young workers: policies, programmes and workplace practices (2009)

<http://osha.europa.eu/en/publications/reports/TE3008760ENC/view>

## CS 118 - Synergie Project

**Country:** France

**Organisation:** The Synergie approach is part of a partnership between the Prevention Institution of the Social Security System and the Ministry of Education for Training in Occupational Risk Prevention, which aims at making risk management a full component of job qualification.

**Activity:** Synergie involves students or apprentices in carrying out risk assessments in the organisations where they train. It covers various sectors (i.e. construction, automotive repairs, metalworking and woodworking).

**Main risks:** Occupational injury experienced by young people at the start of their working life. In France, employees under 25 have 2.5 times more accidents than their elders.

**Main problem:** Training in occupational risk prevention, when it is included in job training, is highly theoretical and often remote from real world constraints and actual company conditions.

**Main action:** A method for vocational students to make practical risk assessments as part of their work placements in cooperation with company and school representatives.

**Main worker participation measures:**

- An action training approach in occupational risk management for students and apprentices
- Partnerships between schools, companies and the prevention sector
- Involvement of students/apprentices in finding risk prevention solutions within the companies/sectors they will work in
- Collaboration between course and workplace supervisors

**Description of worker participation measures:** Collaboration between apprentice's course (educational) supervisors and workplace supervisor at the outset to clarify how the Synergie approach will run. The process involves apprentices carrying out observation and analysis of the risks inherent in an activity, workstation, factory area, workshop or construction site using the occupational safety and health (OSH) risk assessment approach and tools. Tools include an observation questionnaire, information about risks and instructions about preventative measures. Apprentices make observations in the workplace and propose improvements and solutions to the problems identified by them. A report is produced which forms part of their diploma assessment, A copy of the report is also given to management outlining realistic and appropriate solutions to improve safety.

**Results and success factors:** Apprentices show an active interest in the Synergie programme and there is a demand from industry to be included. It will soon be operational for the printing industry and plastics industry.

Success factors include:

- Development of OSH skills in real workplaces
- Close relationship between student and supervisor (workplace and course), and between course and workplace supervisors
- Feeding back results to the employer, which is motivating for the student and the company

**Source (URL):** Preventing risks to young workers: policies, programmes and workplace practices (2009)

<http://osha.europa.eu/en/publications/reports/TE3008760ENC/view>

## **CS 119 - Training young steel workers**

**Country:** Luxemburg

**Organisation:** Arcelor Training Centre, Differdange

**Activity:** Provides occupational safety and health (OSH) training for 16-19 year olds to develop safety skills.

**Main risks:** Safety - use of tools/equipment, maintenance work; Health – skin protection and industrial deafness.

**Main problem:** Young steel workers' lack awareness of health and safety risks.

**Main action:** The development of theoretical and practical in-house OSH training for young workers at various steel production sites.

**Main worker participation measures:**

- Adoption of a participatory approach for training young workers
- Active role of young workers in improving health and safety standards
- Involvement of young workers in the company's annual health and safety day

**Description of worker participation measures:** Young workers are involved in practical operations (e.g. use of tools) to develop their health safety awareness skills. This represents a new training approach for the company, known as 'Espirit 2000 Training'. Young workers learn to spot dangerous situations and behaviour through practical exercises and to develop a critical outlook with regards to safety in the workplace. Young workers therefore play an active part in improving health and safety at work. In addition, they participate in the organisation's annual health and safety day.

**Results and success factors:** Due to initial successes of this new approach to training young workers, further plans are in place to form working groups for risk assessments that will operate under the supervision of trainers and in collaboration with trainees. The company also aims to involve young workers in an OSH suggestions scheme.

**Source (URL):** Preventing risks to young workers: policies, programmes and workplace practices (2009)

<http://osha.europa.eu/en/publications/reports/TE3008760ENC/view>

## ***CS 120 - Productive ageing: Shift plan reform at Polyfelt (now TenCate)***

**Country:** Austria

**Organisation:** TenCate Geosynthetics Austria GmbH

**Activity:** Manufactures geotextiles for road and railway construction, water engineering and tunnels, reinforced earth structures, drainage systems and landfills.

**Main risks:** High incidence of stress, accidents, sickness and early retirement amongst older shift workers. By 1997, the average age of shift workers was 47 years accompanied by an early retirement age of 52 years.

**Main problem:** A staff survey revealed problems with the company's shift roster i.e. only two days off between shift periods. Older workers in particular reported fatigue and a need for regeneration. In addition, standby shifts compromised family and private life. Shift workers also felt a lack of formal training and supervision, which resulted in high stress levels.

**Main action:** Shift working patterns were reformed as part of the company's productive ageing programme. Management agreed to reorganise workstations, adjusting them to workers' age and redesigned existing shift schedules.

**Main worker participation measures:**

- Participative process to develop a new shift plan involving shift workers.
- Collaboration between management and the works council to find intelligent solutions alongside a work group involving key groups of staff
- Involving different departments (e.g. personnel, human resources) at relevant parts of the process
- Development and use of a staff survey to obtain the views of all workers
- Keeping workers updated throughout the change process and involving them in decision making relating to wider implementation
- Training experienced workers to pass on their know-how to younger workers

**Description of worker participation measures:** Stimulated by the works council, management made the strategic decision to develop an age adjusted shift work system. This was achieved through a participatory approach, supported by expert consultancy knowledge and technological tools. A work group for the shift plan reform was established, chaired by a member of the works council. The group consisted of shift workers, leading staff members, workers' representatives, occupational physicians and working time experts from the IBG-Institute<sup>3</sup> in Vienna. Two workshops were held with participants from every group.

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<sup>3</sup> Part of the Vienna University of Technology.

To obtain feedback from all front line staff, occupational health experts developed a survey to obtain details on demographic structure, absenteeism, working culture and personal life. Specifically, this survey was designed to gather information about the burdens that shift workers experienced and the aspects they wished to change at work. Suggestions for new shift models were formulated based on the survey results, experience from other companies and expert knowledge. The company's personnel department was involved in the wage calculation for the new shift models.

The new shift plan model and its financial implications were presented to management and the works council for approval. This was subsequently presented and explained to all shift workers. The new shift plan was piloted in one work unit before final approval, and 90% of the workers within that unit voted for its widespread implementation.

The shift plan reform was accompanied by several other changes, including health promotion training and advanced vocational training for shift workers. Additional offers were made to workers, such as hot meals during night shifts.

Management have used the experience of their older workers to help benefit younger colleagues, thereby enhancing process quality. In 2002, a knowledge management programme was implemented to enable the transfer of knowledge between generations. Experienced workers received training on how to create manuals and training programmes designed to transfer their practical knowledge to younger workers.

**Results and success factors:** Shift working time reduced from 39 hours to 35 hours per week, and night shifts from eight to six per month. Older workers had longer shift breaks with three-four days off between night shifts, with no standby shifts. A new five-crew, as opposed to four-crew, shift schedule was implemented, and three new jobs were created.

Evaluations of the shift plan reform revealed improved quality of life, reduced work stress, and better quality of sleep at home experienced by workers. Increased job satisfaction and team working was evident amongst shift workers compared with levels before the new shift plan was implemented. Productivity was enhanced and sick leave reduced by an average of three-days per year.

Training experienced workers to transfer their knowledge to younger workers provided older workers with meaningful tasks, individual recognition and reduced the physical demands on them. This also helps young workers to develop competencies faster and with less stress.

Success factors include:

- Use of a corporate approach to develop a new shift plan
- Co-leadership by management and the works council
- Worker participation in the reform process with their suggestions being taken on board
- Involving all key groups within the company in the discussion process
- Emphasis of the equal treatment of all employees, including older staff, in the company's human resource policy
- Change in management values and attitudes towards sustainability, productive ageing and generation-balance.

**Source (URL):** Workforce diversity and risk assessment: Ensuring everyone is covered (2009)

<http://osha.europa.eu/en/publications/reports/TE7809894ENC>

## ***CS 121 - Reducing stress among female cleaners at a hospital***

**Country:** Germany

**Organisation:** Hospital of the city of Hanover (now merged into the newly founded Hanover Region Hospital)

**Activity:** Research carried out by the University of Hanover students undertaking a Masters Programme in Ergonomics for Professionals.

**Main risks:** Female cleaning staff at the hospital were subject to disrespect and sexual harassment from colleagues and patients.

**Main problem:** An inappropriately designed work uniform was believed to underlie the sexual harassment experienced by female cleaners. Furthermore, the uniform was uncomfortable and tended to snag on work equipment, door handles, and handrails, which could easily lead to accidents.

**Main action:** Use of health circles<sup>4</sup> to identify gender-specific safety and health issues through a risk assessment process with hospital cleaning staff.

**Main worker participation measures:**

- Involvement of workers in the risk assessment process through the health circles
- Company-wide participation in the steering committee
- Two-way communication between the steering committee and workforce
- Collation of staff views through worker surveys
- Workers able to trial the selected solution and offer their feedback

**Description of worker participation measures:** A steering committee was established, consisting of representatives of the hospital general management; representatives of management of the medical and nursing staff; the company physician; the company's safety representative; representatives of the workers' council; a safety expert from Hanover municipality; the head of the purchase department; and heads of the different services. The committee developed the overall implementation and information strategy, which relied heavily on worker involvement. This included:

- use of worker surveys followed by dissemination of findings to staff and discussion of the results in staff meetings;
- implementation of health circles followed by the committee's discussion of the results to set priorities; and
- providing feedback to the health circle on the committee's discussions.

A health circle was formed consisting of female hospital cleaners. University students facilitated the health circle. These were experienced management representatives in their particular companies. An atmosphere of trust was created so that the workers felt they could air their concerns more easily.

Researchers sent a report of emerging issues and possible solutions to the steering committee and tested new uniforms consisting of a cotton shirt and trousers. An agreement was reached with the management and the laundry staff and the cleaning workers were allowed to switch to a new uniform.

**Results and success factors:** Hospital cleaners stated that they felt more self-confident than previously in their new uniforms. Not only was it more comfortable and safe, the cleaners felt better accepted by the medical staff than before. Sexual harassment on account of the unsuitable uniform had also stopped.

The cleaners also reported greater solidarity with one another. The experience of being taken seriously and being given the chance to put their own ideas into effect also improved their self-esteem and their interest in occupational safety and health issues. After the project ended they continued to participate in health circles.

On the management level the project became an ongoing process. The steering committee decided to establish further health circles for other hospital services, e.g. the transport service.

Success factors include:

- The health circle worked in a homogeneous group enabling open discussion about problems and issues
- The health circle proved to be an effective measure to involve the workers themselves in risk assessment and the occupational safety and health (OSH) management process

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<sup>4</sup> A mechanism for workers to discuss company health issues as a group.

- Through the health circle the cleaners found they were taken seriously and that their opinions were counted, which helped to improve internal communication amongst the workers and between workers and management.

**Source (URL):** Workforce diversity and risk assessment: Ensuring everyone is covered (2009)

<http://osha.europa.eu/en/publications/reports/TE7809894ENC>

## ***CS 122 - Promoting the integration of workers with disabilities at Ford***

**Country:** Germany

**Organisation:** Ford-Werke GmbH, Köln-Niehl (Cologne-Niehl), in cooperation with the Institute for Quality Management in Prevention and Rehabilitation (iqpr), German Sport University, Cologne.

**Activity:** Car production line process.

**Main risks:** Frustration (and potential for work-related stress) amongst older workers with disabilities due to not being sufficiently challenged in their work as evidence through high sickness absence levels.

**Main problem:** Workstations failing to accommodate older workers with physical or psychological disorders (e.g. musculoskeletal disorders, cardiovascular system diseases, psychological disorders), which meant that more challenging work tasks could not be assigned to these workers.

**Main action:** Redesign of the Fiesta production line to enable better integration of older workers with disabilities.

### **Main worker participation measures:**

- Project steering group (integration team) involving key personnel and worker representatives
- Collaboration with relevant external agencies
- Early and ongoing involvement of workers and managers in the project
- Full engagement of workers in the workstation redesign process

**Description of worker participation measures:** Firstly, an integration team was set up consisting of production engineers, occupational physicians, the council for workers with disabilities, workers' council, human resource managers, and external advisers from the Institute for Quality Management in Prevention and Rehabilitation. The team supervised and helped to steer the process, and was also responsible for keeping relevant social insurance companies and labour agencies informed.

The project consisted of four phases, all of which relied on a high level of worker engagement and involvement:

Phase 1 – To obtain their buy-in, workers and management were fully briefed about the project. They also received in-house education on diversity management and disability awareness.

Phase 2 – the integration team used the IMBA (Integration of People with Disabilities into Working Environment) ergonomic tool to assess individual worker abilities and the demands of the new workstation.

Phase 3 – individual assessment of workers from medical diagnoses, examinations by occupational physicians and further information gathered through interviews with workers and the unit heads.

Phase 4 – use of the IMBA tool to find the 'perfect' workstation for each worker.

**Results and success factors:** Project successes include the reintegration of nearly every worker (except 31 on long-term sickness absence) into regular work processes, cost efficiencies, improved worker quality of life (e.g. satisfaction with new workplace and improved self-confidence), and falling sickness absence rates. Management representatives report satisfaction with the performance of the workers, their experience, their social competence, and their identification with the company.

Success factors include:

- Good internal communication and promotion of the project. All groups involved were also included in communication and planning at every stage of the project.
- Management support allowed the integration team to carry out the project efficiently and flexibly.
- The opportunity for each and every worker to fully participate in the work process because:
- workers were evaluated according to their qualifications rather than their restrictions;
- workers with disabilities were no longer given 'light duties', which can be frustrating for the worker and be likewise a financial burden on the employer; and
- workers no longer had to take early retirement.

**Source (URL):** Workforce diversity and risk assessment: Ensuring everyone is covered (2009) <http://osha.europa.eu/en/publications/reports/TE7809894ENC>

## ***CS 123 - Diversity plan: How to bring comprehensible instructions to the work floor?***

**Country:** Belgium

**Organisation:** VANHOUT

**Activity:** The VANHOUT group carries out a wide range of construction activities: office buildings, utility and residential projects, civil construction works, environmental technology and industrial production units.

**Main risks:** Higher accident rates for disadvantaged groups of construction workers, i.e. the temporary unemployed, underprivileged, immigrants and part-time students.

**Main problem:** The growing diversity on construction sites gives rise to new health and safety risks amongst disadvantaged groups. Limited work experience, lack of knowledge of new technologies, language barriers and cultural differences all contribute to this increased risk.

**Main action:** To tackle the issue of diversity in a well-structured way, VANHOUT developed a 'diversity plan' aimed at updating and improving the company's existing policy on recruitment and selection, training, induction and promotion of underprivileged groups.

### **Main worker participation measures:**

- Training a mixed group of construction workers to stimulate communication and consultation on health and safety within in the organisation
- Following a participatory approach to training workers
- Stakeholder engagement through collaboration with relevant external agencies to develop a health and safety brochure for disadvantaged groups

**Description of worker participation measures:** An intra-organisational approach was followed in order to develop a welcome brochure for disadvantaged groups. This encouraged collaboration between VANHOUT and a number of external bodies and organisations. A PAP (Positive Action Plan) commission was set up involving STC Turnhout (which is now RESOC Kempen, i.e. the regional socio-economic consultative committee Kempen), Prevent (Institute for Occupational Safety and Health), Verbal Vision (a communication centre for non-profit and social actions within companies) and BIS (a graphic design agency). The brochure produced provides information and instructions on health and safety at work. It is tailor-made for disadvantaged groups of workers, and aims to increase their awareness of health and safety risks in the workplace and demonstrate how to prevent them.

As part of the diversity plan, eight 'builders' godfathers' (i.e. a selected, mixed group of workers chosen by the company) were trained within the company. This training followed principles of a participatory approach to encourage learning and interpersonal development of the 'builders' godfathers'. They learned about communication, collaboration and motivation during an interactive three-day programme. This programme included practical exercises during which the participants simulated situations on the construction site to promote safe and healthy work. These exercises aimed at evoking reactions and attitudes, which were then analysed to find out how they can stimulate



or disrupt day-to-day collaboration. This approach helped the participants further develop their skills in terms of observation, communication, attitude and dialogue.

Another 12 'builders' godfathers' have since been trained so that there are 20 'builders' godfathers' available for an active workforce of 140 construction workers. The 'builders' godfathers' stimulate communication and consultation on health and safety in the organisation especially where it concerns disadvantaged workers. This helps to promote a positive health and safety culture and secure the implementation and continued development of health and safety policy in the company.

**Results and success factors:** The project encourages the integration of immigrants and underprivileged groups and leads to more safe and healthy employment of these specific workers. Increased risk awareness is apparent among the disadvantaged workers. The frequency rate of occupational accidents has decreased significantly from 37 accidents in 2005 to 17 accidents in 2007. In addition, the welcome brochure has become very popular within the construction sector.

Success factors include:

- The commitment and enthusiasm of the management team.
- The PAP commission played an important role in keeping all stakeholders focused on the project and deadlines.
- The practical focus of the 'builders' godfathers' training enables participants to apply the techniques easily in the workplace.

**Source (URL):** Workforce diversity and risk assessment: Ensuring everyone is covered (2009)

<http://osha.europa.eu/en/publications/reports/TE7809894ENC>

## ***CS 124 - Preventing accidents to temporary workers at a paper mill***

**Country:** Austria

**Organisation:** Sappi Austria

**Activity:** Production of coated fine paper.

**Main risks:** High accident rate for temporary workers (e.g. through use of paper making machinery), as well as stress amongst temporary workers who are inexperienced to cover other staff on sick leave.

**Main problem:** While the accident rate among the permanent staff was falling, the rate for temporary staff remained unchanged at five times higher than permanent staff. In addition, problems in teamwork (between permanent staff and temporary workers) were seen as one of the biggest stress factors in the company.

**Main action:** Initiation of a specific project targeting the often-neglected group of temporary workers in order to reduce accidents.

**Main worker participation measures:**

- Training sessions for temporary workers and workshops for teambuilding together with the permanent staff
- Management and stakeholder involvement in staff training
- Designation of a temporary worker as a safety representative
- Ongoing involvement of key stakeholders in the occupational health programme
- Ongoing collaboration with the temporary employment agency which provided the largest proportion of temporary workers to the company
- Use of employee surveys to monitor worker satisfaction

**Description of worker participation measures:** In order to reduce the accident rate, especially among the temporary staff, to nearly zero, an occupational health programme was developed to improve training and better integrate temporary staff into operational processes. The company's health and security manager initiated the programme, with the ongoing involvement of company management, works council, occupational physician and representatives from the Austrian Social

Insurance for Occupational Risks (AUVA). The company also secured buy-in from a temporary employment agency, which provided around 70% of the temporary workers.

There were three key worker participation measures – firstly, safety training for temporary workers; secondly, teambuilding for temporary and permanent staff; and thirdly, advanced training as a safety representative.

- **Safety training for temporary workers.** A one-day advanced health and safety course. This was provided by the company itself supported by an AUVA representative. It covers basic health and safety legislation, occupational safety at Sappi and fire protection.
- **Teambuilding for temporary and permanent staff.** In a three day workshop the perception of safety and health problems within both groups of workers was discussed. Participants worked together in small groups to carry out tasks such as constructing a tower by using materials provided. In this case the task itself was not that important; the focus was on training workers in teamwork by taking health and safety aspects into account. Representatives from management, works council and the safety and security manager of Sappi also attended a workshop.
- **Advanced training as a safety representative.** The main temporary employment agency recommended a worker for this training and Sappi agreed to this suggestion. Training was given to prepare them for their new role as safety representative. The training focused on improving knowledge of health and safety legislation, duties of the labour inspectorate, occupational medicine, personal protective equipment, accident prevention and risk assessment.

**Results and success factors:** By using a combination of different measures (training, teambuilding, equal pay and the provision of the same uniforms for temporary and permanent staff), Sappi was able to reduce the accident rate among temporary workers by 80% in just one year (from 11 to 2 accidents). The ambitious aim of having zero accidents was narrowly missed, but the company now has a very good safety performance among both permanent and temporary workers. In addition, the relationship between permanent and temporary staff has improved significantly through improved team working. Employee surveys also showed increased job satisfaction amongst all workers. The reliability of the temporary staff has increased, and they feel better integrated into the company.

Success factors include:

- The willingness of Sappi management to take a broader view of accident statistics by including accidents amongst temporary staff
- Buy-in of temporary employment agencies into the occupational health programme for temporary workers
- Use of a combination of measures (training, team building, human resource changes) to improve temporary worker integration

**Source (URL):** Workforce diversity and risk assessment: Ensuring everyone is covered (2009)

<http://osha.europa.eu/en/publications/reports/TE7809894ENC>

## **CS 125 - Dust capture in metal grinding**

**Country:** Germany

**Organisation:** VAE Eisenbahnsysteme GmbH

**Activity:** Iron and steel component production: turnout components especially frogs, tongue rails, ribbed plates, insulated joints and small parts.

**Main risks:** The atmospheric emissions of grinding dust and welding smoke are typical of metalworking, just like high noise levels and poor lighting conditions.

**Main problem:** Dust was dispersed in all directions through the halls, affecting not only the employees involved in grinding (around 30), but also all the other workers (around 150) in the shed.

**Main action:** The prevention or reduction of dust/smoke emissions wherever possible, maximising the capture of the dust particles at source and removal of particles as efficiently as possible from air. Additional measures against noise and adverse lighting conditions.

**Main worker participation measures:** The project team included the affected employees.

**Description of worker participation:** Appropriate finance and staff resources were made available and the project team included the affected employees, managers, occupational physicians, works council representatives and prevention specialists. They looked into possible solutions, holding discussions with potential suppliers and talks with the health and safety authorities. Around a dozen design ideas were prepared and assessed. The final solution for frog and tongue rail grinding, specially designed grinding cabins with a 'tunnel' extractor system, contained details from these suggestions. A prototype cabin was built and tested for frog and tongue rail grinding. Other improvements were made in the extraction and filter systems for insulated rail joint grinding, tool grinding and ribbed plate tacking.

**Results:** Team working both in the company with the participation of employees and with external authorities was important in this example. Dust levels decreased significantly, and also lighting conditions and noise exposure improved. Less cleaning demand resulted less exposure to cleaning agents and lower maintenance costs.

**Source (URL):** The practical prevention of risks from dangerous substances at work

<http://osha.europa.eu/en/publications/reports/106>

## **CS 126 - Safety for chemistry students**

**Country:** Belgium

**Organisation:** Katholieke Universiteit Leuven

**Activity:** Education – universities, also providing practical sessions to chemistry students.

**Main risks:** a wide range of risks

**Main problem:** The students are insufficiently aware of the dangers and risks linked to the use of dangerous products and equipment. The students required safety awareness and knowledge in their future professional careers.

**Main action:** A methodology was developed for carrying out prior risk assessments of student laboratory work.

**Main worker participation measures:**

- Consultation with staff and students by the prevention service to develop risk assessment concept
- Working group to develop risk assessment methodology and rules
- Students make their own risk assessment before starting a practical experiment
- OSH included in the student information pack, website etc

**Description of worker participation:** Firstly, the local, external prevention service developed a concept for carrying out risk assessments. This was done in conjunction with the environmental service, the occupational health service, the students and employees working in the laboratories, especially people supervising practices. A 'Safety and Didactics' working-group was set up which formulated basic rules for practical chemical work, which included the principle of students making a risk assessment prior to starting an experiment. The rules are communicated in various ways including via the university website, a manual for chemical practical, and the information pack for new students. New supervisors of practicals have the chance to discuss the laboratory rules during training.

**Results:** The students have an improved awareness of risks and precautions. The prevention hierarchy is better obeyed. In a number of experiments very dangerous products have been replaced by less dangerous alternatives. More attention is paid to the use of fume hoods and the use of personal protective equipment such as lab coats, spectacles and gloves.

**Source (URL):** The practical prevention of risks from dangerous substances at work  
<http://osha.europa.eu/en/publications/reports/106>

## ***CS 127 - Environmental assessment and chemical management***

**Country:** Denmark

**Organisation:** Decra A/S

**Activity:** Production of galvanised steel and stone roofing.

**Main risks:** The production process of galvanised steel and stone roofing requires the use of a large number of chemicals.

**Main problem:** There was concern that the health of employees was being put at risk and uncertainty about whether the right means of protection were adopted and used correctly.

**Main action:** Introduction of a comprehensive chemical risk management system. Survey of the existing situation was followed by subsequent stages of evaluation and implementation of control measures, introduction of pictogram notice boards

**Main worker participation measures:**

- Safety representatives' participation in workplace evaluation
- Small group discussions with employees to develop solutions (notice boards)

**Description of worker participation:** With support from the occupational health services, the company's working processes were mapped out and a workplace evaluation was carried out in consultation with safety representatives.

The employees were involved in the preparation of the notice boards. A key feature was the use of simple pictograms. A rough outline of the proposal was shown to employees who subsequently had discussions in small groups. The notice boards included:

- Notice board depicting the local conditions at the place of work with which the employees must be acquainted.
- A notice board depicting the location of the company's escape routes, evacuation point, fire fighting equipment etc.
- Adapting a notice board depicting emergency measures to incorporate additional health and safety measurements.
- Following the workplace evaluation, notice boards depicting means of protection.

**Results:** The pictograms have proved to be a more accessible method of informing and instructing workers, including those who do not have a high reading level. Workers' health and awareness and compliance with legislation improved.

**Source (URL):** The practical prevention of risks from dangerous substances at work  
<http://osha.europa.eu/en/publications/reports/106>

## ***CS 128 - 24-hour safety – a cooperative approach between social partners***

**Country:** Finland

**Organisation:** Chemical Industry Federation of Finland, Chemical Workers' Union

**Activity:** Chemical industry

**Main risks:** wide range of safety issues

**Main problem:** Although progress to improve health and safety had been made, it was felt that more innovative ways of supporting these approaches were needed in order to make further progress in

reducing the comparably low number of work-related accidents. Besides existing networks, participants wanted more direct and concrete cooperation.

**Main action:** The Chemical Industry Federation and the Chemical Workers Union held a meeting to discuss implementing a project in the sector to improve health and safety through cooperation. Safety 24h is a joint project with a purpose to find solutions for safety issues at the workplace. The objective is to create new ways of thinking, find practical tools, and benefit from experience and exchange of information and knowledge.

The organisations behind the Safety 24h project offered all participating enterprises a common, but fairly flexible, operating model, with the intention of creating a team sport aimed at improving safety. The overall programme was based on individual development projects carried out within enterprises. Each enterprise or project group chose their own focus according to their individual requirements, from areas of 'management and measuring procedures', 'attitudes', 'reporting and research' and 'risk assessment'.

**Main worker participation measures:**

- Network of cooperation within which experiences and know-how to be shared
- Interaction between project groups, and use of common support materials

**Description of worker participation:** Participating organisations established a working group to explore the idea of the Safety 24h project, which aims to promote innovation within enterprises to improve safety by seeking new ideas and procedures. The project groups were offered support in the form of communication, and were encouraged to tackle challenges through interaction.

**Results:** Participation in improving safety, involving workers and the whole organisation has been encouraged. Safety 24 h project had sped up many ongoing activities or led to the initiation of necessary projects. Many of them involved the creation of practical safety management procedures for different sectors. Reporting of deviations from the normal level of safety, that is near-miss situations, and practices to do with this reporting were promoted through the projects. The projects have provided practical examples that others can follow.

**Source (URL):** The practical prevention of risks from dangerous substances at work  
<http://osha.europa.eu/en/publications/reports/106>

## ***CS 129 - Training in safe and environmentally-friendly use of chemicals***

**Country:** Finland

**Organisation:** Finnish Institute of Occupational Health

**Activity:** metal surface treatment, textile cleaning, printing and car repair shops

**Main risks:** Hazardous substances present at the workplace

**Main problem:** Small enterprises often lack the knowledge and resources to deal with chemical risks.

**Main action:** training

**Main worker participation measures:** training tailored to workers' wishes

**Description of worker participation:** The Finnish Institute of Occupational Health decided to provide active support for small companies in the management of chemical risks. Chemical and environmental data in each firm were collected with the help of questionnaires to assess chemical risks in company level. Expert consultants carried out site visits at each company with the chemical manager. Chemical managers were trained at sector-oriented courses, tailored to the wishes of the workers and their supervisors. Views on chemical training needs were collected by questionnaires distributed to workers in each company. The workers actively participated in the trainings. Experience of the participating firms was also incorporated in the sector-specific chemical guidebooks. Based on the risk assessment results, the safety manager, the management, the personnel and the occupational health team discussed the priority order of preventive measures to be taken. They agreed on the time schedule for the actions, on the responsible persons and on the follow up.

**Source (URL):** The practical prevention of risks from dangerous substances at work

<http://osha.europa.eu/en/publications/reports/106>

## ***CS 130 - Reducing ethylene oxide exposure during sterilisation: medical device manufacturing***

**Country:** Ireland

**Organisation:** Abbott Ireland

**Activity:** Manufacturing medical devices, which require sterilisation prior to shipment.

**Main risks:** Ethylene oxide (carcinogen)

**Main problem:** Although exposure levels in the sterilisation area were already meeting the national legal limits (5 ppm), the company wanted to reduce them still further.

**Main action:**

- Establishment of a project management team
- Monitoring, reporting
- Technical interventions based on findings
- Revision of personnel protective equipment (PPE) use

**Main worker participation measures:**

- Participation in the project management team
- Participation in the task team on PPE.

**Description of worker participation:** The management project team included the health and safety officer, the environmental officer, human resources specialists, the purchasing officer, and staff. Internal engineering, quality and facilities expertise was also made available to assist the project.

The team planned a strategy that set short, medium and long-term goals:

- monitoring and recording ethylene oxide levels on a daily basis;
- weekly reporting;
- a weekly project review;
- setting realistic timetables;
- bench-marking with similar industries;
- on-going communication with personnel.

They set up a separate task team primarily to review the PPE being used and look for a suitable alternative. The task team:

- conducted a brainstorming session with all involved to propose a list of possible solutions;
- met and discussed the problem with key environmental and safety and health people within the company and from external authorities;
- set phases for implementing the proposal;
- generate employee awareness and participation in each phase of the project and highlight any specific changes that may have occurred.

**Results:** Exposure levels of ambient at source ETO were reduced to an internal goal of 0.5 ppm and even to 0.1 ppm in certain areas.

**Source (URL):** The practical prevention of risks from dangerous substances at work  
<http://osha.europa.eu/en/publications/reports/106>

## ***CS 131 - Hospital equipment sterilising: glutaraldehyde substitution***

**Country:** United Kingdom

**Organisation:** Essex Rivers Healthcare NHS Trust

**Activity:** health care

**Main risks:** Glutaraldehyde (sensitizer and irritant)

**Main problem:** In the day surgery unit some staff had become sensitised to the fumes giving them respiratory problems. Others complained of headaches and lethargy and some suffered discolouring of the skin from contact with the solution. During certain operations the legal maximum exposure level was being exceeded.

**Main action:** The NHS Trust formed a committee to evaluate the options available to them. The committee took advice from engineers on local exhaust. Manufacturers of cleaning substances were invited to give presentations to the committee. Endoscope suppliers were invited to test their equipment. The entire disinfectant and endoscope system was revised.

**Main worker participation measures:** Active participation in the committee

**Description of worker participation:** The committee comprised of four endoscope consultants, the directorate manager, the day services manager, the endoscope room supervisor, the trust microbiologist, the local safety representative and the trust risk manager. Options were: improving the local exhaust ventilation or the substitution of glutaraldehyde with a safer disinfectant. More effective exhaust ventilation was ruled out by engineers. The committee considered all aspects of the proposed substitution agents: from effectiveness to installation costs, from wear and tear on equipment to health and safety concerns. The committee invited several endoscope suppliers to test their equipment with the preferred substitute because the old ones were found to be incompatible with the new sterilising agent.

The committee advised the hospital management board that the health and safety concerns should be the priority and that the oxidised saline solution was preferred, despite being the most expensive option.

**Results:** Both patient and staff safety improved. In addition, although initially the new system was expensive to install, the new endoscopes that had to be introduced were significantly cheaper than the old ones.

**Source (URL):** The practical prevention of risks from dangerous substances at work <http://osha.europa.eu/en/publications/reports/106>

## ***CS 132 - Road workers - Reduction of physical strain***

**Country:** Netherlands

**Organisation:** Municipality of Delft

**Activity:** road paving

**Main risks:** manual handling of loads, musculoskeletal disorders

**Main problem:** Road workers in the Municipality of Delft are exposed to considerable physical strain, which resulted in a high prevalence of knee and back problems.

**Main action:**

- Initial occupational health examination of workers
- Involvement of an occupational physiotherapist
- Mapping of risks
- Implementation of measures according to the working group decisions
- Final evaluation of results

**Main worker participation measures:**

- Initiating the occupational health examination
- Participation in the consultations, the project and the working group

**Description of worker participation:** Workers requested a periodic study concerning occupational health because of knee and back pain. It showed that physical strain is an important occupational risk for road workers. During participative consultation, the employees, management and the safety expert made a joint decision to consult an occupational physiotherapist. Later, the municipality's new prevention officer conducted several interviews with the workers. It revealed that there was no change in the working conditions and health complaints was persisting. In collaboration with the manager, the prevention officer started a project. A meeting was held to discuss the high absenteeism rate. They collected quantitative and qualitative data. Discussions took place between management, a safety expert and the participative body representing the workers to consult a physiotherapist. Problem areas were mapped. The municipality set up a working group representing both workers and management. They discussed the results and possible solutions. As workers do not like filling in questionnaires, they could fill initial questionnaires in groups during work time with support provided. Following the implementation of several measures, the working group discussed the progress of the project.

**Results:** Absenteeism among the road workers declined. They felt that the road designers understood their position better. Workers accepted solutions much more readily when they could participate and when they felt that they were taken seriously. The manual specifying the types of materials used to construct the various parts of the road has been amended. Occupational risk during manual handling diminished due to lighter stones used for street paving. Designers are more conscious of the risks of physical strain among the road workers.

**Source (URL):** Case studies database

<http://osha.europa.eu/data/case-studies/roadworkers-reduction-of-physical-strain/view>

### ***CS 133 - Betterlift — introducing a semi-automatic exhaust manipulator to reduce a high absenteeism rate***

**Country:** Belgium

**Organisation:** Ford Motor Company

**Activity:** Manufacture of motor vehicles

**Main risks:** Heavy strain on back, shoulders, neck and wrists from repetitive lifting, holding and fixing exhausts.

**Main problem:** Absenteeism was high among exhaust assembly workers due to pain in the shoulder, back, neck and wrists.

**Main action:** The Local Ergonomic Committee (LEC), which is a multidisciplinary team (safety advisor, financial services, HR, trade unions, ergonomic services, medical services, production, maintenance, etc.) identifies ergonomic problems and helps resolve them by 'adapting work to people'. In the six-step job improvement cycle the Committee identifies priority jobs, evaluates straining jobs, develop solutions, implements solutions, documents the project and finally does the follow-up. A study revealed high absenteeism rate, caused by the repetitive actions performed in the assembly department. The ergonomic team designed, built and implemented a semi-automatic exhaust manipulator, which decreased the physical workload of the operators.

**Main worker participation measures:**

- Trade union delegates were involved from the start, and the workers themselves were also involved throughout the whole process.
- Workers reported complaints about the job and were represented in the LEC.
- Workers tested the manipulator in advance.



**Description of worker participation:** The manipulator was fully designed and built in-house by workers who are familiar with the process and the problems related to it. They have a comprehensive view on the situation. The engineering team, in conjunction with three workers, built a first wheeled prototype that had to be pushed or pulled towards the car. This prototype turned out to be impractical. LEC proposed automatically driven manipulator on rails in the floor. A separate area was provided in order to set up a trial version. This allowed the engineers to detect flaws in the system and to ask the opinion of the workers. Workers had the opportunity to try it out and give feedback. In the stage of testing and retesting, the operational buttons were also ergonomically tested to determine whether they were well placed, easy to push, the right colour, etc.

**Results:** Workers are often less resistant to solutions from colleagues (in-house engineering team) than from outsiders. The introduction of the manipulator resulted in a fall in repetitive strain injury (RSI) complaints and absenteeism; a decrease in the number of operators needed to perform the job; and consequently a decrease in costs related to this job.

**Source (URL):** Case studies database

<http://osha.europa.eu/data/case-studies/betterlift-2014-introducing-a-semi-automatic-exhaust-manipulator-to-reduce-a-high-absenteeism-rate/view>

### ***CS 134 - Noaccident — radical reduction in accidents in a metallic packaging company***

**Country:** Spain

**Organisation:** CROWN CORK IBERICA S.L.U.

**Activity:** manufacture and sale of metal packaging

**Main risks:** Accident risks

**Main problem:** Occupational injuries and costs thereof at the plant were considered too high by the head office.

**Main action:**

- Setting up a programme for occupational safety
- Application of a method of occupational health and safety management (called STOP)
- Observation of people during their work
- Taking preventive measures
- Training programme for all the firm's employees
- Thorough and immediate investigation of accidents and incidents

**Main worker participation measures:**

- The worker representatives initiated the action
- Involvement in occupational health and safety management
- Safety group consisting of the safety coordinator and the OSH representative

**Description of worker participation:** The safety group consisting of the safety coordinator and the OSH representative hold quarterly meetings with the company manager, covering subjects such as the budget and capital expenditure for the current financial year, as well as action plans, training and information plans for the workers, risk assessment on the workstations, human factor engineering, noise measurement, lighting, heat, vibration, accidents and their causes, and a plan for monitoring all these aspects.

The system implies constant evaluation of situations day by day with the involvement and help of the workers.

**Results:** There was a reduction in the number of occupational injuries with subsequent recognition from its multinational parent company.

**Source (URL):** Case studies database

<http://osha.europa.eu/data/case-studies/noaccident-2014-radical-reduction-in-accidents-in-a-metallic-packaging-company/view>

### ***CS 135 - Crushed fingers — modification of a protective plate in order to eliminate of crushed fingers***

**Country:** Luxembourg

**Organisation:** Avery Dennison

**Activity:** Manufacture of articles of paper and paperboard

**Main risks:** Accident risk: powered machine parts

**Main problem:** The protective plate from one of the machines used for cutting paper rolls was displaced thus causing dangerous situation.

**Main action:** Avery Luxembourg had set up a registration system for the management of occupational accidents, first aid, incidents and dangerous situations. In such cases team leaders have to carry out an initial investigation in a group to assess the gravity and extent of the risk and to come up with immediate and adequate preventive or corrective measures. The team leader from the department concerned has to register the details of the matter in the EHS database. The form is then sent to the staff and the responsible persons of the department concerned. Communication is enforced by posting a notice on the workstation, direct e-mails and drawing attention at the 'safety huddle' at the beginning of each shift. Finally, the person responsible for safety analyses the EHS declaration no later than 24 hours after the declaration was registered in the EHS system.

**Main worker participation measures:**

- Reporting the dangerous situation
- Collaboration of team leaders
- Follow-up of the case

**Description of worker participation:** A worker reported the dangerous situation caused by the displacement of the protective plate from slit 13. The initial enquiry was carried out in collaboration with the team leaders from the other departments, in accordance with company policy. They decided to take immediate action by putting a poster on the intermediary wagon in order to notify the workers about the situation. The team leaders also suggested asking the maintenance team to modify the plate.

**Results:**

- The procedure involves workers, which has a positive impact on their safety awareness.
- The gap beneath the plate was removed by adjusting the plate. The risk of crushing fingers was eliminated.

**Source (URL):** Case studies database

<http://osha.europa.eu/data/case-studies/crushed-fingers-2014-modification-of-a-protective-plate-in-order-to-eliminate-of-crushed-fingers/view>

### ***CS 136 - Nocodust — reduction of risks arising from exposure of workers to high dust levels in coal mines***

**Country:** Poland

**Organisation:** Centrum Mechanizacji Górnictwa (Mining Mechanisation Centre) KOMAG

**Activity:** Mining of coal and lignite

**Main risks:** High dust level: explosion risk, risk of occupational lung diseases

**Main problem:**

- Older dust collecting units frequently broke down and were not effective enough.
- Awareness of the negative effect of dust on health was very low.

**Main action:** At the start of the project, an information campaign was conducted in coal mines. Training sessions and information meetings were also conducted at the KOMAG Centre on how to maintain a high operating efficiency of dust collecting units and to raise awareness of the influence of dust on human health. The new solutions were also presented at KOMAG meetings to which representatives from coal mines were invited.

**Main worker participation measures:**

- Training sessions
- Information meetings
- Designers obtained worker experiences

**Description of worker participation:** Designers of dust collection units visited sites where these devices were installed and talked to the staff at the roadhead. Workers were able to explain to them any problems they had when using these devices. Involving mine workers, supervisors and the manufacturers of dust collecting units allowed a broad exchange of opinions and information and helped solve many practical problems.

**Results:**

- The designers introduced new highly reliable and effective dust collecting units.
- The project also achieved higher risk awareness among relevant staff representatives at coal mines on the importance of proper assembly and operation of the new dust collecting unit and the risks from exposure to dust.

**Source (URL):** Case studies database

<http://osha.europa.eu/data/case-studies/nocodust-2014-reduction-of-risks-arising-from-exposure-of-workers-to-high-dust-levels-in-coal-mines>

## ***CS 137 - Holistic RA — holistic risk assessment***

**Country:** Germany

**Organisation:** SICK AG

**Activity:** manufacturing sensor technology for industrial applications

**Main risks:** Time pressure, noise, interruptions, permanent alertness, misbalance in work-life, work-time allocation, physical inactivity, fatigue

**Main problem:** Traditional assessment of risks did not provide a comprehensive assessment of mental strain at work.

**Main action:** First holistic risk assessments were carried out as pilots both at research, office and production workstations helped by experts from the university. Initial evaluations and a second pilot was planned to transfer into an ongoing process. The invited experts from the university carried out analyses of existing documentation, individual experience of workloads and resources (subjective experience of working conditions) and tasks (objective data on working conditions). Factors leading to continuous interruptions in work flow were identified. The results of the analyses were discussed and evaluated, and measures for improvement suggested. The measures were evaluated six months after implementation in a feedback workshop and one year after implementation by questionnaire.

**Main worker participation measures:**

- Participation in the risk assessment process and the implementation of measures
- Workshops
- Steering committee

- Evaluation of individual experiences

**Description of worker participation:** The results of the university team were discussed and evaluated in dialogue with the workers, and measures for improvement were discussed at a workshop. The measures were implemented under the guidance of the management, assisted by volunteers from the departments who took care of practical implementation and supervision of the measures. Frequent meetings were held between the risk assessment steering committee, management representatives and volunteering workers. Six months after implementing the initial measures all workers and management representatives were invited to attend a feedback workshop where all participants reported on their experiences.

**Results:** Workers reported better work environment, less noise and more comfortable office ergonomics. Personal well-being, team-working and quality of work improved.

**Source (URL):** Case studies database

<http://osha.europa.eu/data/case-studies/holistic-ra-2014-holistic-risk-assessment/view>

## **CS 138 - Stress in hospitals — assessment of psychosocial and physical risks**

**Country:** Germany

**Organisation:** Havelland Hospitals (Havellandkliniken) GmbH (in cooperation with University of Potsdam, Institute of Psychology (Universität Potsdam, Institut für Psychologie, Lehrstuhl für Arbeits-Organisations- und Betriebspsychologie) and INQA — Initiative New Quality of Work)

**Activity:** Hospital activities

**Main risks:**

- physical strain (lifting, manual patient handling, working in awkward positions),
- risk from chemical and biological agents (disinfecting agents, blood)
- psychosocial strain

**Main problem:**

- Partners wanted to assess psychological risks at work and their organisational aspects.
- Management suspected that ongoing training had become such a routine for employees that there was a need to really motivate them to pay particular attention to the health promotion measures.

**Main action:** An in-house steering committee oversees health promotion of workers. It requested funding from the Initiative New Quality of Work (INQA) to undertake a thorough assessment with regard to psychosocial risks at work and to install a health management system accordingly, with expertise from the university. Existing documents relating to quality management were analysed. Experts interviewed middle management. Nurses and aftercare workers were asked to fill in questionnaires. The work in different wards was observed by experts. After the first phase of the assessment, the results were analysed, then presented by the university's experts and discussed by the steering committee. Feedback workshops were organised to present the results to ward managers, nurses and care workers. Two health circles, guided by experts, were set up. Workplace design interventions and changes of work organisation were accompanied by individual promotion programmes and trainings.

**Main worker participation measures:**

- Interviews and questionnaires
- Participation in the steering committee
- Discussions and proposals for solutions in the health circles
- Workshops
- Team training sessions discovering practical solutions

**Description of worker participation:** The members of the steering committee are the Statutory Accident Insurance, health insurance companies, Labour Inspectorate, and in-house stakeholders including management representatives, occupational physician, workers' council, health management representative, etc. There was one health circle on the emergency ward, while the second comprised nurses from various different wards. Members were nominated by the hospital management board. They discussed solutions in terms of individual and collective preventive measures and addressed interface and communication problems between different wards in the hospital. At the end of the health circle work concrete proposals for interventions were presented to the hospital's management for further action. The health circles also introduced a programme for individual prevention that included training measures in progressive muscle relaxation, stress management, communication strategies, and conflict management. Training was provided on how to handle violence at work and dealing with death and mourning. Additional training sessions were offered in cooperation with Lufthansa Flight Training: ward teams can go on two-day seminars where they reflect on strengths and weaknesses of their work organisation and teamwork. Teams were encouraged to come up with practical solutions to enhance the work situation in their ward.

**Results:** New guidelines were drawn up for the training of new workers. Changes were also made in the management of patient transfer and assigning operating rooms. Initial feedback was positive on proposed job rotation cycles that take into account the new training guidelines for the nurses and the participation of caregivers. Administrative tasks were delegated to the night shifts, where there was more time to devote to them as the amount of care work fell at night. Some concrete work environment interventions were carried out too:

- better lighting for laparoscopy (surgery) in operation rooms;
- fastening of oxygen resuscitation apparatus in anaesthesia;
- installing additional bed tables in intensive care ward;
- installing new software for accessing laboratory results on PC in emergency ward.

As a consequence of the project, the hospital management has been able to convert risk assessment and health promotion into permanent processes and integrate both into its quality and health management systems. Feedback on occupational safety and health is now an integral element in appraisal interviews as well as in staff and team meetings. In this way, workers' feedback on safety and health issues is integrated in ongoing management processes.

**Source (URL):** Case studies database

<http://osha.europa.eu/data/case-studies/stress-in-hospitals-2014-assessment-of-psychosocial-and-physical-risks/view>

## ***CS 139 - Noise reduction for automated standard lamp production line No 234***

**Country:** Hungary

**Organisation:** GE Hungary Rt. Light Source Factory in Nagykanizsa

**Activity:** Light source factory

**Main risks:** Noise

**Main problem:** The factory in Nagykanizsa commenced its long-term noise reduction project in 2003. The noise level was over 85 dB(A) in 90% of workplaces at the plant. Previous attempts had been made at reducing the noise level by fitting noise protection and reduction covers, but in lamp manufacturing, regular human intervention for the purpose of replenishing materials, maintenance and setting adjustments is required. This reduces the effectiveness of these covers.

**Main action:** Achieving noise reduction to prevent hearing loss along a complete production line in a light source factory.

**Main worker participation measures:**

- Workers council
- Workers participation
- Workers consultations
- Working group
- Brainstorming of prevention ideas
- Trade union invited to meetings

**Description of worker participation:** A general noise assessment was carried out on all the plant's traditional automated lamp production lines, particularly with regard to positions where permanent or temporary work is carried out. It was evident in the course of preliminary measurements that the two main sources of noise affecting employees were operation of the head vibration feeder on the production line and operation of controlled air valves running with pneumatic tools on the entire production line.

Production line number 234, operating with the highest noise level was selected as a pilot scheme to test the prevention measures.

Twenty-four persons were involved in the improvements to the pilot production line chosen while the technical solutions developed on the pilot scheme affect 1,521 workers.

Management initiated the requirement to improve the noise reduction process after notifying technicians and skilled employees working on the production lines, and after making comments at various employment protection committee and works council meetings.

A development team was set up at the plant to implement the project and improvements, and each factory unit involved in light source production delegated some employees to this team. When creating the team, one key factor was that at least half the members should be manual workers.

This also served the purpose of efficiency, since the most useful improvements and ideas largely came from mechanics in direct contact with the production lines. The chairman of the factory's employment protection committee and the NFDSZ trade union representative regularly attended improvement meetings as invited guests.

After the initial brainstorming session, the team decided on a number of improvements for each mechanical unit. The ideas necessary for implementation were collected in two different ways. The noise reduction team surveyed some positive examples employed at the Nagykanizsa factory and other GE Hungary(11) Rt. plants, filtering out any that might be suitable for wide-scale introduction at the plant. Where this proved impossible, the improvement team reduced the noise level instead with completely new technical solutions.

**Results:** Great emphasis was placed on technicians and mechanics working on the production line being involved in the entire improvement process, as they are in direct contact with the machines and thus were able to provide a great deal of information. Information acquired during the project is being applied to the factory's other lamp production lines. At present replacement of head feeders in the plant has virtually been completed, and the introduction of other innovations is ongoing.

The national jury was impressed with the participation of employees in the entire risk assessment process.

**Source (URL):** Prevention of risks from occupational noise in practice-2005

<http://osha.europa.eu/en/publications/reports/6905812>

### ***CS 140 - Participatory co-operation in preventing noise exposure in a planning and construction project for a new beverage plant***

**Country:** Finland

**Organisation:** Oy Hartwall Ab / Hartwall Ltd.

**Activity:** Industry

**Main risks:** Noise

**Main problem:**

- Two old production plants were combined to form a single large production plant. The intent was that with increasing automation, production and speed, noise problems would be brought under control.
- In order to achieve exacting (food) hygiene levels and humidity at certain points on the production line, significant challenges were faced in achieving successful noise abatement
- Noise was a major problem in the old production plants with noise levels in production areas usually exceeding 85 dB.

**Main action:** Designing out noise while meeting food hygiene requirements in the creation of a new production plant

**Main worker participation measures:**

- Participatory cooperation
- Working group
- Workers consultations
- Workers participation

**Description of worker participation:**

This example tackles risks at source through participatory tripartite co-operation within all partners (management, employees, occupational safety and health manager and representative, occupational health service, architect) included in the planning and building project of the new beverage plant.

The whole realization process in this kind of huge project has been open-minded and appreciative about all partners' work.

There were three key stages in the process to reduce the noise exposure of workers on the new line:

- Joint activity, participatory planning
- Working group
- Actions during the planning and construction phase
- Procedures while operating the new factor

Due to the wide scope of the project, the enterprise used the participatory planning method to solve health and safety problems with an open mind. A noise abatement working group was formed in which representatives of employees and employers, the occupational health service, planners and a noise abatement expert from the Occupational Health Institute acted together, with the group evaluating the solutions and materials to ensure their effectiveness.

Acoustic computer modelling used to evaluate the impact of noise abatement solutions. Most of the noise abatement measures were aimed at effectively muffling the area in question and optimising the quantity, quality and locations of muffling materials. Low noise levels became one of the key purchasing criteria in the procurement of new machines and equipment.

Particular attention is being paid to protect the hearing of workers in the new plant. This is being achieved by providing information and training, particularly during induction for new workers. Training checklists and check-ups are now used for all new workers. In addition to the induction and training, there is also a procedure through which workers can, if they wish, get personally fitted earplugs. This option has increased the number of workers who are using personal hearing protection.

**Results:** By virtue of advance planning implemented through joint activity, the production plant is properly lit and hygienic, making production areas more pleasant. The materials used and the suspended baffle solutions proved functional and easy to maintain. Noise exposure for employees usually remains below 85 dB. Compared to equivalent lines in the old production areas, exposure levels have been reduced 2–5 dB depending on the line. In other words, the risk of hearing damage has been reduced 20–70 %.

In this example, the risks were tackled at source through participatory tripartite cooperation in the planning process. Innovative methods were used in the design of the new plant to reduce noise exposure.

**Source (URL):** Prevention of risks from occupational noise in practice-2005

<http://osha.europa.eu/en/publications/reports/6905812>

## ***CS 141 - Hearing protection from military rifle shooting noise***

**Country:** Greece

**Organisation:** Noise-Control-Hellas

**Activity:** Military installations

**Main risks:** Noise

**Main problem:** In a military installation employing many civilian technical staff, a weapon-repair programme receives faulty rifles. In order to test the rifles' performance several thousand bullets are fired per month in a 100 metre long shooting tunnel,

exposing workers exposed to significant risks to their hearing even with heavy-duty hearing protectors on.

**Main action:** Reducing noise exposure and other risks during the testing of weapons

**Main worker participation measures:**

- Workers consultations
- Workers participation
- Finding solutions

**Description of worker participation:** The in-house health and safety office of the base performed a series of evaluations of the problem, and in collaboration with the shooting tunnel operators (military and civilian personnel) and with the technical support of the "Noise-Control-Hellas" consultancy and manufacturing firm drew up the requirements of the needed solution.

These requirements were presented to the management and technical drawings were drawn of the solution. The drawings were presented to the operators in order to retrofit the solution with more specific requests and optimisations. After the optimisation offered by all involved personnel, construction began.

The solution was to manufacture an ergonomic and adjustable heavy-duty noise insulating noise enclosure with attached silencer. The construction can be considered as "heavy duty" and the inline silencer is both of passive and energetic design.

**Results:** Upon installation and several days of trial, all operators were asked and replied as "satisfied" or "highly satisfied" so real improvement is achieved.

Due to its heavy construction and its panelled form a very long efficient life is expected.

As mentioned above all parties (management, health and safety office, workers, external acoustic consultant and manufacturer) were involved in pinpointing the problem, developing its best ergonomic design, and participating to optimise the final acoustic and safe solution.

**Source (URL):** Prevention of risks from occupational noise in practice-2005

<http://osha.europa.eu/en/publications/reports/6905812>



## **CS 142 - Reducing noise when manufacturing concrete vats by immersion of vibrating trestles in water**

**Country:** France

**Organisation:** URVOY

**Activity:** Manufacturing industry, employ 60 people

**Main risks:** Noise

**Main problem:** The company manufactures, among other things, concrete vats. This activity generates extremely loud noise: on some moulds, noise pressure levels of 111 dB(A) were recorded at the workstation over the course of several production cycles. Daily noise exposure (Lex,d) estimated on the basis of these measurements amounts to 103 dB(A). Workers assigned to these workstations or working in the immediate surrounding were therefore exposed to a real risk of hearing loss.

**Main action:** Reducing noise in the manufacturing industry of prefabricated concrete units for construction purposes.

**Main worker participation measures:**

- Workers consultations
- Workers participation

**Description of worker participation:**

Aware of the high noise level generated by this activity, the company's mechanical maintenance engineer came up with the idea of damping the system with water, namely, to create a pit in the floor filled with water, in which to immerse all the vibrators, trestles and mould base, known as the base plate.

The proposal was presented to the company's management and accepted for the manufacturing of 4000-litre and 5000-litre moulds, which are produced in a specialised workshop.

The comité d'hygiène, de sécurité et des conditions de travail (CHSCT), or workplace health and safety committee, and the workers, particularly aware of the risks they were exposed to, have supported this approach.

This first pit was created entirely in-house. During the first tests it was immediately clear by listening to noise levels at the workstation that they had been considerably reduced.

Workers themselves have designed the technical intervention, based on their practical experience. Water has very good damping properties and is cheap, hence the ingenuity of the method. The workers' exposure to noise has been reduced very significantly, by 20 dB(A).

The intervention has been developed with the active support and participation of the regional health insurance fund (Caisse Régionale d'Assurance Maladie (CRAM) which is the regional network of the national salaried workers' health insurance fund (Caisse Nationale d'Assurance Maladie des Travailleurs Saliés (CNAMTS))(32), and of the national research and safety institute (Institut National de Recherche et de Sécurité (INRS)). The workers who devised the solution have also received an award from the regional health insurance fund.

**Results:** A noise reduction of approximate 20 dB(A) during the production cycle has been achieved regardless of the type of mould. Given the extent of the production, the daily noise exposure level is estimated at 83 dB(A) for a 3 000-litre pit after the intervention, as compared to 103 dB(A) before the intervention. This value is below the relevant exposure limit value of 87 dB(A) for daily noise exposure set by the 2003 Noise Directive. The intervention has not increased the production time of vats.

Furthermore, the intervention has resulted in improved workers' postures at the workstation as the moulds have been lowered by approximately 0.50 m, resulting in a better working height for workers

**Source (URL):** Prevention of risks from occupational noise in practice-2005

<http://osha.europa.eu/en/publications/reports/6905812>

## **CS 143 - Mechanism for preventing noise risk in an energy service company**

**Country:** France

**Organisation:** DALKIA France; ACMS

**Activity:** Energy service company

**Main risks:** Noise

**Main problem:** Dalkia provides maintenance on a wide range of installations, including cogeneration plants, boilers and chillers of varying age and design. Exposure to noise varies according to season, time of day, place, to the type of assistance required and to the tools used as Dalkia's workers are often on site at other employer's workplaces, Dalkia cannot always take action at source to prevent or control noise exposure. A sonometry study revealed noise levels exceeding 115 dB(A).

**Main action:** Reducing noise exposure in maintenance operations in the energy sector

**Main worker participation measures:**

- Workers consultations, e.g. survey
- Workers participation
- Working group
- Social dialogue – safety committee and works council
- Training

**Description of worker participation:**

Dalkia launched participative measures for the prior identification and evaluation of risks, providing each staff member with a survey instrument to identify the potential risks to which they feel they are exposed. Noise was the third most frequently cited risk, after falls from a height and bumping into projecting parts in the workplace.

The issue raised in the project conducted by Dalkia France can be defined as follows: "How can we eradicate the noise risk to which workers who provide assistance to customers on installations producing a wide range of random noises are exposed?"

At the request of the health and safety manager of the Dalkia Group, a 'noise' commission has been set up. It is composed of staff representatives, five Dalkia safety engineers and one occupational physician who coordinate 56 ACMS physicians responsible for monitoring the health of all staff at Dalkia Île-de-France

Dalkia France has five regional workplace health and safety committees (Comités d'Hygiène de Sécurité et des Conditions de Travail – CHSCT)), which include staff representatives and internal and external experts, who attend regular meetings chaired by the employer. These specialised committees support the project and are regularly informed of the state of progress. A general overview is given of the prevention activities performed within the company at an annual meeting of workplace health and safety committees and at a meeting of the central works council, a social dialogue body operating at Group level.

Solutions in the implementation phase include:

- devising a module for training staff exposed to noise risk;
  - publishing an awareness-raising leaflet produced by the ACMS;
- evaluating the prevention measures

**Results:** The staff welcomed the fact that the noise issue was tackled in the project and expressed a very positive feedback with regards to the result of the actions. The measures taken have resulted in a better use of personal protective equipment, including personal hearing protection among staff

**Source (URL):** Prevention of risks from occupational noise in practice-2005

<http://osha.europa.eu/en/publications/reports/6905812>

## **CS 144 - Courses for noise monitors**

**Country:** Denmark

**Organisation:** JobLiv Danmark as

**Activity:** School

**Main risks:** Noise

**Main problem:** A lot of children gathered together create noise problems that many people have found is almost impossible to do anything about. Noise in day care centres, kindergartens and after-school centres is a problem that had appeared again and again among the inquiries from clients received by JobLiv Danmark. The problem was not new to the institutions themselves, as many had tried to solve the problems with the aid of traditional soundproofing, but in many cases this was insufficient to solve the problem.

**Main action:** Reducing noise in children's institutions by training staff to find solutions in their workplaces

**Main worker participation measures:**

- Participative, action-oriented training
- Exchange of experience
- Workers as Noise monitors

**Description of worker participation:** A number of Danish municipalities have trained personal as noise monitors (persons especially trained to focus on noise) in recent years. JobLiv Danmark wanted to build on this and take the concept a step further.

They decided to develop a course that extended the way in which noise problems are traditionally addressed, by also focusing on where, when and how noise is experienced, and then discussing how noise can be prevented by:

- addressing attitudes;
- changing children's and adults' behaviour;
- planning the work.

The general goal of the course is to train an employee to act as noise monitor in their own institution. The focus is not just restricted to the physical environment, but is also placed to a high degree also on teaching arrangements. The model also aims to ensure that noise and the everyday situations that can give rise to it are paid attention to and discussed on an ongoing basis.

The course takes place on two separate days at an interval of one month. Both days are formulated as an interaction between theory, including an introduction to noise-reducing methods with practical examples, and the exchange of experiences. Participants carry out work between the two course days, analysing noise problems at their own workplace. An important aspect is that this should provide the incentive for starting concrete actions to provide solutions in their own workplaces.

A mixture of participants facilitates exchanging of experiences. Both managers and employees attend the courses. Some have been members of the safety committee and others have not. This provides an opportunity for exchange of experiences between a variety of managers and employees, who face very similar problems. Many experiences in creating improvements can be transferred directly from institution to institution.

**Results:** an evaluation meeting following one course received positive feedback: the employees have experienced significant improvements; they have indicated that it is useful to focus on noise; they are now thinking about the problem more in their everyday work, and they are more aware of what else can be done to make improvements; and they are also finding that they are less tired when they come home from work.

This course helps to empower employees to find and implement solutions to noise in their own workplaces, taking a holistic approach to prevention. The trained noise monitors receive a much wider

understanding of noise problems than just the technical. The establishment of a catalogue of solutions promotes the exchange of good practice.

**Source (URL):** Prevention of risks from occupational noise in practice-2005

<http://osha.europa.eu/en/publications/reports/6905812>

## ***CS 145 - A sound ear: training and awareness raising of noise exposure to musicians***

**Country:** United Kingdom

**Organisation:** Association of British Orchestras

**Activity:** Musicians

**Main risks:** Noise

**Main problem:** Orchestral musicians are exposed to a varied and wide range of noise, including high frequency noise and excessive volume, for a significant period of time. This noise is generated by both the worker's own instrument and from other musicians in the ensemble.

**Main action:** Looking for ways to reduce the noise levels in rehearsal and performance environments in order to protect orchestral musician's hearing

**Main worker participation measures:**

- Dialogue with trade union
- Working groups
- Workers consultations
- Workers participation
- Noise expert teams
- Training – for working group members
- Training – for all players

**Description of worker participation:** The national industry body representing professional orchestras, the Association of British Orchestras (ABO) has been running a multi-faceted project to address the particular problems faced by this industry. In carrying out the project, the ABO has worked with the UK musicians' trade union and the UK occupational safety and health authority, for example over policy development on noise for the sector. It has also shared its work with other, for example working with other orchestras outside the group to transfer the system and training. Work so far undertaken includes expert research, a final report, seminars, conferences and special training.

Given the number of people on whom some of these changes can impact, orchestras have been encouraged to create their own 'expert team' comprising players from across the orchestra, orchestra management, venue staff, technical staff and where possible planning and artistic staff, such as the conductor. This team should meet on a regular basis to discuss mid- to long-term planning issues in terms of venues and repertoire and would be present (at least in part) at rehearsals and performances to advice or act on immediate concerns.

In order that teams can function effectively, the members need to receive training. They must be made aware of the risks to their hearing and what control measures are available. It was felt that a long-term, pro-active approach using existing knowledge, experience and comparisons was a requirement. The ABO therefore developed a two-day training courses aimed predominantly at symphony and opera/ballet orchestras around the UK, following which the 'noise teams' could be formally established.

The ABO developed more basic training for all players. Through the programme of education and training, musicians learn that hearing loss is no longer an unavoidable occupational hazard and that positive steps can be taken to create a safe working environment.

**Results:** Since 2001, the ABO has run several successful conferences and workshops tackling the issue of noise exposure to musicians in its continued commitment to raise awareness of the problems

and solutions available. This increased the dissemination of research outcomes and solutions beyond large orchestras to small and medium enterprises (SMEs) such as chamber orchestras, smaller ensembles and individual musicians.

**Source (URL):** Prevention of risks from occupational noise in practice-2005

<http://osha.europa.eu/en/publications/reports/6905812>

## ***CS 146 - Moving with Awareness — an ergonomic approach to training cleaners***

**Country:** Germany

**Organisation:** University of Applied Sciences Hamburg

**Activity:** Cleaning

**Main risks:**

- negative technical and organisational conditions at the workplace
- unnatural working postures and levels

**Main problem:** The multiple levels at which cleaning staff have to work cannot be adapted to personal body measurements. Cleaners often have considerable practical experience in their trade but also tend to have a low self-perception and often a low educational status. Insufficient job specific training and a general lack of recognition of cleaners were contributing stress factors.

**Main action:** 'Moving with Awareness' is a learning concept of ergonomic movements while working with mops, brooms, vacuum cleaners, cloths, etc. It was developed in collaboration with cleaning workers and other experts to overcome the problems faced. The workers are provided with information and guidance before they are able to recognise and prevent health hazards for themselves. When health-promoting methods of working have been identified and experienced through practice is the worker able to protect his/her own health.

**Main worker participation measures:**

- Training in hazard identification/risk prevention
- Active participation during the entire training course
- Implementation of changes at the workplace
- Training developed in collaboration with cleaners

**Description of worker participation:**

A short video explains that the employees themselves can influence the way the task is performed, even under unfavourable circumstances. With the aid of questionnaires the participants grade each cleaning task according to the degree of effort expended and discomfort experienced. This sensitises the participants to their work setting and their posture during work.

The training method builds on the practical experience of the cleaners, is practice oriented and has a slow and sensible approach to learning situations with the following steps in the process.

- Impart the basic principles
- Enhance body awareness
- Improve observation skills
- Practise with working equipment — participants get into small groups to practise using their work equipment while employing optimal techniques. In this phase the trials and assessments by participants and the instructor are emphasised. The cleaners are also encouraged to take photos of each other while practising. Where appropriate, new equipment might have to be purchased, e.g. mops with telescopic handles.
- Reflect through reinforcing activity.

- Practise at the work site — it might be found necessary to purchase new equipment e.g. mops with telescopic handles.

**Results:** Through a follow-up study 50 trainers in the 'Moving with Awareness' concept have confirmed that the teaching and implementation of the concept has been effective. In addition 100 trainees were asked to participate in the programme evaluation. In summary, they found the training concept valuable in increasing awareness and easing burdens at work.

**Source (URL):** Preventing harm to cleaning workers

<http://osha.europa.eu/en/publications/reports/TEWE09006ENC/view>

## ***CS 147 - 'Toolbox' meetings help create a safer workplace***

**Country:** Belgium

**Organisation:** CARE NV

**Activity:** Cleaning

**Main risks:**

- heavy workload
- lack of autonomy on the part of workers

**Main problem:**

- High accident rates
- Misconceptions on the part of workers about occupational accidents and their consequences

**Main action:**

An analysis of the occupational accidents revealed that minor incidents were resulting in a high absenteeism rate. Tool box talks were introduced.

**Main worker participation measures:**

- Safety committee
- Tool box talks

**Description of worker participation:**

Toolbox meetings are short on-site meetings between the leader and his/her team where the team leader or the prevention advisor discusses an actual safety topic to point out dangerous situations and raise the workers' awareness of how to deal with them.

The company's occupational safety committee decided to use the toolbox meetings to raise employee awareness and explain the procedures to be taken in the event of an occupational accident.

**Results:**

Workers are wearing safety shoes, and both employees and managers have an increased safety awareness. Safety measures are no longer seen as a burden, but are carried out as a matter of course. As a result, fewer accidents happened.

**Source (URL):** Preventing harm to cleaning workers

<http://osha.europa.eu/en/publications/reports/TEWE09006ENC/view>

## **CS 148 - Getting workers involved in analysing risks: an example of hospital cleaners**

**Country:** Germany

**Organisation:** Leibniz Universität Hannover

**Activity:** Hospital (cleaning)

**Main risks:**

- Sexual harassment
- Accident risk

**Main problem:** Disrespect of cleaner staff

**Main action:** The hospital was to implement an occupational safety and health management system to cover not only the medical staff but also all support services. A steering committee was formed, including representatives of all categories of hospital staff and management. The steering committee developed an overall implementation and information strategy. One health forum was formed by the cleaning workers of the hospital, all of them women.

**Main worker participation measures:**

- Steering committee
- Health forums – including a specific cleaners' forum

**Description of worker participation:** During the meetings workers' input made obvious that psychological rather than physical risks were the main concern of the cleaning staff. The impractical work uniform — a short dress made of synthetic fabric — was identified as the main reason for sexual harassment and accident risks. The health forum reported to the steering committee and tested new uniforms consisting of a cotton tunic and trousers.

**Results:** By introducing a new, practical, worker-friendly uniform, job satisfaction and the self-confidence were enhanced, and several risk factors for the job eliminated. The project also had the added effect of sensitising the workers to safety and health issues.

**Source (URL):** Preventing harm to cleaning workers

<http://osha.europa.eu/en/publications/reports/TEWE09006ENC/view>

## **CS 149 - Designing hotel rooms with cleaning in mind**

**Country :** France

**Organisation:** Caisse Régionale d'Assurance Maladie d'Ile de France (CRAMIF), Hotel Scribe

**Activity:** Hotel (cleaning)

**Main risks:** Ergonomic risks during room cleaning.

**Main problem:** Future rooms of the hotel were to be designed to prevent occupational risks insofar as possible.

**Main action:**

As part of a total refurbishment project the hotel hired an architect, who designed model rooms which the workers have been able to test. Three model rooms were identified as being broadly representative of the situations found in the establishment.

**Main worker participation measures:** Testing of model rooms and providing feedback

**Description of worker participation:** Management outlined the project to the chambermaids, emphasising the attention paid to their problems while asking them to try out the rooms to ensure they met their needs. Following the tests, analysis of the critical comments made it possible to distinguish between undeniable problems and mere resistance to change in the workplace.

### Results:

Involving the chambermaids in the project, and preparing them for the changes, was invaluable in helping gain acceptance for the changed working conditions. The characteristics of the new Scribe rooms are as follows:

- Room — wall-mounted television set, small-sized furniture (console, armchair, etc.) to save space, correspondence folder to prevent stationery from becoming scattered, light waste bin (the previous one was made of a heavy material), flush wall sockets, choice of fabrics that do not show the dirt (no more velour armchairs!), elimination of curtain cords, reduction in the number of skirting boards which are, moreover, placed higher up.
- Bathroom — choice of smooth ceramics that do not show the dirt for the ceramics, suspended WCs for ease of cleaning, plastic coverings for dressing gowns, etc.
- Tools — provision of feather dusters, research on trolley manoeuvrability, etc.

**Source (URL):** Preventing harm to cleaning workers

<http://osha.europa.eu/en/publications/reports/TEWE09006ENC/view>

## **CS 150 - MAS — Multicultural Amsterdam Cleaning company**

**Country:** Neitherlands

**Organisation:** MAS Dienstverleners

**Activity:** Cleaning

**Main risks:** Almost all employees are of immigrant origin.

**Main problem:**

- Low education levels and lacking fluency in the language of Member State (Dutch)
- Employees reporting sick when experiencing practical household problems

**Main action:** The company has an extensive and integrated staff policy with a focus on selection (initial) training, development, absenteeism and occupational health and safety. All employees have to obtain a basic certificate 'Skilled Cleaner'. During the initial training period, new workers work with colleagues and learn their tasks, rights and responsibilities in the field of occupational safety and health. At the end of the starting week a form summarising completed tasks is sent to the personnel department, which arranges a meeting with the new employees. Employees are also offered Dutch language courses.

**Main worker participation measures:**

- Development discussions with human resources
- Bi-monthly meeting of groups or workers initiated and paid by the employer
- Language training

**Description of worker participation:** In theory, employees are allowed to discuss the good aspects of their job and suggest areas for improvement of their managers and the company, but, in practice, they are afraid to do so. Being able to speak to the personnel officer rather than their direct boss makes it easier for them to do this. Employees who have been with the company for a year or more are invited to consult the human resources department to provide input on areas of improvement for all employees. These discussions give employees and the employer the opportunity to evaluate work satisfaction, and as a result hopefully to increase well-being at work.

Every two months a different group of employees from the company's various levels is invited to a meeting. They receive a letter at home asking them to take part in this discussion meeting. They receive the agenda and they can add points for discussion. When taking part in the meeting, they are paid normal working hours. More and more employees are enthusiastic about this initiative and want to participate. The topics are diverse, from practical arrangements during Ramadan to the start of a



new training programme. These meetings resulted in better insights into bottlenecks and higher employee participation.

**Results:** MAS has become a successful company with well-trained and motivated employees whose work is of a high standard. Efficient staff policy keeps absenteeism low.

**Source (URL):** Preventing harm to cleaning workers

<http://osha.europa.eu/en/publications/reports/TEWE09006ENC/view>

## **CS 151 - Safety and security for cleaners — Dussmann Service**

**Country:** Austria

**Organisation:** Dussmann Service

**Activity:** facilities management - cleaning

**Main risks:**

- psychosocial and musculoskeletal loads
- complex interrelated conditions

**Main problem:** Musculoskeletal, cardiovascular and skin diseases.

**Main action:**

The project was based on a three-year awareness campaign within the company where the situation of the cleaning personnel was analysed.

The training concept 'Moving with Awareness' will also be presented; and trained personnel will, in turn, train all employees of the company. Job enrichment and teamwork will be addressed in detail, together with the prevention of drug addiction. Site managers will come up with a way of giving staff a proper introduction to the job. It is also planned to purchase ergonomically sound equipment.

**Main worker participation measures:**

- Interviews
- Working groups (health circles)
- Representatives on steering committee
- Workers given more responsibilities in their job

**Description of worker participation:** The project started with a meeting at both company sites, followed by employees' interviews. After the results were published, work groups (health circles) evaluated the survey. There are two health circles at each company site. These meet and develop suggestions on shortcomings which need to be addressed. Thus cleaning workers are involved into the development of the preventive measures that will guarantee that the measures can and will be applied in practice. The steering committee and the health circle are envisaged to continue their work to achieve a continuous improvement process.

- Working groups involving cleaners developed, discussed, tested and finally applied intervention measures
- Representatives were members of the project steering committee
- Cleaners part of the health circles.
- Workers take over more and more responsibility, by establishing the implications of their activities in common learning processes.

**Results:** The project was in progress, the following recommendations were developed:

- Job enrichment is of importance for the prevention of health problems.
- Teamwork can also help in enabling physically demanding tasks to be alternated with less demanding tasks and it can help to expose cleaners to a greater variety of tasks.
- Cleaning should take place at reasonable hours.
- Mop holders should have a standing aid, so there is no need to bend down to pick up fallen mops.

- Cleaning trolleys meeting ergonomic requirements can reduce carrying of heavy loads and bending.
- For larger areas a battery-powered machine should be considered.
- Floors should be cleaned with dry or damp procedures or there should be a combination of wet and dry methods.
- Washed mops and cloths could be delivered in damp state.
- Clothes should provide adequate protection but should also meet the expectations of the cleaners in terms of wearability and style.
- Shoes should be closed in the rear at order to give sufficient support and they should have a special sole to prevent slips.
- A skin protection plan should be in force.
- Cleaners need realistic opportunities for advancement and they need specially designed courses.
- Health and safety training is also needed and should also be designed specifically for the target group.
- Qualifications are also needed for superiors, managers, and other stakeholders to raise their awareness of the problems cleaning workers are confronted with and to introduce the methods to overcome them.
- Constructive measures are needed in modifying ergonomic design and cleanability of the sites.

**Source (URL):** Preventing harm to cleaning workers

<http://osha.europa.eu/en/publications/reports/TEWE09006ENC/view>

## **CS 152 - The chamber maids' work: Ergonomic approach**

**Country:** France

**Organisation:** CRAMIF; SOFITEL

**Activity:** Hotel

**Main risks:**

- MSD's
- Stress
- Accidents at work

**Main problem:** Hotels are faced with difficulties concerning their chambermaid personnel in a changing environment: occupational injuries, absenteeism, demotivation, recruitment problems, population ageing, etc.

**Main action:** Creating a reference group involving workers to develop an autonomous permanent preventive approach within the hotel, based on ergonomic analysis of the chambermaids' actual work, and to reduce the work's stress and pain.

**Main worker participation measures:**

- Working group
- Survey
- Training of workers in risks analysis
- Evaluation questionnaire

**Description of worker participation:**

An initiative was carried out in particular with Sofitel Hotel, at the request of the management.

The reference group for this hotel was formed of two chambermaids, two housekeepers, a human resources assistant, a member of the CHSCT (committee for health, safety and working conditions), a maintenance employee and an instructor from the ACCOR Academy.

The players were mobilised chiefly by the presentation of the group's approach and the results to the hotel management, the partners (industrial doctors, Île-de-France Regional Health Insurance Fund (Cramif), instructors from the academy, etc.) and to the other floor staff teams.

Training for the Sofitel reference group was provided by dispensing theoretical knowledge and through practical work in real-life situations to learn how to analyse work activities in order to look for solutions for improvement.

**Results:** Finally, in 2005, the first occupational health and safety measures were implemented.

They consisted of a new work organisation, i.e. the establishment of an operating procedure for room cleaning and the appointment of expert chambermaids for training new recruits and supervising compliance with the procedures, and the purchase of new equipment.

In 2006, new measures were introduced, especially concerning work organisation. For example, the process of integration was formalised with the expert chambermaids, the breakdown of working hours was modified (to create a better balance between working hours and rest periods), a catalogue of ideas was introduced, research was carried out on less painful work methods, and a document was produced summarising all the good practice rules of the job and ideas and tips found during the group work.

Work was also carried out on cleaning performance aids,

And the rooms were reconfigured.

At present, a practical data sheet dealing specifically with chambermaids' and valets' work is in preparation; it describes the sector, the job, the need to understand the actual work activity, and pointers to attenuate work constraints. Training around the measures was developed.

- with regard to training measures included: creation of internal resources for research on the work, the participatory approach, professionalism and enhancement of the job's image.

An evaluation of this project was made through the questionnaire 'one year later'. In the second quarter of 2006, questionnaires were produced by the two leaders of the reference group and questions were asked by the two chambermaids in the reference group. The questions prepared made it possible to gain an impression of a representative sample of chambermaids (10 in all) of different ages, length of service in the establishment and morphology (size).

The overall situation for Sofitel is as follows.

- Improvement in the work atmosphere: development of mutual aid between chambermaids and job enrichment.
- Reduction in the number of occupational injuries and raised team awareness of the various risks related to gestures and postures.
- Reduction in the time to make the bed,
- Chambermaid satisfaction: with respect to the equipment installed, the new work organisation and follow-up by expert chambermaids
- Transmission of good practice rules: conveyed by expert chambermaids trained in the ergonomic approach (role as catalyst in team cohesion).
- But difficulty in finding equipment for cleaning bathrooms.

Following this initiative, the training department of ACCOR extended this approach to 10 Sofitel hotels in France during 2006. All the Sofitel hotels in the French network are encouraged to develop this training within two years, on a voluntary basis.

**Source (URL):** Protecting workers in hotels, restaurants and catering

[http://osha.europa.eu/en/publications/reports/TE7007132ENC\\_horeca](http://osha.europa.eu/en/publications/reports/TE7007132ENC_horeca)

## **CS 153 - Risk assessment in the hotel sector**

**Country:** Greece

**Organisation:** ELINYAE

**Activity:** Hotels and restaurants

**Main risks:**

- Poor air quality
- Slips and falls,
- explosions
- Noise,
- Dust

**Main problem:** Prevalent health hazards are poor air quality, due to dust, and high noise levels. Safety hazards identified included slippery floors and falls, and possible explosions from the misuse of combustible materials.

**Main action:** Due to its tourism industry, Greece has a large numbers of hotels and accommodation units employing many workers in a diverse number of activities. For this reason ELINYAE chose to investigate a number of activities and services in the hotel business for potential health and safety problems, with the ultimate aim of developing a model for risk assessment for hotel employees.

Within this field study, measurements were made of noise levels, thermal stress, suspended solids, carbon dioxide and carbon monoxide levels, and for pathogenic and non-pathogenic micro-organisms.

**Main worker participation measures:** Questionnaires aimed at workers

**Description of worker participation:**

The study was brought to completion in three phases:

- literature research
- field study, and
- evaluation of experimental results and conclusions.

The second phase contained the main body of the study and included the following.

- The filling of questionnaires. Here employees were required to provide information on health and safety aspects for each group work or service activity.
- Formation of a model for assessing and preventing occupational hazards.

The questionnaire was generally well accepted at all hotels and the response was high, except in one case, where a particularly small reply level was noticed. This was attributed to intense working rhythms and lack of disposable time. In this particular hotel a change in management had recently occurred. The new management was indifferent to the distribution of the questionnaire, and their general attitude created an atmosphere of uncertainty and general anxiety.

**Results:** From this study a number of conclusions can be drawn about the state of health and safety in the hotel business. For a number of areas, such as the hot and cold plate kitchens and the laundries, where unfavourable working conditions may prevail, recommendations were made for improving the work environment. The observations and conclusions derived from the study could be used to conduct seminars and instruct many more employee groups in the hotel business.

**Source (URL):** Protecting workers in hotels, restaurants and catering

[http://osha.europa.eu/en/publications/reports/TE7007132ENC\\_horeca](http://osha.europa.eu/en/publications/reports/TE7007132ENC_horeca)

## ***CS 154 - Safety enhancement in swimming pool chlorination systems***

**Country:** Italy

**Organisation:** Spisal ULSS No 16

**Activity:** Thermal sector

**Main risks:** chemical intoxication and gaseous chlorine inhalation

**Main problem:** Chemical intoxication and gaseous chlorine inhalation

**Main action:** Spillages of water treatment products in water treatment plants of swimming pools. .  
Review of new procedures development of act guidelines

**Main worker participation measures:** Working group

**Description of worker participation:** The first action was the creation of a mixed working group made up of technicians from control agencies and representatives from the associations of entrepreneurs that are participating together in order to identify the necessary interventions required to avoid further accidents.

The major actions consisted of the analysis of the causes of accidents, investigation of the main techniques for the treatment of thermal swimming pool waters, integrated control of the interactions between the various system plants that incur water quality control (chemical, hydraulic, electrical, and electronic), definition of enhancement procedures, identification of methods of communication, the dissemination of information and sharing of work experience.

These actions led to the creation of guidelines for the management of chlorination system plants, covering both the management aspects and the system plant modifications aimed at improving safety.

No change of methods, targets etc., occurred during the action, which required about 400 man-hours to complete the guideline, and involved around 20 individual technicians, designers and plant system managers.

**Results:** Comparison of the situation before and after the circulation of the guidelines shows that no further accidents have been recorded. Moreover, the quality of service offered to tourists, as well as working conditions, seem to have improved as a direct result of system plant operators' enhanced professionalism and improved awareness.

**Source (URL):** Protecting workers in hotels, restaurants and catering

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## ***CS 155 - Distance learning for the hotel sector – training project for personnel in the hotel industry***

**Country:** Italy

**Organisation:** ISPESL

**Activity:** Hotel

**Main risks:**

- high turnover of personnel;
- seasonal nature of the business;
- precariousness of the work;
- high number of non-native born workers;
- need for certification of training provided for by regional rules.

**Main problem:** achieving the required levels of training

**Main action:** The project was aimed at employers and employees in the hotel accommodation sector. The project tested out a participative model of prevention actions intended to resolve specific difficulties in the sector in the area of training, included both managers and employees

**Main worker participation measures:**

- Training of workers
- Trade union's involvement in the project
- Workers participation

**Description of worker participation:**

Following around seven years of vigilance and control of the hotel industry, the Operational Area of the Local Health Unit (LHU) Valdichiana — organised a convention . From this it emerged that hotel industry personnel (trade associations and trade unions) complain about the singular difficulty of creating consistent training plans in line with the planning of prevention activities.

The project is inspired by the rationale of a development pact (signed and agreed by the Tuscan regions and the trade associations, both employer and trade union), which provides for the participation of all interested parties.

The Hoteliers Association of Chianciano Terme has provided space and equipment to set up an IT classroom for free attendance by employers and workers. Confcommercio (Italian General Federation of Commerce and Tourism) will provide workers with tutoring and will coordinate administrative/teaching support with a view to certification of the training to meet regional standards. The LHU will provide assistance and tutoring to employers and workers. Trade unions will provide the support necessary to properly disseminate and promote the product. In this way, interested parties (employers and employees) will have very easy access to a training service offering training materials validated by accredited bodies, and high quality professional, technical and logistical back-up.

Software has been produced for employers' self-teaching and for their employees, and provides for a differentiated training programme which can be tailored to the specific duties performed, depending on the tutor's initial definition of a user profile: clerk and receptionist, kitchen assistant, barman, waiter, chambermaid, porter, maintenance man, car park attendant, laundry operator, lifeguard.

The product is also provided on CD-ROM, to be distributed within firms. The software is user-friendly and allows users to integrate the training programme with images, photographs and maps of their own facility. An online version of this software will also be provided. As for training content, the product is divided into two areas, 'prevention at work' and 'Hygiene and public health'. A system of assessment with a multiple-choice questionnaire has been devised.

**Results:** The data which will become available, following a period of observation of one year from the first experience, allow certain indicators to be assessed such as:

- the frequency of accidents;
- the percentage of workers complying with the compulsory training requirements/controlled workers;
- the percentage of firms complying with the compulsory training requirements//controlled firms;
- the percentage of firms complying with the requirements for compulsory prevention in the workplace/controlled firms;
- the percentage of firms complying with the requirements for food safety/controlled firms.

**Source (URL):** Protecting workers in hotels, restaurants and catering

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## **CS 156 - Substitution of beds, Melia Hotels**

**Country:** Spain

**Organisation:** Melia Hotels

**Activity:** Hotels

**Main risks:** MSD's, Stress

**Main problem:** bad making, vacuuming, moving furniture, pushing trolleys

**Main action:** The introduction of beds with a lift mechanism in hotels can reduce the efforts that chambermaids have to make in bed preparation and in floor cleaning, worker training

**Main worker participation measures:**

- Consultation of workers
- Working group.
- Training of workers by prevention service and trade union

**Description of worker participation:**

The idea of introducing a lifting mechanism to elevate the beds and adapt the job to workers had been identified as a possible solution some time ago. Both the preventive service and workers' representatives demanded such a measure based upon the available information, and on similar experiences in other hotels.

Action was taken to reduce back injuries in the group. It involved trade union representatives, employees, the staff of the preventive services, the mutual insurance company, and the manufacturing company. A project was initiated both by trade unions and preventive services, during which they acknowledged the need for this action to be taken. The employer eventually approved and implemented the measures.

Training and providing information on musculoskeletal disorders has been carried out in the company since 2000, through a trade union initiative in cooperation with the preventive service and the employers. Training activities included workshops, in which maids participated, to raise awareness of the risks related to their daily tasks, especially risks of musculoskeletal disorders.

Preventive criteria for the acquisition of new beds included a mechanism to elevate the bed, thus making the maids' work easier. The idea was to lift the bedstead to reduce lower back efforts and torsion. Workers could use a lever to place the bedstead in either of two positions: 'high' or 'low'. The high position makes it easier to clean that part of the floor under the bedstead.

The opportunity to replace the beds came when a thorough overhaul was conducted in one of the hotels: the Palas-Athenea in Palma de Mallorca. A total reconditioning was carried out, aimed at raising the quality standard of the facility from Sol standards to Melia's (a higher category in the same hotel group), including the upgrading of the infrastructure.

**Results:** Workers and their representatives expressed a high level of satisfaction with this solution. A significant reduction of absenteeism among maids was observed within the next two years. The reduction of efforts in the arrangement of beds and the cleaning of the rooms was highly valued.

**Source (URL):** Protecting workers in hotels, restaurants and catering

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## ***CS 157 - Participatory ergonomic intervention in kitchen work: a randomised controlled trial and an ethnographic study on work development***

**Country:** Finland

**Organisation:** Finnish Institute of Occupational Health

**Activity:** Catering

**Main risks:**

- Strenuous work
- MSD's
- Stress

**Main problem:**

Communal kitchen workers have more hospitalisations than their age group on average. Their health and physical ability to work is also poorer than any other occupational groups in the municipal sector. The work is physically more strenuous and to have a fast-paced

**Main action:**

A study was carried out to investigate the effectiveness of participatory ergonomic interventions in the prevention of work strain and in promoting musculoskeletal health and general wellbeing of kitchen workers.

**Main worker participation measures:**

- Participatory ergonomic methodology
- Focus groups
- Worker training in risk analysis
- Workshops
- Questionnaire
- Ethnographic survey

**Description of worker participation:**

Following the participatory methodology, individual changes in the kitchen work were both planned and implemented by the workers and managers of the workplaces. During the field phase, the ergonomists and scientist mainly had a supporting and monitoring role in the action. Another goal was to scrutinise how the workplace culture interacts on the effects of the interventions. An ethnographic culture analysis aimed to describe the positive and negative features of the kitchen work and work environment as perceived by people in different occupations and positions in kitchens.

The interventions were conducted in trial kitchens, and other kitchens were monitored for reference. Nine to 12-month-long interventions were carried out. The targets for the ergonomic changes were selected by the kitchen workers who were also performing the actions to improve their working conditions.

The employees of the trial kitchens were invited to the first preparatory workshop. In this workshop, the ergonomists presented basic information about the ergonomic problems relevant to kitchen work and the results of the ergonomic risk assessment in the participating kitchens. Ergonomic changes were advised to target tasks that were performed by several workers, that were physically strenuous, and that were repeated weekly, or those that involved a sudden risk of overloading the worker. The workers were also taught to analyse their work. After the workshop the workers analysed their work and selected one to four targets for development in their kitchen. The targets and plans were accomplished in the second preparatory workshop a month later.

Later during the intervention period, six three-hour-long workshops were arranged so that staff from the kitchens visited each other. In these workshops, the ergonomists lectured first on specific issues in



kitchen work, such as repetitive work. Then the participants discussed the progress and further actions of the ongoing developments.

The kitchens also had the opportunity to consult the ergonomist during the implementation phase. Good solutions encountered during the developing work were collected into an idea folder that was used to disseminate the experiences during the project.

A prior ergonomic risk assessment in the workplace was performed in all kitchens. After the intervention period all the trial kitchens and one of the reference kitchens were assessed. The targets of the interventions were video-recorded before and after the changes, whenever possible. Additionally, the workers filled in questionnaires on their health and work strain before the intervention, during the intervention period and immediately after the interventions were completed, and one year afterwards. The ethnographic study was based on interviews, observations, and free-form writing from the participants. The whole intervention was evaluated by focus-group interviews of three to four representatives of both workers and managers in two of the cities and questionnaires filled in by the workers.

#### **Results:**

Over 400 changes were completed, most of them being targeted at work organisation, methods and habits, machines, equipment and tools, and layout and furniture. Most of the interventions were directed at dish washing, and preparing and serving food.

An important practical outcome was an Internet database on good practices identified in the project. Available at: <http://www.ttl.fi/keittiovinkit>.

The database is provided in simple and clear language applying terminology that is familiar to kitchen employees.

In the baseline questionnaire, respondents reported high levels of musculoskeletal symptoms and stress. Less than half of the workers felt that they have plenty of possibilities to influence decisions concerning themselves in their workplaces.

According to the ethnographic study the excessive workload and pressing pace of work was considered to be the central burdening factor. On the other hand, workers considered the fast pace of work with numerous tasks meaningful if the atmosphere prevailing in the kitchen is positive, open, happy, and functional. Another important observation of the culture study was that employees committing themselves to a larger entity such as a day-care centre, are likely to cooperate better and cause less conflicts than workers committing themselves just to their own job, closest colleagues and the kitchen.

The ethnographic study also revealed that the kitchens conducted the intervention in two different modes. In more hierarchically and supervisor-centred kitchens, the development project was not a shared endeavour but was carried out mainly by the head of the food producing unit. This decreased the motivation of the employees and caused passivity and disappointment. Another mode of action was based on collective responsibility and shared development, in line with the principle that 'everybody does everything'.

The analyses on the effectiveness of the intervention was conducted to be published in 2007–2008.

**Source (URL):** Protecting workers in hotels, restaurants and catering

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### ***CS 158 - Facilitating wellbeing at work in restaurants***

**Country:** Finland

**Organisation:** Finnish Institute of Occupational Health

**Activity:** Restaurant

**Main risks:** Psychosocial risks, MSD's

**Main problem:** The work in school kitchens is similar to work in restaurant kitchens, but only one to three workers usually work in one kitchen. Workers need training to improve their work-knowledge and well being at work.

**Main action:** A multi-level intervention programme was planned to improve the work process, workers' work process knowledge, and wellbeing among personnel in school kitchens.

**Main worker participation measures:**

- Survey
- Training programme
- Workers participation
- Group exercises

**Description of worker participation:**

One hundred and twenty-three school kitchen workers participated in the evaluation study of the training programme.

The intervention consisted of the implementation of a programme that lasted two years and included several phases.

The first phase aimed to improve work process knowledge and included the following elements:

- The analysis and development of kitchen work (two days). The main method involved
- acquiring learning based on the analysis of the work process.
- The development of work in district teams (24 x two hours). Each team had chosen its own objectives to be developed. Acquiring learning was also the principal method in this phase.
- Sharing the development ideas and results of improvement work with all workers (three days).
- Training in the use of electronic equipment in the school kitchens (two x six hours), lecturing and learning from experience (rehearsing the task).

The second phase of the intervention was meant to improve functionally the capacity of workers, and included participation in group exercises one hour a week and participation in special 'days to find out different ways to support the work ability of personnel' (five x one days).

The final phase of the intervention was based around health promotion and was organised for special groups, which included:

- a weight-watchers group for those suffering from excess weight ;
- a group to discuss health issues among women over 45 years ('Senioriitta').

Other interventions were directed to special groups such as the leaders of the organisation or the teams. Most of the interventions were organised during working hours, and participation was generally compulsory.

**Results:**

Questionnaires were used to get an indication of the participants' work characteristics and wellbeing. The participants were asked to fill out the questionnaires before and after the intervention programme.

The results showed that significant changes were realised after the intervention. The participants were more satisfied with their jobs, they had greater mental resources, and they suffered from fewer psychological symptoms.

The workers' conceptual mastery of their work improved. A development programme based on systematic analysis of the work process can improve work process knowledge of kitchen work. Nevertheless, conceptual mastery was not perfect, even after the interventions. This shows that there is a continuous need to analyse and develop work in school kitchens.

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## **CS 159 - Good practice to prevent stress and burnout in the hotel and restaurant sector**

**Country:** Finland

**Organisation:** Finnish Institute of Occupational Health

**Activity:** Restaurants and hotels

**Main risks:** Stress, Burn out

**Main problem:** Supervisors can be assumed to be a high-risk group for work stress and burnout and need support.

**Main action:** The main aim of the study was to examine the feasibility and effectiveness of work counselling groups for managers in the hotel and restaurant sector.

**Main worker participation measures:**

- Discussion groups
- Workers participation
- Group counselling

**Description of worker participation:**

It was hypothesised that recession affects burnout and stress in supervisors, but that group counselling lessens the effects of the recession. A field experiment was conducted with two intervention groups and one control group. The experimental groups were of two types; one was directive, where discussions were focused and controlled by the counsellor, and in the other group non-directive ways of support were applied; that is, the participants were allowed freely to decide what matters they wanted to discuss.

The intervention was planned to increase social support at work and bring more clarity to work roles to prevent stress and burnout. The groups aimed to alleviate stress and burnout during major changes in organisations and working life. In the counselling groups it was possible to discuss openly work-related problems and thus develop a clearer view of personal work goals and common expectations about the role of supervisors in the changing environment. The competence to control one's work and having realistic personal work goals was assumed to decrease stress and enhance psychological wellbeing and productivity in the long run.

The intervention measures were expected to improve the managers' ability to cope with stress, and to increase group cohesiveness.

In the experiment groups, the supervisors discussed their work problems, and analysed their work goals and roles over half a year.

The participants included 21 supervisors, all women. Small groups of supervisors consisted of six to eight participants. The directive group differed from the control group; the mean age was slightly higher than in the other groups. The other intervention group did not differ from the control group. The mean ages of the groups varied between 38 and 40 years.

Measurements consisted of questionnaires, interviews, and open-ended questions. The researcher collected the information and participated as a passive member in the group discussions. Group leaders were trained in work counselling. Statistical methods were used to analyse the data.

In the pre-and post-measurements, the respondents were asked about their organisation and work role. Manager's stress and burnout was measured using the Maslach's Burnout Inventory, with translated and modified items. The questions from the OSQ (occupational stress questionnaire) about work strain were included. Stress symptoms were measured using a 12-item scale. Role conflict was examined through five questions.

**Results:**

Supervisors were asked to list the most stressful factors in their work and life in general.

Problems connected with the recession were the most commonly mentioned stress factors. The fear of losing one's job was especially stressful.

The general trend was that in the intervention groups satisfaction with the organisation's efficiency, personnel management, and physical and psychological wellbeing increased, whereas in the control group the level of satisfaction fell over time.

Role conflict decreased in the non-directive group, but in the control group and directive group role conflicts appeared to increase. Role clarity decreased in all three groups. Role conflict and role clarity are connected with work stress. When the support from managers decreases and work role problems increase during recession, the symptoms of burnout and stress tend to increase.

Those supervisors who in the beginning phase valued their own work goals, and were committed to them, had fewer burnout symptoms in the end phase. The analysis indicated that burnout symptoms are connected with the amount of autonomy at work, the relationship with the supervisor, and how realistic and valued people's own work goals are.

The work goal index, the commitments to goals and the estimated likelihood of being able to achieve their goals did not vary between the groups or over time. However, the reported benefits of having personal work goals were greater in discussion groups and increased during the sessions.

Group work had a positive effect on team effectiveness. In the control group team effectiveness, group cohesion and satisfaction with the supervisor decreased during the study. At the same time, symptoms and loneliness increased. This may have been caused by the worsening economic situation in the firm and in the country. However, in the directive group team effectiveness increased, while in the non-directive group it remained the same.

The hypothesis was that recession causes psychological strain on supervisors, but the group discussions and sessions, when they offer social support, buffer its effect.

The recession increased exhaustion and decreased the feeling of personal accomplishment, which are sub-factors of burnout. Burnout symptoms increased in all groups over time.

The effect of time was different in the different groups: in the directive group the supervisors' team effectiveness increased, while in the non-directive group it remained the same. In contrast, in the control group team effectiveness decreased.

There may be mild buffering effects in the intervention groups against the negative effects of recession. The small number of participants, however, prevents this mild effect from being statistically significant.

The results showed that the supervisors' discussion groups are feasible and well suited to prevent supervisors' stress in the hotel and restaurant sector. The supervisors felt that they gained support from each other. They had an opportunity to see that they were not alone with their problems in a changing situation. The positive effects of supportive discussion groups were seen in the satisfaction with the organisation and the social effectiveness of their own work teams. In sum, using discussion groups seems to be an effective method to prevent and tackle stress and burnout in the hotel and restaurant sector.

**Source (URL):** Protecting workers in hotels, restaurants and catering

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### ***CS 160 - Wetwork – prevention of skin diseases due to permanent work with water in large canteen kitchens***

**Country:** Germany

**Organisation:** Kooperationsstelle Hamburg

**Activity:** Catering

**Main risks:** Skin diseases

**Main problem:** The reason for undertaking the action was the high number of skin diseases, the low application of good practice and the low degree of implementation of existing regulation.

**Main action:** Reduction of skin diseases and irritation due to permanent work with water in canteen kitchens. Introduction of better skin protection, skin protection plans and guides on how to use the right gloves.

**Main worker participation measures:**

- Workers survey
- Workers consultations
- Workers participation
- Participative Elaboration of a strategy

**Description of worker participation:**

The action consisted of four main parts:

- Identification and assessment of the status quo in four large canteen kitchens.

This part included a survey of the employees, work place visits to assess the technological situation, the organisation of work, the organisation of protection measures and the medical examination of skin diseases;

The employees wore gloves of different types most of their working time. Approximately one third never used protective skin creams or skin care cosmetics; only around one third were aware of skin protection plans.

The visits to workplaces showed that basic parts of the existing regulation were not being implemented. There were a number of typical problems. The employees had a number of proposals to improve the situation, mainly concerning information, instruction, detailed plans and better availability of skin protection and care products.

- Development of a practical prevention strategy;

Based on the survey and on the information from the visits, the proposals from the employees and the medical examination, the three partners developed a prevention strategy.

This consisted of: a standard letter to OSH-representatives in canteen kitchens (as a model for OSH authorities); a standard letter to the management in canteen kitchens; a leaflet 'OSH and wet work in kitchens'; a leaflet 'Skin protection, skin cleaning and skin care in kitchens', including a standard skin protection plan; a leaflet on liquid-tight gloves in kitchens, including a standard glove plan; standard instruction on wet work; tips on how to instruct and inform employees.

- Test of the prevention strategy in other hospitals and similar work places;

The tool (i.e. the full information package) was tested in the two pilot hospital kitchens and two others. This test phase led to small changes in the content of the leaflets.

- Dissemination of the strategy.

Finally the information package was disseminated via the project partners. The dissemination covered mainly canteen kitchens in the public sector.

**Results:**

The main result is the published information package for better skin protection for wet work in kitchens. The most successful element is very probably the combined approach of survey, workplace visits, medical examination and the test of the tools.

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## **CS 161 - MSD's in a university kitchen**

**Country:** United Kingdom

**Organisation:**

**Activity:** Catering

**Main risks:** MSD's

**Main problem:** Employees in a university kitchen over the course of a working day were responsible for performing different tasks, which contributed to their experiencing a variety of aches and pains. Employees did not link the discomfort that they felt to their jobs.

**Main action:** The management conducted a risk assessment of the kitchen duties that highlighted the tasks that employees felt were the most arduous. The management implemented changes to the equipment, which reduced the risks to staff.

**Main worker participation measures:**

- Workers consultation
- Job rotation

**Description of worker participation:**

The tasks that workers were required to perform in the kitchen during a working day were very diverse, and ranged from preparing food, taking food to the distribution area for waitresses to take to customers, washing pots and pans and cleaning the cooking equipment.

The management of the organisation carried out a risk assessment of the kitchen. They involved the employees in the process, as they were the ones with first-hand knowledge of the tasks that they performed on a daily basis.

The musculoskeletal risks were reduced by offering the employees different ways to conduct tasks or by changing the work environment to eliminate risks.

Staff and management set up a job rotation system so that employees were not performing the same task for the entire working day. For example, staff would spend a few hours working in the sandwich preparation area and then move to a different task, therefore reducing the employees' exposure to the risk factors associated with sandwich preparation (for example continual bending and twisting of the wrist when buttering the bread).

**Results:** The staff were directly involved in the process, and they seem to have responded well to the changes.

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## **2.2. Commentary on Worker Participation extracted from Report Conclusions**

### **2.2.1. Prevention of psychosocial risks and stress at work in practice:**

**Report conclusions on worker participation:**

**Success factors in stress prevention initiatives:**

- Adequate risk analysis

A baseline should be established through risk assessment. Surveys can be part of this process, but surveys should not be undertaken unless there is a clear intention of taking timely action on the results

- Thorough planning and a stepwise approach

Clear aims should be set and target groups identified, as well as identifying tasks, responsibilities and allocating resources.

- Combination of work-directed and worker-directed measures

Priority must be given to collective and organisational interventions to tackle risks at source. Worker-directed measures can complement other actions.

- Context-specific solutions

Employees' on-the-job experience is a vital resource in identifying problems and solutions. Outside expertise may sometimes be necessary too.

- Experienced practitioners and evidence-based interventions

Only competent outside expertise should be used.

- Social dialogue, partnership and workers' involvement

Involvement and commitment from employees, middle and senior management is crucial for every stage of an intervention.

- Sustained prevention and top management support

Sustainable improvement is not possible unless management is ready to make changes. Risk management should become a principal of the way business is done.

#### *Social dialogue, partnership and workers' involvement*

Social dialogue, partnership and workers' involvement play important roles in determining the success of stress prevention initiatives. Work practices and solutions to problems must be matched to the particular situation by carrying out an assessment of the risks at the actual workplace concerned. Involvement of employees and their representatives to identify problems and develop solutions is crucial to success, as workers have firsthand experience of the work situation (page 8). This is clearly illustrated by case 'training for managers on management styles to reduce stress at work', where an initial occupational stress survey was carried out in all the participant companies to assess the problem. It is worth mentioning that when carrying out these types of surveys, individual confidentiality is very important. In addition to risk assessment, social partners and workers should also be actively involved in seeking effective solutions to the problems. In the case of 'implementation of a prevention plan for risks relating to third party violence in an urban public transport company', elected staff representatives were actively involved in preparing quarterly statistical review reports of attacks on staff and material damages as well as seeking new prevention and safety measures. In order to deal with complex issues such as harassment and bullying it is important that all parties in the company understand and agree with what constitutes acceptable and unacceptable behaviour and for this to form part of the terms and conditions. For example, in the case of 'work culture agreement' to tackle harassment, bullying and discrimination', the 'work culture agreement' was developed and introduced as part of a general approach of developing effective human resource management. The agreement was developed in partnership with trade unions and the Equal Opportunities Commission, and involved working with the entire workforce (page 58).

**Source (URL):** <http://osha.europa.eu/en/publications/reports/104>

### **2.2.2. *How to tackle psychosocial issues and reduce work-related stress (2002)***

#### **Report conclusions on worker participation:**

Key elements contributing to the success of tackling psychosocial issues and reducing work-related stress are: (page 122 - 124)

- Adequate risk analysis
- Thorough planning and stepwise approach
- Combination of work-directed and worker-directed measures

- Context-specific solutions
- Experienced practitioners and evidence-based interventions
- Social dialogue, partnership and workers' involvement
- Sustained prevention and top management support

#### *Social dialogue, partnership and workers' involvement*

To secure ownership of an intervention, involvement and commitment of employees and their representatives, middle management and top management is crucial in every stage of the process. The management should accept responsibility and employees should be included in all assessment, decision-making, and implementation stages. The management and employees will represent different motives and interests in the stress preventive activities and in addition to this comes the interest of consultants, researchers and other parties. It is important to find a compromise of overlapping or parallel interests, which should be the basis of the cooperation. In some cases, local staff can be trained as special resource persons, equipped to build bridges between the different parties.

Source (URL): <http://osha.europa.eu/en/publications/reports/309>

### **2.2.3. *The managing risks to drivers in road transport***

#### **Report conclusions on worker participation:**

Drivers work independently and away from a fixed base. They may be self-employed and often have long experience as drivers. This means that it is not always easy to communicate with them and consult and involve them, and they are not always open to change. Because of this, drivers need to be intimately involved in solutions – solutions need to be developed by drivers for drivers using participatory methods, in order to use their experience and gain their acceptance. It is also crucial to allow sufficient time to discuss, plan, trial and introduce changes. The experience of drivers can also be harnessed by using them as advocates, trainers and mentors.

The active participation of workers from the beginning and throughout the intervention was highlighted as a key success factor in a number of cases. In particular, it was found to increase the interest, engagement and motivation of drivers in participating in the programme and changing/adapting their working behaviours. Increasing the participation of workers was accomplished in a number of ways; for example, by having more experienced drivers deliver training and feedback sessions, and providing commentary on the development of OSH policies and organisational practices through surveys and focus groups.

#### **Drivers could air their views include:**

- regular information exchange meetings
- toolbox meetings and individual feedback
- drivers providing daily reports
- interviews between managers and drivers
- driver surveys
- a group of individuals from throughout the company brainstorming issues
- driver rewards for demonstrating an awareness of safety issues by reporting near-miss incidents and by highlighting their concerns about particular delivery locations
- close monitoring of incident reports
- procedures implemented to regulate accident reporting and investigation.

The key reflections and recommendations of ways to further promote the occupational health of drivers and road safety in the future include the ways to increase understanding of how to engage employers and workers in occupational health and safety procedures.

The use of participatory approaches to promoting safety and health among drivers, including in the area of risk assessment is innovative.



Active participation of workers in the case studies consists of consultation, training, participation in comprehensive questionnaires, interviews, and engagement in social dialogue. Workers were also engaged in a campaign aimed at combating violence and reducing stress. In most cases the workers were actively involved in the process.

Involvement of workers in risk assessment and development of solutions is always important as they have the knowledge of the actual work circumstances. Effective worker participation is particularly important in the case of drivers as they are frequently found to be sceptical about this type of initiative. Sufficient time must be allowed to explore, test, revise and implement changes. Success factors include involving drivers through consultation and training and allowing sufficient time for consultation on change, especially where drivers may be sceptical. Obstacles to driver involvement may be finding it difficult to find time to participate.

It is recommended to involve drivers throughout, acknowledging and incorporating their experience, and work with them to show that things can sometimes be done differently.

Promote consultation, dialogue and participation in OSH matters – ensure staff consultation and an internal communication system, providing a channel for staff to report problems and put forward comments and suggestions; involve staff in risk assessments and development of prevention measures.

**Source (URL):** [http://osha.europa.eu/en/publications/reports/managing-risks-drivers\\_TEWE11002ENN/view](http://osha.europa.eu/en/publications/reports/managing-risks-drivers_TEWE11002ENN/view)

#### **2.2.4. Safe maintenance in practice**

##### **Report conclusions on worker participation:**

Although it is always good practice to involve the employees in the process of risk assessment, cases clearly demonstrate that for maintenance operations it is all the more necessary to involve in the process those who will carry out the work. Without their input, it is difficult to identify all hazards, analyse all the various aspects of the work and situations that might arise, and to decide on the most effective and suitable methods to control the risk involved.

It is important to involve workers in the maintenance management during the whole process, from planning to the final evaluation. Active employee participation in safety and health management is important to build ownership of safety at all levels and exploit the unique knowledge that employees have of their own work. Quite often they already know and can suggest practical ways of eliminating or mitigating the risks.

In addition, involving employees is an important way of gaining their acceptance of changes and encouraging compliance with the rules.

**Source (URL):** <http://osha.europa.eu/en/publications/reports/safe-maintenance-TEWE10003ENC/view>

#### **2.2.5. Prevention of risks in construction in practice**

##### **Report conclusions on worker participation:**

Key elements contributing to the success of initiatives in preventing risks in construction are: (page 54)

- Commitment of top management
- Integrating key management areas of occupational safety, the company's quality control system and environmental control
- Consultation with workers and managers
- Cooperation with competent outside experts and authorities
- Regular monitoring and review of policies and procedures
- Training, information and publicity about the new system for staff and managers
- Information for clients

- Setting objects within a policy of continual improvement
- Extension of the policy and the company's safety philosophy to its contractors
- Inclusion of 'health at work' initiatives
- Comply effectively with EU regulations
- Incorporation of the whole approach into 'a healthy company' philosophy and programme
- Promotion of the company's activities

Planning is crucial in achieving good standards of safety and health. Projects will also benefit from the increased likelihood that they will be completed on time, and within budget and quality requirements. However, when putting plans into operation it is important to ensure that they do not simply result in a set of rules for workers to follow, but involve the workers in a cooperative process. (page 34) After the planning stage, it is important for the development of the safety management system to consult the employees from different departments in the organisation. In case 'managing safety in road construction from the client's perspective' all employees were trained and were encouraged to provide **their suggestions for the implementation of the management system. Although involving employees** should be a standard part of good health and safety practice, it is not always easy to achieve this satisfactorily in the construction sector. The case 'achieving employee participation in health and safety management systems' demonstrated that with commitment, and by making available adequate time and resources, cooperation with employees can be achieved, to the benefit of all concerned. A participative approach between the company and the works council is a critical factor in the successful outcome, as was cooperation with outside experts. (page 52) In this case, employees were actively involved in the project from very early stage and they were consulted throughout the process, i.e. launch event, analysing the existing problems, proposing solutions, evaluating the results. An important part of the project was the integration of health and safety into the company's overall staff development policy and activities.

**Source (URL):** <http://osha.europa.eu/en/publications/reports/108>

## **2.2.6. Achieving better safety and health in construction**

### **Report conclusions on worker participation:**

Key elements contributing to the success of initiatives in achieving better safety and health in construction are: (page 138)

- recognising the importance of the design phase;
- having inclusive management, involving all relevant persons;
- the method of risk assessment and prevention put in place;
- ensuring effective implementation of all prevention systems;
- information, training and communication;
- monitoring performance.

### Employee involvement

Employee involvement in the survey carried out in the case of 'health and safety at the restoration works of the Acropolis monuments (Greece)' seems to have been the key to its success. One of the main steps in this survey was to ask the workers to fill in a questionnaire on health and safety on the site. Not only were the workers involved in this survey, but this also made it possible to obtain an initial overview of the risks present on the site. (page 140)

### Information, training and communication

Safety culture is still very weakly developed in the construction sector, because the risks incurred by the employees are accepted as just part of the job by many of them: risks from an integral part of their work and they must accept them. In order to develop this safety culture, both employers and employees must be trained and informed of occupational risks in the construction sector, and of their obligations.

Communication between the various players is also a factor guaranteeing the success of safety improvement. This is the role that was played by Mr Dowling as worker safety representative on one of the projects of the Bovis Lend Lease company in London, in the case of 'Effective safety representatives mean safe sites (United Kingdom)'. In particular, he made it possible for information to circulate between employers and employees on the project, and vice versa. This was possible because the workers saw him as a credible person with detailed knowledge, and the employers as a good communicator enabling them to effectively manage the safety and health risks. He was therefore able to carry out numerous actions based on communication and information. (page 142)

**Source (URL):** <http://osha.europa.eu/en/publications/reports/314>

### **2.2.7. Preventing risks to young workers: policies, programmes and workplace practices (2009)**

#### **Report conclusions relevant to worker participation:**

Many organisations provide training to young, new workers. Whilst training is necessary, on its own it is not effective. It represents one complimentary part of an effective occupational safety and health (OSH) system. (pp. 97).

The main success factor for the actions seeking to reduce the OSH risks of young workers seems to be the involvement of all relevant partners in the project (labour inspectors, OSH specialists, commercial firms and trade unions). (pp. 97).

**The choice of training channels, methods and media is also important for the effectiveness of communication with young people.** Engaging them in OSH is critical, and seems to work best when young people are challenged to learn more about safety and health at work. (pp. 97-98).

Many of the training examples involve active learning where young people develop abilities not only in recognising hazards themselves by also in prevention solutions to the problems they have identified. If these hazard-spotting exercises and practical proposals are fed back into the employers' risk assessment and prevention process, this process is given a new dimension and the OSH system is strengthened further. (pp. 98).

Another important factor within organisations is motivation and commitment of senior staff and OSH management, which can include their presence at training sessions. (pp. 98).

Mentoring as an instruction method for new workers is beneficial not only for the senior and junior personnel involved, but also for the company. Successful mentoring can be a real win-win situation, which improves the skills of both the young and senior workers, boosts the moral of the entire workforce and underpins the workplace prevention culture. (pp. 98).

Common success factors (pp. 101-102):

- Consultation and active participation of young workers
- Providing training together with implementing the necessary measures to make the work environment safe and healthy for young workers, providing them with suitable jobs for their age, capabilities and experience and ensuring proper supervision
- Training supervisors, mentors and trainers in their role and OSH
- Making OSH an integral part of other induction training
- Partnership – at the workplace level this includes partnerships with temporary employment agencies
- Using peers, including more experienced young workers, and older, experienced workers as mentors. This provides a positive experience for new and more senior colleagues alike
- Using active, participatory learning methods, for example, where young people learn to recognise hazards and examine and solve real work problems, and where possible doing this in real organisations
- Feeding the results of apprentice work back into the workplace risk assessment and prevention process. This makes the exercise meaningful for youngsters and is of value to employers

- Using videos or virtual reality methods where access to real workplaces is not possible or to demonstrate high risk situations

Source (URL): <http://osha.europa.eu/en/publications/reports/TE3008760ENC/view>

## **2.2.8. Workforce diversity and risk assessment: Ensuring everyone is covered (2009)**

### **Report conclusions relevant to worker participation**

Risk assessment must include all workers, and take into account the risks that are specific to each category of workers based on age, gender, situation in the company, etc. This means that the general tendency to assess workplace risks from the point of a 'standard worker' must be overcome [pp. 110]

Software or database solutions are sometimes used and can facilitate the risk assessment process. However, their success rests on the adaptation of the work to the worker and not the contrary. This is helped by a careful observation of the worker's abilities and effective communication between the worker and the management in order to ensure the specific needs of the worker are met. It is important to include all groups of workers in the communication and planning of the project at every stage [pp. 110]

#### Workers involvement and social dialogue (pp. 111)

Generally, worker involvement in any given project is a decisive factor in its success or failure. By asking workers for their opinion and impressions concerning their work and observing their working environment and conditions, it is possible to provide a better answer to their needs and achieve a truly satisfactory solution.

Participation is fundamental to effective risk prevention, as workers have practical knowledge and experience of the work situation and can provide employers with a 'reality check'. Therefore consultation with worker safety representatives and shift (older) workers, disabled workers, women, etc. is an important part of ensuring health and safety issues for these groups of workers are identified.

To secure ownership of an intervention, the involvement and commitment of employees and their representatives, middle management and top management is crucial at every stage of the process. The management should accept responsibility and employees should be included in all assessment, decision-making and implementation stages.

Health circles have proved to be an effective way of involving the workers in risk assessment and the occupational safety and health (OSH) management process. Another successful method involves training workers to promote safe and healthy working.

#### Successful partnership (pp. 112)

The success of a project also depends on the partners involved: workers/workers' representatives, management, experts, main company – contractors, subcontractors, public institutions, etc.

Key issues for inclusion-sensitive risk assessments (pp. 113-155)

From a worker participation perspective, this includes:

- The organisation's management needs to be a proactive 'driving force' for the development of an inclusive approach (pp. 113)
- Considering the entire workforce, including cleaners, receptionists, maintenance workers, temporary agency workers, part-time workers, etc. (pp. 114)
- The needs of the diverse workforce should be considered at the design and planning stage, rather than waiting for a disabled/older/migrant worker to be employed and then having to make changes (pp. 114)
- Providing relevant training and information on diversity issues regarding safety and health risks to risk assessors, managers and supervisors, safety representatives, etc. (pp. 114)

- Adequate OSH training should be provided to each worker; training material must be tailored to workers' needs and specificities (pp. 114)
- Inclusive risk assessment should take a participatory approach, involving the workers concerned and based on an examination of the real work situation. This participation has to take place at all stages of the risk assessment process (identifying of risks and people at risks, evaluating the risks, deciding on preventive action, monitoring and reviewing). (pp. 114)
- If the company or the organisation is not competent to deal with the risks of a specific group of workers, it is important to seek advice. Occupational safety and health services and authorities, health professionals, safety professionals and ergonomists or disability and migrants' organisations, etc may provide this (pp. 115)
- Good practice examples of inclusive risk assessment show that, for any preventive action to be effective, it is essential to involve the whole range of actors directly concerned: workers and workers' representatives, work councils, management, OSH experts, contractors or subcontractors, public institutions, etc. (pp. 115)

**Source (URL):** <http://osha.europa.eu/en/publications/reports/TE7809894ENC>

### **2.2.9. Preventing harm to cleaning workers**

#### **Report conclusions on worker participation:**

It is important to involve the cleaners in the development and implementation of occupational health and safety management system. To make sure that all aspects of the job are considered, the workers should be involved in the risk assessment process, which is the responsibility of the cleaner's employer.

Workers are reminded to take part in risk assessment, discuss the necessary preventive methods and apply the measures decided upon.

**Source (URL):** <http://osha.europa.eu/en/publications/reports/TEWE09006ENC/view>

### **2.2.10. Protecting workers in hotels, restaurants and catering**

#### **Report conclusions on worker participation:**

Generally, worker involvement in the project is decisive in its success. In particular, by asking them for their opinion and impressions concerning their work and observing their working environment and conditions, one can meet workers' needs by achieving a truly satisfactory solution.

The observation work performed in the MELIA hotel chain in the Balearic Islands (Spain) enabled management to find a solution to the problems faced by chambermaids when making beds. Workers and their representatives expressed a high level of satisfaction with this solution.

A significant reduction in absenteeism among maids was observed within the next two years. The reduction of efforts in the arrangement of beds and the cleaning of the rooms was highly valued.

However, these improvements and the higher category achieved by the hotel generated a side effect: an increase in the number of rooms to be cleaned by one maid and an increase in the tasks to be carried out in each room. Workers complained about an intensification of work and the extension of their responsibilities to additional tasks (to empty and clean flower vases, to fold toilet paper, to bring and assemble advertising material (brochures and gifts for the guests) to the rooms and other similar assignments).

In Finland, the aim of the intervention study was to investigate supervisors' burnout and stress (which are common, as they usually work alone without colleagues in their work units, and it is their responsibility to support personnel), and to evaluate the effectiveness and suitability of prevention groups in the catering and restaurant business.

The groups aimed to alleviate stress and burnout during major changes in the organisations.

The results showed that supervisors' discussion groups are feasible and well suited to prevent stress amongst supervisors in the hotel and restaurant sector. The supervisors felt that they got support from each other. They had an opportunity to see that they were not alone in facing problems in a changing situation. The positive effects of supportive discussion groups were seen in levels of satisfaction with the organisation and the social effectiveness of work teams. In sum, discussion groups seem to be an effective method for preventing and tackling stress and burnout in the hotel and restaurant sector.

Another initiative in Finland consisted of a participatory intervention in kitchen work. It was a laborious one-year undertaking both to study the effectiveness of the participatory intervention and to improve working conditions. Even though this kind of participatory approach was not familiar to the kitchen employees, the interventions were mainly successful and the workers enjoyed the opportunity to make choices concerning themselves and the entire kitchen personnel. As key success factors in this project, the ethnographic study highlighted the inspiring and motivating attitude of the ergonomists and appreciative attitudes of the participating employees.

But sometimes, the most important obstacles to the development of actions are the resistance by some individuals to the change, passivity, and outright refusal to make changes in their work.

**Source (URL):** [http://osha.europa.eu/en/publications/reports/TE7007132ENC\\_horeca](http://osha.europa.eu/en/publications/reports/TE7007132ENC_horeca)

### **2.2.11. How to reduce workplace accidents**

**Remarks and conclusions relevant to worker participation:** The most important features in order to implement Accident Prevention programmes successfully are...

- using an adequate monitoring system;
- adapting the initiative to the means and capabilities of the enterprise or sector;
- organising social dialogue, partnership and workers' involvement (page 20)

#### *Social dialogue, partnership and workers' involvement*

Social dialogue between employers, employees or their representatives at the enterprise level, and unions and employers' associations at the sector, regional or national level, is an important condition for success. This is illustrated by the case 'Prevention campaign in the textile and clothing manufacturing sector', where the aim was to create a general awareness of safety and health to serve as a basis for further action. Agreement on a safety and health subject turned out to be an important means of promoting dialogue between the social partners.

In Ireland, in response to a bad occupational accident record, a partnership agreement was signed between government, employers, employees and the institution in charge of occupational risk prevention. The objective of this partnership action was to promote a culture of safety in the construction sector. Each player has its own role to play in the partnership. In 'Recipe for safety in the food and drink industry', employers and the employees' unions in this industry agreed on a 'common strategy' document. This agreement incorporates a commitment by each partner, and also lays down actions for each of the parties, including the institution in charge of occupational risk prevention, covering all stages of the campaign. 'Preventing needle-in-finger injuries — William Baird' is another example of cooperation where action started with a corporate initiative. The aim was to develop a safety device for the company's own use. Once the device was shown to be effective, and with the company's agreement, it was promoted within the industry by the union with the help of the institution in charge of occupational risk prevention. The device has been widely accepted and the concept has been integrated into a

CEN standard.

'Tuttava — Safe and productive working habits' and the WASP method illustrate the benefits of involving employees and all levels of management in the prevention process. Consultation of employees was also an essential factor in 'Safety management in the steel industry — Arbed'. Finally,

the importance of employee involvement is made clear in the case of 'Long-term action for occupational safety and health — TITAN'. (page 183)

**Source (URL):** <http://osha.europa.eu/en/publications/reports/306/view>

### 3. Conclusions

There is clear evidence to suggest that organisations, irrespective of their size or type of industrial activity, that have good worker participation as a key component of their health and safety system are safer and healthier places to work. The reviewed EU-OSHA case studies demonstrate the importance of worker participation for determining effective prevention measures and solutions. The information extracted from the reviewed EU-OSHA case studies demonstrates that cultivating and integrating worker participation into occupational health and safety management and policies does not have to be complex; indeed often simple approaches and measures can be effective. A wide range of methods and practices have been used by organisations, using both direct and indirect/formal and informal approaches, to cultivate active participation of worker participation.

The reviewed cases and conclusions of the reports confirm that effective worker participation in OSH has business benefits beyond improving healthy and safety management. They support the findings of studies on the benefits of worker participation, such as a review conducted by Spector (1986), which indicated that employee participation can be linked with higher motivation and performance, fewer intentions to quit, and decreased turnover. Active worker participation in the interventions reviewed can be linked with:

- significant observed reductions in injuries and enhanced occupational health [reduced costs];
- decreases in sickness absence;
- improvements in employee morale and generation of practical solutions to workplace problems;
- enhanced organisational communication and clearer objectives; and
- assisting in the development of safe systems at work that are shaped by operational reality.



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## Annex 1 - EU-OSHA reports and cases reviewed

Type	Title	Catalogue no.
Report - GP	Preventing musculoskeletal disorders in practice	Not available
Report - GP	Accident prevention in practice	TE3701615XXC
Report - GP	Prevention of psychosocial risks and stress at work in practice	TE4702422XXC
Report - GP	The practical prevention of risks from dangerous substances at work	TE5503415XXC
Report - GP	Prevention of risks in construction in practice	TEAH04001ENC
Report - S&P	How to Reduce Workplace Accidents	TE3701607ENC
Report - S&P	How to tackle psychosocial issues and reduce work-related stress	TE4502967XXC
Report - S&P	Achieving better safety and health in construction	TE5904136ENC
Report	Reducing the risks from occupational noise	TE6805535ENC
Report GP booklet	Prevention of risks from occupational noise in practice	TE6905812ENC
Report GP booklet	A safe start for young workers in practice	TE7707062ENC
Report No. 3	Work-related musculoskeletal disorders: Back to work report	TE7807300ENC
Report No. 4	Work-related musculoskeletal disorders: prevention report	TE8107132ENC
Report GP booklet	Prevention of work-related MSDs in practice	TE8108190ENC
Report No. 5	Protecting workers in hotels, restaurants and catering	TE7007132ENC
Report No. 7	Preventing risks to young workers: policy, programmes and workplace practices	TE3008760ENC
Report No. 8	Assessment, elimination and substantial reduction of occupational risks	TEWE09001ENC
Report	Workforce diversity and risk assessment: ensuring everyone is covered	TE7809894ENC
Report No.10	Preventing harm to cleaning workers	TEWE09006ENC
Report	Safe maintenance in practice	TEWE10003ENC
Report	Managing risks to road transport drivers	TEWE11002
Online cases	Workplace health promotion case studies	
Online cases	MSDs case studies	
Online cases	Young worker health promotion case studies	

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