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# Occupational Safety and Health

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**Dutch Employers  
Cooperation Programme**

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# Occupational Safety and Health

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# 1. Introduction

## 1.1 Scope

What is the importance of good health and safety at work? And who is responsible? Good health and safety at work is important not only in human terms, to help to reduce workers' pain and suffering. It is also a way of ensuring that enterprises are successful and sustainable, and that economies thrive in the long term.

Basically it is the employer who is responsible for good working conditions. Obligated by international treaties and national laws he is the one who should organise information about risks, measures to reduce risks and training of personnel to avoid risks.

An employer needs to appoint 'one or more competent persons' to help him to meet his duty to control risks at work. Many employers can secure or develop this help in-house which they are required to use when it is available. However, when resources are insufficient or making the necessary arrangements would not be cost-effective, employers will seek help from specialist providers.

This booklet describes the occupational health service as a specialist provider of primary health care, consultancy and training with respect to occupational safety and health. We consider the occupational health service as an external provider, e.g. as an independent commercial or non-profit organisation.

However we are aware that in some cases in-company services or mixed models of internal and external services can be a good solution.

## 1.2 Importance of health and safety

As already stated good health and safety at work are important from both a moral as well as an economic point of view. But it is also more and more a marketing instrument. Customers in every sector expect ever-higher Occupational Safety and Health (OSH) standards in the enterprises they interact with. This is due to the higher priority they are giving to their own OSH performance and reporting. OSH performance standards are increasingly being written into public and private sector contracts.

For enterprises, good OSH helps to:

- perform a moral duty in human terms;
- enhance 'brand image' and 'brand value' as a socially responsible business (which may affect investors' decisions);
- boost productivity: reduce absences and increase the productivity of workers, increase motivation and the commitment of workers to the business;
- prevent losses: reduce business costs, such as insurance premiums, and business disruption;
- enable enterprises to meet and exceed customers' expectations.

### 1.3 Costs of occupational health and safety

For most enterprises, simple cost-benefit analysis will not be necessary or appropriate in this area. It is impossible to quantify costs such as suffering in monetary terms. Nevertheless, there are quantifiable costs and benefits involved in OSH, which businesses should be aware of.

For businesses, disruption, claims for damages, loss of goodwill and loss of confidence in management can sometimes lead to total collapse. For small companies particularly, occupational accidents can have a major financial impact.

For the individual, there are the costs of care, loss of earnings, etc.

Insurance can play a major role in cost and benefits, depending on the national system of social welfare and health care (often called 'worker compensation'). On the one hand insurance costs can be very significant, depending on the type of business. For example the cost of worker compensation can be very significant, constituting a real financial consideration for insurers. On the other hand insurance can play a role in improving OSH, alongside regulation and other incentives: based on past experience, insurers can promote and assist with OSH improvements in enterprises.

Costs of poor working conditions:

- higher insurance premium;
- costs for replacement: temporary personnel, higher cost of newcomers, etc.;
- training costs;
- negative impact on competitive position;
- poor social climate, bad relations with trade unions.

Traditionally investors analyse risks using financial criteria. But there is a growing recognition of the importance of non-financial criteria in affecting the value of a company, and these are increasingly being taken into account by investors in making their decisions.



Figure 1: Economic effects of safety and health at company level (source: <http://osha.europa.eu/>)

## 2. Obligations of government, employers and workers

The most important obligations of national governments, employers and workers as well in the area of occupational safety and health are based on international conventions, treaties, directives and other regulations. Worldwide the conventions and recommendations established by the International Labour Organisation are an important source for legislative initiatives at national level. As soon as a country has ratified an ILO convention, that country has the obligation to implement the convention in national legislation. Once every ten years a government can decide to cancel the ratification of the convention concerned.

In the European Union the Member States have the obligation to implement all European directives in any policy area in national legislation. There are two kinds of directive.

The first are directives aimed at the improvement of a common market with freedom of movement for people, goods, services and capital between the Member States. These directives are maximum directives. That means that Member States are not allowed to create additional obligations or requirements in their national legislation.

The second ones are directives aimed at the creation of a floor of standards for protecting people or interests. These directives are minimum directives. That means that Member States have to comply with the legal minimum obligations and requirements of the directives concerned, but that they are allowed to create additional obligations and requirements and higher protection levels in their national legislation.

Both ILO conventions and European directives in the field of occupational safety and health have the character of minimum requirements.

Once ILO conventions and/or European directives are implemented in national legislation all obligations, prohibitions and requirements are obligatory for all employers and all workers, irrespective of whether they are working for private companies or for the government. Particular sectors of economic activity, such as maritime shipping or fishing, are excluded.

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## 2.1 Obligations of the national government

The national government has to develop a coherent national policy for occupational safety, occupational health and the working environment, aimed at the prevention of work-related accidents and injuries insofar as is reasonably practicable.

In its national legislation the government has to take account of:

- design, testing, choice, substitution, installation, arrangement, use and maintenance of the material elements of work;
- relationships between the material elements of work and the persons who carry out or supervise the work;
- training, including necessary further training, qualifications and motivations of persons involved;
- communication and cooperation at all appropriate levels;
- protection of workers and their representatives from disciplinary measures as a result of actions properly taken by them in conformity with the policy.

The government has to review the situation regarding occupational safety and health and the working environment at appropriate intervals.

The national government takes steps in the following areas:

- consultation with representative organisations of employers and workers;
- enforcement of laws and regulations secured by an adequate and appropriate system of inspection;
- adequate penalties for violations of laws and regulations;
- guidance to employers and workers so as to help them comply with legal obligations.

Furthermore the national government should carry out the following functions:

- determination of conditions governing the design, construction and layout of business premises, commencement of their operations, major alterations affecting them and changes in their purposes, safety of technical equipment used at work, as well as the application of procedures defined by the competent authorities;
- determination of work processes and of substances and agents exposure to which is to be prohibited, limited or made subject to authorisation or control by the competent authority or authorities;
- procedures for the notification of occupational accidents and diseases and the pro-

duction of annual statistics on occupational accidents and diseases;

- holding of inquiries;
- publication, annually, of information on measures taken;
- systems to examine chemical, physical and biological agents in respect of risk to the health of workers;
- safety of machinery;
- mainstreaming health and safety issues in education and training.

## 2.2 Obligations of employers

In general the employer is obliged to prevent or reduce accidents at work and occupational diseases and injuries insofar as is reasonably practicable.

More concretely, the employer has to:

- ensure that workplaces, machinery, equipment and processes are safe and without risk to health, insofar as is reasonably practicable;
- ensure that chemical, physical and biological substances and agents are without risk to health when the appropriate protection measures are taken, insofar as is reasonably practicable;
- provide - where necessary - adequate protective clothing and protective equipment to prevent, insofar as is reasonably practicable, risk of accidents or of adverse effects on health;
- collaborate with other employers operating at the same workplace (for instance on construction sites);
- provide - where necessary - for measures to deal with emergencies and accidents;
- ensure that workers and their representatives in the undertaking receive adequate safety and health training throughout the period of employment;
- ensure that there is cooperation between management and workers (or their representatives);
- guarantee that workers incur no expenditure with regard to OSH.

Additionally the European framework directive on Occupational Safety and Health requires the employer to:

- evaluate the occupational risks, inter alia in the choice of work equipment and the fitting-out of workplaces, and to make provision for adequate protective and preventive services;



- keep a list of, and draw up reports on, occupational accidents;
- inform and consult workers and allow them to take part in discussions on all questions relating to safety and health at work;
- designate one or more worker to carry out prevention and protection activities;
- enlist - if necessary - competent external services or persons.

The inventory and evaluation of the risks is an important starting point for all employer activities for dealing with the legal obligations with regard to safe and healthy workplaces. Elements of the risk assessment include:

- internal prevention service;
- treatment of absenteeism;
- escape routes and first aid to accidents;
- workplace;
- work equipment;
- machine safety;
- dangerous substances;
- physical agents;
- personal protection equipment;
- psycho-social risks.

### 2.3 Obligations of workers and workers' rights

Workers have the following obligations:

- workers have to make correct use of machinery, other means of production, personal protective equipment and safety devices;
- in the course of performing their work workers have to cooperate in the fulfilment by their employer of the obligations placed upon him;
- representatives of workers in the enterprise cooperate with the employer in the field of occupational safety and health;
- a worker reports forthwith to his immediate supervisor any situation which he has reasonable justification to believe presents an imminent and serious danger to his or another worker's life or health;

Workers and their representatives have the following rights:

- representatives of workers in an enterprise are given adequate information on measures taken by the employer to secure occupational safety and health and may

- consult their representative organisations about such information provided they do not disclose commercial secrets;
- workers and their representatives in the enterprise are given appropriate training in occupational safety and health;
- workers or their representatives and, as the case may be, their representative organisations in an enterprise, in accordance with national law and practice, are enabled to enquire into, and are consulted by the employer on, all aspects of occupational safety and health associated with their work; for this purpose technical advisers may, by mutual agreement, be brought in from outside the enterprise;
- when a worker reports any situation which he has reasonable justification to believe presents an imminent and serious danger to his or another worker's life or health, the employer cannot require workers to return to a work situation until the employer has taken such remedial action as is necessary.

### 2.4 What can employers' confederations do for their members?

- represent and promote the interest of employers in consultation procedures and in negotiations with unions and with the government;
- help individual employers or groups of employers to comply with the legislation, e.g. through;
- awareness-raising;
- providing information;
- developing guidelines;
- assist in establishing an OSH service.

#### References

- ILO Conventions No. 155 Occupational Safety and Health (1981);
- ILO Recommendation No. 164 Occupational Safety and Health (1981);
- ILO Convention No. 161 Occupational Health Services (1985);
- ILO Recommendation No. 171 Occupational Health Services (1985);
- ILO Technical and ethical guidelines for workers health surveillances, Occupational Safety and Health Series, No. 72 Geneva, 1998;
- Risk assessment essentials, European Agency for Safety and Health at Work, <http://hwi.osh.europe.eu>.
- Pan American Health Organization, Division of Health and Environment, FRAMEWORK OF ACTION IN ENVIRONMENTAL HEALTH, PAHO 2003-2007, <http://www.bvsde.paho.org/bvsadi/fulltext/framework.pdf>

# 3. Position of OSH on the shop-floor

## 3.1 OSH on the shop-floor - management systems

Though they try to avoid risks, business owners and entrepreneurs are, by nature, risk-takers. There is excitement and challenge in such a venture, but to succeed in business you need good management information in order to make the right decisions. And for a proper assessment of this information you must be educated, trained or at least in the process of learning. This is basically the same process in both small and large companies. With the proviso that in small companies management systems are often informal and the owner or a small staff fulfils all the necessary actions. Whereas large companies have formal systems based on ISO standards or Total Quality Management Systems. Figure 2 Deming circle: management of health and safety Occupational health and safety is just one of the elements of running a business, like planning workforce and raw materials needs, assuring product quality, marketing and financing. And OSH is a vital element as well as we stressed in the first chapter. From this point of view occupational health and safety should be one of the management systems.

There are five basic elements to all good safety and health programmes. They are based on the Deming Circle and these are as follows:

### Management commitment and worker involvement

The manager or management team leads the way, by setting policy, assigning and supporting responsibility, setting an example and involving employees.

### Plan

· Action plan: what will be done and when, by whom and with what budget?

### Do

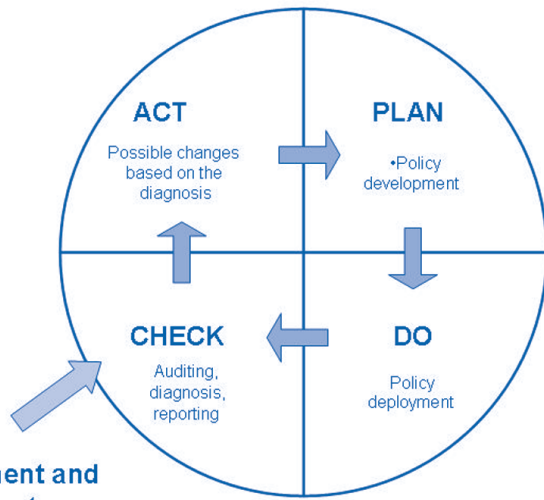
- Training for workers, supervisors and managers. Managers, supervisors and workers are trained to understand and deal with worksite hazards.
- Hazard prevention and control. Methods to prevent or control existing or potential hazards are put in place and maintained, for example worker health surveillance checklists (see Annex 5)

### Check

· Worksite analysis: risk assessment (see paragraph 3.2), analysis of accidents, registration

### Act

· Management review: what corrective measures are needed?



**Commitment and involvement**

Figure 2 Deming circle: management of health and safety

Regardless of the size of your business, you should use each of these elements to prevent workplace accidents and possible injuries and illnesses. The precise approach will depend on the nature and complexity of the organisation.

And this Deming circle will only turn and work on motivation. In terms of staff motivation, what works is:

- senior executives demonstrating clear and consistent leadership;
- working conditions that are safe and healthy and that stay that way;
- employees who are confident and competent in the work they do;
- effective OSH policies and systems that are shown to be used and work;
- employees who are fully involved in OSH decision-making;
- individuals, teams and organisations being recognised and rewarded for their successes.

If you are more interested in management systems you should look for the BS 18000OHSAS system, released by the British Standards Institute (BSI) ([www.bsi-global.com](http://www.bsi-global.com))

- The following key areas are addressed by OHSAS 18001:
- planning for hazard identification, risk assessment and risk control;
  - OHSAS management programme;
  - structure and responsibility;
  - training, awareness and competence;
  - consultation and communication;
  - operational control;
  - emergency preparedness and response;
  - performance measuring, monitoring and improvement.

### 3.2 Risk assessments

#### Essentials

Risk assessments are an essential tool in improving working conditions. They are a snapshot of the actual situation and give you a baseline for further improvements.

A risk assessment is a careful examination of hazards weighing up the risk. It is essential to understand the difference between hazard and risk.

#### • HAZARD:

- a hazard is anything that has the potential to cause harm, e.g. injury or disease to people, damage to the environment, property, plant or equipment.

#### • RISK:

- risk is the chance, or likelihood, that a hazard will result in injury, illness, loss or damage to people, the environment, property, plant or equipment.

#### • Risk = Hazard x Likelihood

$$80 = 8 \times 10$$

$$80 = 20 \times 4$$

Understanding that risk is an equation and that the result of an equation can be made up of different factors. For example extremely hazardous substances do not necessarily impose a high risk. Safe handling and low exposure reduce the likelihood that the hazard will result in damage.

### How do you carry out a risk assessment?

The result is that a risk assessment consists of three steps:

#### • Step 1: Collecting information

Before starting, you need to do some desk research and have interviews with the company representatives. You should at least check the following data:

- registration on sick leave, accidents;
- reports on occupational diseases;
- key figures of the working population;
- reports and investigations;
- register on toxic substances;
- product information from suppliers;
- experiences from colleagues, sector organisations, literature;
- complaints by workers.

#### • Step 2: Identifying hazards

To identify hazards at the workplace there are several checklists available. We suggest using the checklist in appendix 4 developed by the European Commission.

- just complete the checklist;
- if you know that a hazard exists tick "YES";
- if you know that a hazard does not exist tick "NO";
- when you are not sure you should either use hazard-specific checklists (see appendix 5) or do some more research.

#### • Step 3: Assess the risk arising from the hazards

For each identified hazard you must decide if the risk is small, medium, or high, taking into account the severity of harm which can be caused by a hazard and the likelihood. Use the table below to make the decision.

You follow the matrix below

### Step 3 A: Evaluate the hazard:

Look at the descriptions and choose the most suitable hazard

Hazard/ consequences / severity			
Major	Injury Extensive injury/death (e. g., amputations, complex fractures leading to disability, cancer, second- or third-degree burns on a large body area, etc.).	Process interruption One week or more	Impact on environment Community alarm
Moderate	Medical treatment (such as wounds, simple fractures, second-degree burns on a limited body surface, dermal allergy, etc.).	1 day – 1 week	Off-site impact
Minor	First aid treatment (such as small cuts, eye irritations, headaches, etc.)	1 hour – 1 day	On-site impact
Insignificant	No treatment	Less than 1 day	Potential impact

### Step 3B: Consider the likelihood.

Look at the descriptions and choose the most suitable likelihood

Likelihood	Description
A: Highly probable	The event is expected to occur in most circumstances May materialise repeatedly during the occupational career of an employee.
B: Probable	The event could occur at sometime May materialise only a few times during the occupational career of an employee.
C: Less probable	The event could occur, but only rarely May materialise only a few times during the occupational career of an employee
D: Highly improbable	The event could occur, but probably never will It should not materialise during the entire occupational career of an employee.

### Step 3C: Pinpoint the risk

		Hazard			
		Major	Moderate	Minor	Insignificant
Likelihood	A	HIGH	HIGH	HIGH	MEDIUM
	B	HIGH	HIGH	MEDIUM	MEDIUM
	C	HIGH	MEDIUM	MEDIUM	LOW
	D	MEDIUM	MEDIUM	LOW	LOW

### Demands on a risk assessment

- written report, available for every employee;
- reliable, actually and complete;
- should always be carried out with the employees' active involvement;
- focus on major (!) risks;
- focus on special groups e.g. youngsters, pregnant women, subcontractors;
- updated when needed.

A format for reporting a risk assessment can be downloaded from the publications of the DECP-website (<http://www.decp.nl/web/show/id=124806>). This format should be customized to the national situation with respect to legal obligations.

### 3.3 Action plan

Based on the risk assessment an action plan is drafted. First of all you have to decide whether risk arising from a hazard is acceptable or unacceptable. In general:

- unacceptable are high risks or legal requirements which are not complied with actions to reduce or comply need to be taken at once;
- for medium risks it is advisable to plan actions to reduce the level;
- small risks may be acceptable, but it is necessary to ensure that they will remain at the same level.

Preventive and protective measures should be implemented in the following order of priority:

- eliminate hazard/risk;
- minimise hazard/risk, through organisational measures;
- minimise hazard/risk, through collective protective measures;
- reduce risk, through appropriate personal protective equipment.

### 3.4 Organising competence

In order to make a proper risk assessment, in collecting the data and evaluate all the information you need to be competent. On the shop floor there is a large body of knowledge which can of course be sufficient to make a risk assessment.

Nevertheless in many cases the knowledge and competence in the company is not sufficient. In that case employers should organise competence. Either by educating or hiring staff competent in the field of occupational health and safety or by contracting consultancy e.g. an occupational health service.

There are many factors of course to make up which model will be more suitable. First of all is there the size of the company. It is obvious that an internal occupational health service can only be cost-effective for larger companies. Secondly the pros and cons of both models should be evaluated. We address this issue in more detail in chapter 4. And small and medium sized companies? In chapter 4 we also present a model for SMEs.

## 4. Occupational Health Services

### 4.1 Services

Traditionally occupational health services (OHS) were focused on curing. And its staff had a medical training. This can still be an important function of OHS. Controlling occupational injuries and illnesses and related expenditures is a top priority in most companies. But we stress the importance of an OHS in prevention of damage, accidents and illness. This is quite a different approach and it needs more than occupational medicine to fulfil this role.

Qualified occupational health care professionals, employed by an occupational health service, assist employers in achieving a safe and healthy work environment. Along with other safety and health professionals, health care professionals work collaboratively with labour and management to:

- identify potential hazards and to find ways to prevent, eliminate, minimise or reduce hazards;
- develop and manage training programmes to promote workplace health and safety;
- enhance the accuracy of OSH record-keeping.

Minimum services which an occupational health service should provide are:

- qualification of risk assessments and action plan;
- (preventive) workers health surveillance (see Annex 5);
- consulting hour;
- medical examination (recruitment);
- guidance to sick workers.

### Independency

Being independent is an important demand of OHS. There are some principles in OHS:

- an occupational health service is not the Labour Inspectorate. In other words an OHS does not penalise unsafe and unacceptable situations. An OHS needs consultancy skills to convince a company that situations need to be improved;
- an OHS is of course responsible for good services. But an OHS is not responsible for poor working conditions. And it is not responsible for implementation of an action plan (see paragraph 3.3). It is the management who is responsible;
- an OHS must guarantee the confidentiality of personal and company data files;
- an OHS has to bear in mind the interest of the company as well as that of the workforce.

This requires quite some skills for the occupational health professionals in order to keep up with this independent role as well as the organisation of an OHS as a whole.



Figure 3: Playing field of occupational health services

#### 4.2 Staff

Different countries have different legal obligations with regard to the required expertise. The following functions could be considered to be important:

Function	Focus and tasks
Occupational physician	> health + worker Guidance sick employees, workers health surveillance
Occupational hygienist	> risk + workplace Workplace surveillance, measurements
Safety expert	> safety + equipment Assessing mechanical, fire and electricity hazards
Occupational psychology	> worker + organisation Occupational psychology
Ergonomics	> worker+workplace Workplace redesign

Every country has its own legal requirements with regard to the level of education and training of the experts within the OHS. But besides the formal education, other aspects are important. For the staff, as a provider of health and safety assistance, must be competent, give a good quality service and deliver help that is fit for purpose.

Competence is fundamental to manage risks sensibly. It is not an optional extra - the management of OSH requires it. In general, being competent means having:

- relevant knowledge, skills and experience;
- the ability to apply these appropriately, while recognising the limits of your competence and;
- the necessary training to help you acquire and maintain competence levels.

'Fit for purpose' - the advice must be:

- Correct:
  - based on an informed assessment of the risk;
  - taking account of any established standards (e.g. exposure limits) and good practice (e.g. as found in HSE guidance).

- Tailored:
  - directed at the actual circumstances found in the workplace under consideration;
  - based on your knowledge and experience of the particular industry, process etc.;
  - tapping into the knowledge and experience of both the management and workers at the particular workplace.
- Sensible:
  - concentrating on practical action to control significant risks;
  - not over-responding to trivial risks;
  - not pursuing paperwork as an end in itself;
  - looking to control measures that are reasonably practicable.

### 4.3 Equipment

The equipment needed depends highly on the type of service provided. The following list gives some examples:

- stethoscope;
- blood pressure;
- glucometer;
- vision meter;
- weighting equipment;
- first aid equipment and materials;
- biomedical test equipment;
- lung function apparatus;
- audiometer;
- noise level meter;
- lux (lightness) measurement;
- writing hygrometer;
- air sampling tubes and or pumps.

But before investing in equipment you must be aware that the use of equipment needs:

- trained personnel. They are the ones who can decide which equipment is necessary;
- maintenance and calibration of instruments;

- availability of skilled laboratory services for some specialised sampling procedures.

### 4.4 Quality Assurance

Delivering good quality services is essential. Not only as a necessity for improving working conditions but also as a market demand in order to survive as an independent service. Quality of services can be addressed at different levels:

#### Transparency

An OHS should meet to following requirements:

- private and independent service companies;
- qualification and certification based on the national Occupational Health and Safety Act or international treaties on health and safety;
- guidelines on expertise, organisation and quality of services.

#### Skilled personnel

See paragraph 4.2

#### Clear contracts

OHS-services obviously are ruled by the same principles as other commercial services. So it must be clear what will be provided for what price and under specified conditions. Therefore services are based on contracts. An internal OHS also needs a type of contract or agreement with the company to clarify the services and conditions.

#### Content of contract:

- contracting parties;
- duration;
- tariff;
- confidentiality;
- dissolution of contract;
- complaints and disagreement;
- specification of services;
- legal obligations;
- annexes.



#### 4.5 Models

There are basically two models of OHS. Either it is an external, independent, service. Or it is an internal, in-company service. It is obvious that an internal occupational health service can only be cost-effective for larger companies. For SMEs or companies with limited resources, an external OHS is a way of sharing costs.

#### External Occupational Health Service

Several models for delivering occupational health care at the workplace can be considered. This might involve:

- Local – Regional OHS
  - sharing the services of health care professionals locally or within a business or industrial park;
  - contracting with a larger firm whose occupational health service includes an occupational health care professional as part of its total safety and health programme. Cooperation with a local hospital in contracting medical services can be considered.

#### · Sector OHS

National sectoral employer organisations provide an OHS for their members. Cooperation with trade unions is preferred when services are being developed.

The pros of an external OHS are:

- expertise in health surveillance
- qualified personnel
- cost-effective.

The cons of an external OHS are:

- "academic" specialisation, services not tailored for the specific company;
- health and safety is problem of the OHS (and not of the management);
- communication between OHS and company.

#### In-company OHS

Even large companies can decide to contract out to an external OHS. They should consider the pros and cons of an internal OHS.

The pros of an internal OHS are:

- knowledge of enterprise;
- simple solutions to known problems;
- health and safety is internalised in the company.

The cons of an internal OHS are:

- cost of full-time OSH personnel;
- lack of certain competences;
- own agenda of internal departments.

## 5. How to set-up an external OSH service? <sup>1</sup>

Setting up a new OSH service for the members is as creating a new enterprise, and thus needs to start with a "feasibility study". The aim of such study is to know from the beginning what are the conditions for a successful start and functioning of the new service.

Such a study is not a "one-man show", but should be the result of "teamwork".

#### 1. Team-building

Within the employer organisation, a team- or project manager for the new OSH service should be appointed and he should gather around him different experts who could input into the study, as physician, nurse, engineer specialised in labour safety, trainer, accountant, lawyer, etc.

The project manager will chair the regular meetings of the team, he will draft the final proposal and conclusions.

#### 2. Definition of the proposal.

The study should clearly define what kind of services the new department will offer: all or some of the following, as

- training of workers;
- medical surveillance;
- risk assessment;
- assistance on reporting on accident.

It must also indicate a timing for the implementation, the conditions (tariffs), the contract relations with the members/clients and the responsibilities, as well as the information and promotion/marketing of the new service.

<sup>1</sup> See also:

How to prepare a business plan? A guide for start-ups and advanced private enterprises in countries in transition.

UN Economic and Social Council, 1996, ref: GE.96-31693, 32 pg.

Start Your Business: Business Plan.

ILO, 2003, ISBN 93-2-111637-9, 32 pg.

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### 3. Documentation:

The new service should start in compliance with the national regulations as well on health protection as on work safety: the study should collect all national, and international regulations concerning occupational safety and health of workers and should be kept updated.

In addition the success and quality of the new service will depend on the quality of the documentation and experience of the professionals of the new service.

That is why it is very useful for the new service to set up a good data base with information and documentation about diseases, solutions, remedies, etc.

This data base can be built up from website, such as ILO-Safework and EU-OSHA in Bilbao, and others (see annex 2)

Examples including lessons learned from colleagues, at seminars, congresses, etc. are also recommended. The professionals should also build their own national and international network via professional associations.

### 4. Marketing Plan

The study should also contain a marketing plan with information about:

- statistics on work accidents, and main diseases;
- statistics on enterprises with higher level of accidents;
- statistics on insurance costs of labour accidents, etc.
  
- information from competing OSH services (number of clients, services offered, tariffs, etc.)
  
- but also about the expectations and wishes from the members:
  - what are their needs;
  - what do they expect from the new service?
  - what are they ready to pay for?
  
- and what will be the attitude of the trade unions and the Labour Inspectorate? Will they have a positive attitude? If not, why not?

### 5. Human Resources Plan:

The quality of the service will of course in the first place depend on the competences of the professional staff: some of them will be full-time, others part-time or recruited ad hoc, depending on the number of clients and cases to solve.

Of course the manager of the OSH service must be available full-time, as well as his secretary. But others, such as physicians, nurses, engineers, psychologists, trainers, accountants, lawyer, etc., should be recruited as a function of the workload and number of clients. They have to be ready to work in a flexible environment.

For each of them a clear and complete job description has to be prepared.

The follow-up of their activities, as reporting to the client, the workers and in some cases, the authorities is very important.

And they should be paid at the going market rate.

### 6. Investment Plan:

A new service needs a proper office (can be rented), with proper equipment such as computer, copier, telephone and fax, etc. From the beginning it is important to have a good anti-virus and back-up system as many data from the workers are nowadays stored electronically, and should not be lost.

In addition, special rooms for medical examinations of workers have to be foreseen, in conformity with health standards, guaranteeing hygiene and privacy.

An alternative solution is to rent a "mobile unit" with facilities for the medical examination: this has the advantage that workers don't have to travel to the offices of the OSH service. This can represent an important saving for companies.

The new service should also have at disposal specific equipment for risk assessment (safety checks): in attachment is a list of recommended tools. Their amortisation should be spread over 3 to 5 years maximum. As they are measurement tools, they have to be certified and periodically calibrated.

If a loan is used for the purchase of some equipment, the financial plan must take into account the cost for reimbursement.

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## 7. Financial Plan:

This plan has to be based on all costs and revenues for the OSH service so that it can indicate under which conditions the service can be successful, meaning that ultimately all costs are covered by revenues.

It will indicate the minimum number of clients and workers, the tariffs for the medical checks and for the risk assessments and the min. amount of running capital needed.

Tariffs for medical checks are usually calculated per check per worker, while risk assessments are calculated per day per visit.

The financial plan should be calculated over a period of 3 to 5 years, and each year detailed per month: indeed, some months will have higher activities, and other lower activities, thus lower income, while fixed costs will remain the same. As all activities will not start at once, it is important to have a clear and realistic view of the evolution of costs and revenues during the launch or start-up period (first 6 months).

The financial plan should also look for alternative solutions.

During the start-up the plan should also contain a detailed plan of cash expenses, week by week.

## 8. Publications:

· presentation folder:

Once the study is conclusive and convincing to start with the new service, when tariffs are fixed, and min. number of clients known, a folder has to be prepared for prospecting clients/members.

The core of the folder must be the presentation of the services offered, and the tariffs.

An important part of the folder should provide arguments to employers as to why they should join the service.

The arguments should be more than that they are obliged by international or national rules, such as collective agreements, public tenders, etc.

The arguments should also explain the direct benefits for the employer as a reduction of the number of accidents and injuries and the indirect benefits as a better image of the employer or CSR.

· contracts:

Together with the folder, contracts have to be prepared whereby the relations between the clients/members and the external OSH service have to be laid down.

The contracts must clearly define the duties of each party: conflicts usually arise because of misunderstandings about the duties and expectations of the service.

## 9. Final reminders:

A feasibility study should be prepared before starting the setting-up of an external OSH service. It has to be prepared by a team of experts, under the leadership of a project-manager.

The study must give, over a period of 3 to 5 years, a clear picture about the conditions for a successful start and functioning of the service.

The aim of the service is to assist the members/employers in their duties on prevention of accidents and improvement of working conditions.

# Annex 1: Useful Documentation on OSH

## • **Training Manual:**

### **Safety-Health and Working Conditions,**

Produced by the Joint Industrial safety Council in Sweden in cooperation with ILO, Stockholm, 1987, 110 pages.

ISBN 91-7522-115-2

Can be downloaded in pdf from website of ILO-Safework ([www.ilo.org/safework](http://www.ilo.org/safework)), together with "Guide" and "Checklist"

## • **OSH Management Systems**

### **Guidelines on Occupational Safety and Health Management Systems (ILO-OSH 2001)**

Geneva, ILO, 2001

Available in several languages

ISBN 92-2-111634-4

Web: <http://www.ilo.org/safework>

## • **Service by an Employers' Organisation:**

### **Developing and Establishing an Occupational Safety and Health Service in an Employers' Organisation A practical Guide and Training Programme for Small or Developing Employers' Organisations**

Geneva, ILO/Bureau for Employers' Activities, 1998, 37 pg. ACT/EMP 19

## **Developing an external OSH service**

Opportunities for Employers' organisations concerning occupational safety and health issues (case of Stara Zagora, Bulgaria)

Budapest, ILO, 2005, 31 pg.

ISBN 92-2-117042-X

Can be downloaded in pdf from ILO-SRO Budapest ([www.ilo-ceet.hu/publications](http://www.ilo-ceet.hu/publications))

## • **Risk Assessment:**

### **Risk Assessment Tool**

Safety and health at work is everyone's concern

Bilbao, European Agency for safety and health at Work, 2007, 52 pg

TE - 76-01-001-EN-1

Available in several languages.

Downloadable in pdf at "[osha.europa.eu/publications](http://osha.europa.eu/publications)"

# Annex 2: Websites on OSH

## **International:**

ILO (International Labour Organisation) – Safework	<a href="http://www.ilo.org/public/english/protection/safework">www.ilo.org/public/english/protection/safework</a>
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With interesting information and documents about ILO conventions (standards), training materials, management systems, etc.

ILO – CIS (International Occupational Safety and Health Information Centre)	<a href="http://www.ilo.org/public/english/protection/safework/cis/index.htm">www.ilo.org/public/english/protection/safework/cis/index.htm</a>
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ILO-CIS is the "knowledge management arm" of the ILO-Safework programme. It is a data base of all information needed for prevention of injuries and diseases at workplace

WHO (World Health Organization) WHO Regional Office for Europe	<a href="http://www.who.int/occupational_health/en/">www.who.int/occupational_health/en/</a> <a href="http://www.euro.who.int/occhealth">www.euro.who.int/occhealth</a>
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The WHO has also interesting programmes on improvement of occupational health through its regional offices.

## **EU (European Union):**

	<a href="http://www.osha.europa.eu/en">www.osha.europa.eu/en</a>
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The European Agency on OSH in Bilbao (Spain) provides via its website and a free monthly newsletter interesting and useful information for all practitioners.

## **National sites:**

Canada	Canadian Center for Occupational Safety and Health	<a href="http://www.ccosh.ca">www.ccosh.ca</a>
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The website of the Canadian Center for OSH is very complete and provide access to many useful links.

USA	Occupational Safety and Health Administration	<a href="http://www.osha.gov">www.osha.gov</a>
	National Institute for Occupational Safety and Health	<a href="http://www.cdc.gov/niosh">www.cdc.gov/niosh</a>
	National Fire Protection Association	<a href="http://www.nfpa.org/index.asp">www.nfpa.org/index.asp</a>
	National Safety Council	<a href="http://www.nsc.org">www.nsc.org</a>

OSHA and NIOSH are governmental institutions (department of labor and department of health and human sciences, while the NFPA and NSC are private initiatives.

UK	Health and Safety executive	<a href="http://www.hse.gov.uk">www.hse.gov.uk</a>
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This official website contains a lot of useful downloadable publications in several languages and also the possibility of online reporting of accidents, etc.

France	Institut National de Recherche et de Sécurité pour la prévention des accidents du travail et des maladies professionnelles (INRS)	<a href="http://www.inrs.fr">www.inrs.fr</a>
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INRS is jointly management by the social partners and its website is bilingual French-English.

Germany	Bundesanstalt der Arbeitsschutz und Arbeitsmedizin	<a href="http://www.baua.de">www.baua.de</a>
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This site belongs to the German Ministry of Labour and is bilingual German-English.

Finland	Finnish Institute of Occupational Health	<a href="http://www.ttl.fi/internet/english">www.ttl.fi/internet/english</a>
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Website with interesting references, documentation, books and training programmes, in Finnish, Swedish and English.nt:

Ireland	Health and Safety Authority	<a href="http://www.hsa.ie">www.hsa.ie</a>
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The website provides several useful publications in different European languages.

New Zealand	Department of Labour, health and safety section	<a href="http://www.osh.govt.nz">www.osh.govt.nz</a>
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The website contains an impressive list of downloadable safety guidelines and publications.

#### **Employers' and Business' Organisations**

Ireland	Irish Business and Employers Confederation (IBEC)	<a href="http://www.ibec.ie">www.ibec.ie</a>
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IBEC's OHS service provides advice, consultancy, training and information to members on all aspects of health and safety legislation. IBEC publishes also a useful Guide on Occupational Safety and Health.

Lithuania	Lithuanian Industrialists Confederation – Training Center (LPK – MC)	<a href="http://www.lpk-mc.lt">www.lpk-mc.lt</a>
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The Confederation LPK has a special training centre which provides basic training of workers on OSH based on the ILO-Manual "Safety-health and Working Conditions".

Prevention and Interim (Pi)	<a href="http://www.safestart.eu">www.safestart.eu</a>
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SAFESTART is a European partnership which aims to enhance work floor safety through the development of a user-friendly e-Learning training course. Safestart is the result of a financial project supported by the European Leonardo Da Vinci scheme. Users have to register (free of charge) before having access to the content of the site. The programme is available in different languages.

European Safety Federation	<a href="http://www.eu-esf.org">www.eu-esf.org</a>
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Website of the associations of manufacturers and suppliers of PPE (Personal Protective Equipment) in Europe.

# Annex 3: Checklist identification of hazards

## Other interesting sites:

Health and Safety for Beginners (HSfB) [www.healthandsafetytips.co.uk](http://www.healthandsafetytips.co.uk)

Health and Safety for Beginners (HSfB) provides health and safety downloads, support for health and safety courses, toolbox talks, careers advice, discussion forums and it's all FREE!

Pictures on H&S: [www.safetyphoto.co.uk](http://www.safetyphoto.co.uk)

This site brings together in one place, photographs of hazards, poor working procedures and near misses in the workplace. The purpose of this web site is to provide free practical information and resources that might be helpful to qualified safety practitioners.

No. Hazard	YES	NO	? <sup>2</sup> :	Likelihood	Consequence	Risk	Remarks
1. Uneven or slippery surfaces (which can cause slips, trips, falls, etc.)			Part III - 1				
2. Moving vehicles and machines			Part III - 2				
3. Moving parts of machines			Part III - 3				
4. Objects and parts with dangerous surfaces (sharp, rough, etc.)							
5. Hot or could surfaces, materials, etc.							
6. High workplaces and climbing points (which can cause falls from a height)							
7. Hand tools							
8. High pressure							
9. Electrical installations and equipment			Part III - 4				
10. Fire			Part III - 5				
11. Explosion			Part III - 6				
12. Chemical substances (including dust) in the air			Part III - 7				
13. Noise			Part III - 8				

<sup>2</sup> Do not know go to this hazard specific checklist "Risk assessment essentials" <http://hwi.osha.europa.eu>

# Annex 4: More checklists

No. Hazard	YES	NO	? 2 :	Likelihood	Consequence	Risk	Remarks
14. Hand-arm vibration			Part III - 9				
15. Whole-body vibration			Part III - 9				
16. Lighting			Part III - 10				
17. UV, IR, laser, and microwave radiation							
18. Electromagnetic fields							
19. Hot or cold climate							
20. Lifting and carrying loads							
21. Work involving poor posture							
22. Biological hazards (viruses, parasites, moulds, bacteria)							
23. Stress, violence, harassment (mobbing)							
24. Others: please specify below and tick "YES":							

More checklists are available in the brochure "Risk assessment essentials"  
<http://hwi.osha.europa.eu>

## IDENTIFICATION OF HAZARDS AND SELECTION OF PREVENTIVE MEASURES – GENERAL

- Checklist No. 1: Uneven or slippery flat surfaces
- Checklist No. 2: Moving vehicles and machines
- Checklist No. 3: Moving parts of machines
- Checklist No. 4: Electrical installations and equipment
- Checklist No. 5: Fire
- Checklist No. 6: Explosion
- Checklist No. 7: Chemical substances
- Checklist No. 8: Noise
- Checklist No. 9: Vibration
- Checklist No. 10: Lighting
- Checklist No. 11: Stress at work

## IDENTIFICATION OF HAZARDS AND SELECTION OF PREVENTIVE MEASURES – FOR SPECIFIC SECTORS AND WORK

- Office work
- Construction
- Food processing
- Woodworking
- Car repair
- Agriculture
- Small-scale surface mining



# Annex 5: Workers Health Surveillance

## **What is Workers Health Surveillance?**

Workers Health Surveillance (WHS) is, like a risk assessment, a vital instrument in improving health conditions. Because WHS is a complex instrument, specialists are needed. Therefore it is one of the services an OHS can provide.

WHS is primarily a check-up on the individual workers' condition with respect to some kind of exposure of labour. The basic idea of WHS is periodic monitoring. If you frequently monitor the state of health you can see changes: improvement or deterioration, impairment. The WHS gives information of the health state of individuals. But it also gives information at a group level by comparing the results of workers employed in the same department or profession.

There are different goals for WHS:

- (early) diagnosis of occupational diseases;
- improvement of general health condition: blood pressure, weight, visibility or sight;
- investigating the perception of employees.

## **When?**

It depends on national laws whether and when WHS should be provided. But basically the employer should give the employee access to health surveillance in order to prevent occupational health risks.

At least in case of exposure to carcinogens, vinyl chloride monomer, asbestos, lead, biological agents, visual display units, noise levels above 80 decibels and for diving and caisson labour WHS instruments need to be developed.

## **How?**

- orientation and decision;
- preparation;
- introduction;
- evaluation;
- periodicity – repetition (1-5 years);
- periodicity: based on risk level and time lag of health complaints;
- record keeping of the results.

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### Instruments available?

- questionnaires;
- physical examination for example physical workload;
- physical testing of organs for example lung function, eye testing, hearing loss audiogram;
- laboratory research, for example levels of lead in blood and chrome in urine.

### Example: Lead in blood

Workers exposed to lead should be monitored frequently. Frequency of measurements (in air or blood) depends on action level. A high level means a higher frequency. The actions planned also depend on the action levels.

Action Level I 40 µg/m <sup>3</sup> (air) 300 µg/100 ml (blood)	Inform workers about risks Prohibition on eating, drinking on location Possibility of medical supervision
Action Level II 70 µg/m <sup>3</sup> (air) 500 µg/ 100 ml (blood)	Monitoring programme Clean Zone Work clothes Control measures
Action Level III 600 µg/100 ml (blood)	Intensive medical supervision and treatment

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