Occupational safety and health in small and medium-sized enterprises

Occupational safety and health services for small and medium-sized enterprises – Experiences and solutions

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A) Introduction

As part of the activity programme of the Permanent Committee on Prevention of Occupational Risks of the ISSA for the period 1996-1998 a report was planned on occupational safety and health services for small and medium-sized enterprises. The report carries on from the report IX entitled Occupational health services: Concepts, scope, organization, financing and implementation, by Gerhard Mehrtens, put before and accepted by the Permanent Committee on Prevention of Occupational Risks at the 25th General Assembly of the ISSA in November 1995.

This study is to be seen in connection with the areas to which the ISSA has always paid particular attention, namely the prevention of and compensation for occupational accidents and diseases on the one hand, and the development of practical concepts for occupational health on the other. In addition to the above-mentioned report, the following studies should also be mentioned in this respect:

- Present state and evolution of occupational diseases in the light of the recognition of new types of diseases (Report XV, 22nd General Assembly of the ISSA, 1986);

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The improvement of health and risk prevention in private life by utilization of experience from the workplace (Report XXI, 22nd General Assembly of the ISSA, 1986);

Strategies to prevent the effects of harmful materials on the individual and to evaluate noise and vibrations as sources of ill-health (Report II, 23rd General Assembly of the ISSA, 1989);

Integrated strategy for prevention of occupational accident, traffic and in the home (Report III, 23rd General Assembly of the ISSA, 1989);

Trends in compensation for occupational illnesses in the light of the recognition of new illness types (Report III, 24th General Assembly of the ISSA, 1992);

Occupational diseases and possibilities of preventing them (Report IV, 24th General Assembly of the ISSA, 1992);


In addition to these studies the relevant decision-making body of the ISSA approved a Prevention Concept in October 1994 (ISSA Prevention Concept “Safety worldwide” – Prevention: The Golden Path to Social Policy).

The Permanent Committee on Prevention of Occupational Risks, on the occasion of the 25th General Assembly of the ISSA in 1995, accepted the following conclusions as part of the above mentioned report on occupational health services:

1. In many countries, not all employees are covered by occupational health services, as is stipulated in International Labour Convention 161 (1985). Frequently, small and medium-sized enterprises are not included.

2. Occupational health care should be developed in such a way that it benefits all employees, including those in small enterprises.

3. In many countries, no occupational health care is provided beyond examinations. As a result of this, major responsibilities of occupational medicine such as the exerting of influence over the working environment and working conditions are not taken into account.

4. The responsibilities of occupational medicine must be laid down in all countries in such a way that they cover not only occupational health examinations but also the total “Man-Machine-Environment” system.

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5. ... In all countries, the quality of occupational health care must be raised by high levels of basic and advanced training for physicians and paramedical personnel.

6. ... A system of quality management should be developed and implemented within occupational health. This system could be the object of assessment if an external inspection is considered necessary.

Furthermore, the report referred explicitly to the need for co-operation between occupational safety and occupational health services.

These conclusions gave rise to the present study in which examples of occupational safety and health services for small and medium-sized enterprises in selected countries are described with a view to inferring a model for effective occupational safety and health services for small and medium-sized enterprises which are tailored to the special needs of such enterprises. The report on occupational health services has already pointed out that co-operation between occupational safety and occupational health services has already been recognized as a problem in some countries and is being improved (section 6 of the Report Occupational health services: Concepts, scope, organization, financing and implementation). The present study also pays special attention to this aspect with regard to the situation facing small and medium-sized enterprises.

1. **Object of the study: Small and medium-sized enterprises**

The small and medium-sized enterprises forming the object of the study cannot be defined exactly using quantitative parameters (e.g. number of employees, business turnover, in the case of agricultural enterprises – the area under cultivation, etc.). In as far as national regulations governing occupational safety and health services differentiate according to the number of employees in an enterprise, a comparison against the relevant threshold figures provides little of use. According to the recommendation of the European Communities dated 3.4.1996 on the definition of small and medium-sized enterprises (96/280/EC, Official Bulletin No. L 1074 dated 30.4.1996) such a definition depends, in the main, on such criteria as the number of employees, turnover, business results and independence from larger enterprises. With regard to the number of employees, the figure of 50 for small enterprises and 250 for medium-sized enterprises is proposed. Enterprises with fewer than 10 employees are referred to as “smallest enterprises”. In relation to the question of the relevance of the parameters mentioned and numbers for employees in the present context, it should be borne in mind that the recommendations mentioned are aimed at creating a uniform framework for the application of the Community programme to encourage small and medium-sized enterprises. This recommendation is not directly applicable to the problems addressed in the present study because of its purely economic focus. This is particularly true for the upper limit of 250 employees set for medium-sized enterprises which appears to be set too high as a cut-off point for distinguishing between medium-sized and large-scale enterprises with regard to occupational safety and health services. It is even more the case for the agricultural sector.
Leaving aside the issue of set parameters, the object of the study can be described as being about enterprises with economic, employee-related and other infrastructure-based particularities by the very nature of their small size, which, in comparison with larger enterprises, places special demands on the organization and implementation of occupational safety and health services. The question of how the size of an enterprise, particularly with regard to the number of its employees, would change the requirements made on occupational safety and health services can depend both on which industry the enterprise is in and on other regional conditions (e.g. infrastructure, general economic conditions). For this reason, the questionnaires sent to national institutions did not contain questions requiring quantitative data with regard to the definition of a small or medium-sized enterprise. They concentrated, rather, on ascertaining to what extent statutory regulations provide for qualitative differentiation with respect to safety and health services based on the size of an enterprise or whether other considerations are taken into account in implementing such services. The report’s conclusion also makes no reference to any attempt to link any particular implementation of services to enterprise size in the proposals made for occupational safety and health services for small and medium-sized enterprises.

2. Special conditions for occupational safety and health services for small and medium-sized enterprises

The systems for occupational safety and health services originally set up both in industrialized countries and developing countries were mainly oriented towards the requirements of large or very large enterprises. Little attention was paid initially to the particular situation of small or medium-sized enterprises. It therefore emerges that, for a variety of reasons, the implementation of an effective system of occupational safety and health services for small and medium-sized enterprises creates special difficulties and that proven procedures used for large-scale enterprises cannot simply be applied to small and medium-sized enterprises in the same way. On the other hand, it is safe to assume that it is precisely in small and medium-sized enterprises, because of the large number of employees that they employ overall (see appendix Statistics), that support for entrepreneurs’ efforts to establish such services is urgently needed. Thought must therefore be given to how account can be taken of the special conditions to be found in small and medium-sized enterprises when setting up systems for occupational safety and health services. Below are some of the special circumstances which characterize the situation facing small and medium-sized enterprises in many branches of industry. The list is not meant to be exhaustive.

- Limited financial resources on the part of the entrepreneur, which gives rise to the question as to the financial burden that such entrepreneurs can be expected to assume for occupational safety and health services (see also the special regulation in article 118a, § 2, sentence 2 of the EU treaty, which is dealt with in more detail in section 3).

- A low level of knowledge or no knowledge at all of health and safety requirements among entrepreneurs or works managers, skilled employees with special knowledge of

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occupational safety and health (e.g. engineers) are more likely to be found in larger enterprises than in small and medium-sized enterprises.

- This leads in turn to a situation in which new experience in health and safety protection is less likely to be implemented successfully without outside help in small and medium-sized enterprises than in larger enterprises.

- The poor financial situation in small and medium-sized enterprises is also often the reason for obsolete machinery; financing to bring the workplace environment up to modern health and safety standards is also lacking.

- Because of limited financial possibilities and the lack of specialist technical knowledge obsolete working procedures often still apply which do not reflect the current technical possibilities for occupational health and safety. In typical cases there are few controls and little monitoring of working procedures or machinery so that accident risks or dangerous emissions are detected less often.

- It must also be assumed that hygienic conditions for employees in small and medium-sized enterprises are often worse than those in larger enterprises in the same or similar industrial branch.

In summary it emerges that the possibilities for systematic preventive measures in small and medium-sized enterprises are extremely restricted, both for financial reasons and because of the lack of technical expertise. Ideally support from outside through effective occupational safety and health services may be able to replace the lack of expertise in the enterprise. The financial problem, however, would not be solved by such support.

3. Objectives of the study

Based on the 1995 report on occupational health services, the study has the following objectives:

- The provision of an exemplary description of occupational safety and health services for small and medium-sized enterprises in selected countries. The aim is to ascertain the extent to which:

  - the relevant statutory regulations regarding occupational safety and/or occupational health services for small and medium-sized enterprises contain special regulatory provisions compared with those for larger enterprises. One such example would be whether the application of a statutory obligation to provide occupational safety and health services depends on the size of the enterprise or whether the importance of the enterprise’s size determines the extent of safety and health services to be provided. The study also seeks to
ascertain the extent to which funding systems differentiate between small and medium-sized enterprises on the one hand and larger enterprises on the other. Of particular interest is the question of the extent to which the relevant statutory regulations provide for different models with regard to the implementation of occupational safety and health services and the extent to which special qualitative requirements are placed on those persons or organizations involved in occupational safety and occupational health services for small and medium-sized enterprises.

- The study also seeks to determine the extent to which occupational safety and health services in small and medium-sized enterprises are actually set up. Carrying this further, experience to date in implementing occupational safety and health services in small and medium-sized enterprises is of interest, particularly with regard to how the effectiveness of occupational safety and health services in small and medium-sized enterprises is evaluated and which organizational solutions for the particular requirements of small and medium-sized enterprises are regarded as suitable.

- Based on the study of existing statutory provisions and the actual conditions prevailing in selected countries the study seeks to formulate proposals for effective occupational safety and health services tailored to the special needs of small and medium-sized enterprises.

4. International concepts

4.1. The International Labour Organization (ILO)


Convention 161, which is only binding on those States that have ratified it, stipulates that each Member State undertakes to set up occupational safety and health services gradually for all employees, including those in public service and members of production co-operatives, in all works and branches of industry. It describes the scope and terms of reference of these services and the modalities by which they are set up, operated and monitored, the independence of such services and the various reporting requirements. Convention 161 does not differentiate with regard to small and medium-sized enterprises. However, Article 3 § 1 does require that the measures taken be suitable for and in accordance with specific occupational risks. Up to 31.12.1997 17 States had ratified Convention 161. These States are: Bosnia and Herzegovina,
Brazil, Burkina Faso, Croatia, Czech Republic, Finland, Germany, Guatemala, Hungary, Mexico, San Marino, Slovakia, Slovenia, Sweden, The Former Yugoslav Republic of Macedonia, Uruguay, Yugoslavia.

4.2. The World Health Organization (WHO)

Occupational health care is part of the programme Health for All adopted by the World Health Organization in 1981. The 1986 Ottawa Charter on health promotion contains an undertaking to combat occupational risks and calls for the development of strategies to ensure that safety and health services in small and medium-sized enterprises are of the same quality as those in large enterprises.

4.3. ILO-WHO Joint Committee on Occupational Health

At its meeting in 1995 the Joint Committee on Occupational Health of the ILO and the WHO discussed the adoption of the “Declaration on Occupational Health for All” and the Recommendation “Global Strategy on Occupational Health for All – The Way to Health at Work”. The recommendation “Global Strategy on Occupational Health for All” emphasizes the need for special action to ensure health and safety protection in small enterprises and for the self-employed (one-man firms). The recommendation points out that it is precisely small enterprises that often lack the necessary expertise and capabilities to prevent or control dangers in risk occupations effectively. The fact that economic and health damage due to insufficient preventative health care and dangerous workplace conditions has reached extreme proportions and could also threaten the existence of enterprises was not generally recognized. The recommendation further points out that programmes to ensure that the necessary expertise and capabilities together with technical and organizational infrastructures are in place for effective health and safety protection in small enterprises are not only costly but also difficult to implement. Special actions, particularly new models for making the necessary services available and new concepts for co-operation, for example, between occupational safety and health service organizations and the social partners, are regarded as necessary in order to achieve the objective of effective health and safety protection in small enterprises nevertheless.

4.4. The Treaty on the European Community – Article 118a

In 1987 the Treaty on the Foundation of the European Community was amended to receive Article 118a. Article 118a § 1 contains a – non-binding – commitment under which the Member States shall endeavour to promote improvements in the work environment to protect the health and safety of employees. In order to achieve this aim the Council is authorized by the Commission, in co-operation with the European Parliament after consultations with the Committee on Economic and Social Affairs, to issue directives in the form of minimum regulations governing measures to promote the health and safety of employees which would then be applied in stages. Article 118a § 2 sentence 2 is particularly important since it states that these directives shall not impose any administrative, financial or legal requirements which

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might stand in the way of the establishment and development of small and medium-sized enterprises. In a Declaration on Article 118a § 2, made on the initiative of the Federal Republic of Germany, the Conference of Member States stated that in the discussions on these regulations there had been agreement on the fact that the Community had no intention of placing employees in small and medium-sized enterprises at a disadvantage where there were no objective grounds for doing so when drawing up minimum regulations on health and safety protection. It is deduced from this statement that the health and safety of employees in all enterprises must be guaranteed equally. Any consideration of the special economic situation of small and medium-sized enterprises in relation to administrative, financial or legal requirements only arises in as far as there are objective grounds for exceptions and where the required standard of protection in the interests of employees can be reached by other means (c.f. Heilbronner, K.; Klein, E.; Magiera, S.; Müller-Graff, P.-C.; Heymanns Cologne 1995, Article 118a Margin note 6).

In implementation of Article 118a of the EC Treaty, the Council of the European Communities issued the Council Directive on the implementation of measures to improve safety and health protection of employees at work (dated 12 June 1989 – 89/391/EEC, Official Bulletin of the EC No. L 183/1). Under the terms of this directive employers are required to show due care for the health and safety of employees in relation to all aspects to do with the work they perform. Under this obligation the employer must take the necessary measures to ensure health and safety protection for his employees including measures to prevent occupational risks, to inform and instruct the workforce and to make a suitable organization available. The regulations in Article 7 §§ 3-5 of this directive are particularly important. These regulations read as follows:


**Article 7**

(3) Where the possibilities to implement the organization of these protective measures for risk prevention are insufficient in the enterprise or works the employer must bring in external experts (persons or services).

(4) If the employer brings in external experts he must inform these persons or services about those factors which are known to effect, or which are suspected of effecting the health and safety of employees and to provide them with access to the information contained in Article 10 § 2.

(5) In all cases:

- the appointed employee must have the necessary abilities and means;
- the external persons or services brought in must be suitable and have the necessary staff and occupational equipment; and

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• the appointed employee and the external persons or services brought in must have sufficient staff available;

so that they can take on protective measures and risk prevention measures, whereby the size of the enterprise or works and/or the degree of risk to which employees are exposed as well as their location within the overall enterprise or works are to be taken into account.

Specific regulations governing the demand in Article 118a § 2 sentence 2 of the Treaty to avoid administrative, financial or legal requirements which might stand in the way of the establishment and development of small and medium-sized enterprises (see above) are not contained in directive 89/391/EEC.

5. Reasons for restricting national enquiries to Europe

In the report *Occupational health services: Concepts, scope, organization, financing and implementation* it is already clear that, with the exception of the Asia-Pacific area, a trend towards improving occupational health services can currently be identified in all the regions of the world. This is especially true for those countries canvassed in the African and American regions. With regard to the subject of this study, however, it nevertheless appeared justified to restrict the study to the European area. The following considerations favoured this option:

• The special regulation quoted in 4.4. above with regard to occupational safety and health services in small and medium-sized enterprises suggests that it would be worthwhile to pursue the question as to what experience exists already on implementing this regulation by eliciting responses from several countries.

• A comparison of differing models for occupational safety and health services is made fundamentally easier as a result of the basic similarity between political systems to be found in Europe and to a large extent outside the European Union.

• Apart from this, the countries selected represent a variety of contexts in terms of their economies, social policy and infrastructure, which makes it possible to arrive at differentiated statements about the effectiveness of various service models.

B) Austria – Experiences and solutions

1. Legal framework

The 1997 amendment to the *ArbeitnehmerInnenschutzgesetz* (ASchG) (legislation governing employee protection), which originally came into force on 1.1.1995, brought health and safety protection at work in Austria into line with the regulations in the European Economic Area.

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This brought about fundamental structural changes such that the ASchG regulations were introduced in stages. Leaving aside the transitional regulations, the ASchG aims at introducing occupational safety and health services in enterprises of all sizes.

The ASchG provided for the following regulation governing the gradual introduction of the obligation to provide such services:

- from 1.1.1997 all places of work regularly employing more than 100 employees;
- from 1.1.1998 51 – 100 employees;
- from 1.1.1999 11 – 50 employees;
- from 1.1.2000 1 – 10 employees.

The small and medium-sized enterprises forming the subject of this study are therefore only partially subject to the obligation to provide such services from 1.1.1998. This means that there is no practical experience to report on as yet.

The ASchG differentiates between occupational safety services and occupational health services.

a) **Occupational safety services**: Employers must appoint safety experts. They can meet this requirement

- by employing safety experts on a regular employment basis;
- by making use of external safety experts; or
- by making use of occupational safety centres.

Safety technicians must be qualified. They must possess a certificate of successful completion of a technical training course recognized by the Federal Minister for Labour, Health and Social Affairs (§ 74 section 1 ASchG). All further details are regulated in the directive of the Federal Minister for Labour, Health and Social Affairs on technical training for safety experts (see 5.).

The technical training course must last a minimum of 8 weeks and comprise at least 288 teaching units of 50 minutes each. Learning controls and a final examination are prescribed. Persons to be admitted to such technical training courses are those who:

- have completed a technical university course or a course at a higher technical institution or an equivalent course or who hold their qualification as a master craftsman and who have worked for at least two years in an enterprise for which the training course is relevant.

Other persons who may also be admitted to training courses are those who:

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• have worked for at least four years in an enterprise for which the training course is relevant and who have passed the entrance examination to the training institution to show that they have the necessary basic technical knowledge.

Occupational safety centres may only operate if the ministry responsible is satisfied that special qualification requirements have been met. These requirements are:

• at least two full-time safety experts with the necessary technical knowledge are employed;
• the necessary technical and support staff are employed; and
• the necessary technical equipment for a regular occupational safety service are available.

Safety experts have the task of advising employers and employees, safety representatives and staff bodies on occupational safety and work ergonomy and to support employers in the fulfillmentment of their occupational safety obligations. Safety experts are not authorized to do anything more. Safety experts are under an obligation to co-operate with the occupational health physician appointed for the enterprise (see b) below). Intervention times for safety experts are a function of the number of employees in the enterprise. This time rises proportionally for enterprises with up to 100 employees; from 101 employees onwards the time decreases proportionally.

In addition the ASchG makes provision for the ministry responsible to issue regulations stipulating a higher minimum intervention time for occupational safety services for activities connected with specific accident risks.

b) **Occupational health services:** Employers can meet their obligation to appoint occupational health physicians in the same way as under the regulations governing safety experts, i.e.:

• by employing occupational health physicians on a regular employment basis;
• by making use of external occupational physicians; or
• by making use of a duly certified occupational health centre.

Occupational health physicians are those medical practitioners entitled to practise medicine independently and who have completed a course of study on occupational medicine duly recognized by the ministry responsible. Employers must hire such additional expert and support staff as may be necessary to provide occupational health services. Employers must also provide the premises and equipment for occupational health services.

Occupational health centres must be licensed by the Federal Minister for Labour, Health and Social Affairs. All further details are regulated in the directive of the

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Federal Minister for Labour, Health and Social Affairs on occupational health centres (see above). The main requirements for licensing are:

- the centre must be under the direction of an occupational health physician. The centre must employ enough occupational physicians for the centre to guarantee a minimum of 70 hours of occupational health care per week;

- the centre must have suitable specialist staff available, e.g. physicians in training, medical technicians, nurses, psychologists, chemists, toxicologists, according to the type of cover to be provided; suitable premises and technical equipment (particularly equipment to measure lighting conditions, air humidity, temperature, airspeed, equipment to measure noise levels and medical equipment for standard medical examinations).

The task of occupational health physicians is to advise employers and employees, safety representatives and staff bodies on health protection and health requirements with regard to working conditions and to support employers in the fulfillment of their duties in these respects. Occupational physicians are not authorized to do anything more. They are under an obligation to co-operate with the safety experts appointed for the enterprise.

Minimum intervention times have also been defined for occupational health physicians as a function of the number of employees in the enterprise. This time rises proportionally for enterprises with up to 100 employees; from 101 employees onwards the time decreases proportionally.

In addition the ASchG makes provision for the ministry responsible to issue regulations stipulating a higher minimum intervention time for occupational health care for activities connected with specific accident risks.

c) Guarantee of occupational safety and health services: Employers are required to ensure that safety experts provide the necessary information to employees, safety representatives and staff bodies on request and also that they provide advice for employees and safety representatives without such a request having been made.

The same applies for advice and information from occupational health physicians.

Labour inspectorates are responsible for supervising occupational safety and health services. Employers shall provide the labour inspectorates with the names of their appointed safety experts and occupational physicians. Appointed safety experts and occupational health physicians are required to keep records of interventions and activities. Labour inspectors may have sight of these records on demand. In addition,
occupational safety and health centres have special reporting requirements towards labour inspectorates.

2. Special regulations for small and medium-sized enterprises

The ASchG contains two special regulations for small and medium-sized enterprises with regard to service requirements.

a) In enterprises with less than 25 employees employers can perform some of the tasks of safety experts providing:
   - they can show they have sufficient knowledge in the area of health and safety protection; and
   - engage the services of an external safety expert or occupational safety centre on a half-time basis with regard to statutory intervention times.

An employer can perform all the functions of a safety expert if he can show that he has had the necessary training and that this is practicable with regard to the type of activity and the risks that exist. A directive shall stipulate the enterprise type to which this shall apply. This has not yet been done. These special regulations do not apply to occupational health services.

b) A separate ASchG article lays down the following for enterprises employing up to 50 employees: the federation, in co-operation with the relevant accident insurance institution, offers consultancy services for enterprises employing up to 50 employees to help them in the implementation and provision of regular occupational safety and health services under the terms of the legislation. If an employer has applied for these consultancy services unsuccessfullly he shall not be held to have failed to meet the requirement to appoint safety experts and an occupational health physician.

Beyond these special regulations applying to small and medium-sized enterprises there is no group of enterprises in Austria that is completely exempt from the requirement to provide occupational safety and health services.

The regulations governing the financing of occupational safety and health services (an obligation for employers) do not differentiate between small and medium-sized enterprises on the one hand and larger enterprises on the other. Financing for these services also does not form part of any separate collective agreements.

There is as yet no experience available on the implementation of occupational health services in small and medium-sized enterprises (see 1. above for the regulation

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governing the gradual introduction of the requirement to provide services based on enterprise size).

Draft planning proposals have been drawn up to ensure country-wide coverage for service provision to small and medium-sized enterprises.

3. Implementation of service provision

While the ASchG makes no specifically separate provision with regard to organizational forms for small and medium-sized enterprises that differ from those for larger enterprises, it does stipulate the following service modalities for undertakings with up to 10 employees:

- If an undertaking regularly employs between six and ten workers a joint inspection must be performed by a safety expert and an occupational physician at least twice per calendar year. Employers shall ensure that all their employees are present for such inspections unless they are unable to attend for reasons of holidays, illness or other important personal reasons or reasons to do with the business of the enterprise.

- For undertakings regularly employing up to five workers, external safety experts and occupational physicians must carry out a joint inspection to catalogue and evaluate risks and stipulate any measures to be taken. Then, taking account of the risks that have been identified, they shall stipulate how often future joint inspections will be required. The periods between inspections shall be recorded in the relevant health and safety reports. In all cases, as soon as there has been a change in the conditions identified and evaluated, a new joint inspection must be performed.

Since such enterprises will only come under the regulatory requirements from 1.1.2000, there is no practical experience available as yet.

With regard to the qualifications required for occupational health physicians and safety experts and other service staff no differentiation is made based on enterprise size. There is also no difference made with respect to the statutorily defined tasks and scope and terms of reference for appointed safety experts and occupational health physicians. Leaving aside the exceptions mentioned above, the ASchG merely provides a catalogue of minimum intervention times and tasks for small and medium-sized enterprises which are to be performed in the light of the actual requirements in each enterprise. The following tasks in particular feature in this catalogue:

- advice to the employer on all organizational measures involving health and safety;

- advice to employees, safety representatives and staff bodies on occupational safety matters;

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inspection of undertakings, construction-sites, etc. as required:

- the investigation and analysis of the causes of occupational accidents and diseases;
- co-operation in the investigation and evaluation of risks at the workplace in accordance with the ASchG;
- occupational health examinations for employees as required (up to 20 per cent of minimum intervention time);
- inoculations in connection with employee activity;
- involvement on health and safety committees;
- documentation of the activities performed;
- reporting of any shortcomings with regard to occupational health and safety to employers, the relevant State organizations and staff bodies.

Advice to employers on a change of workplace and the integration/re-integration of handicapped workers is part of the tasks of occupational health services. Treatment is not the responsibility of occupational health services either in small and medium-sized enterprises or in larger enterprises. Neither are statutory medical examinations prior to hiring employees. These are performed by specially appointed physicians who do not have to be the same as the occupational health physician appointed by enterprises.

While there are no plans to date for grouping certain occupational safety and health tasks either for small and medium-sized enterprises or for larger enterprises, consideration is being given to such solutions for small and medium-sized enterprises.

The ASchG provides for the following regulations to concert the efforts of occupational safety and health services both in terms of organization and the tasks performed:

- Safety experts and occupational physicians are required to work together and perform joint inspections of undertakings. Safety representatives and staff bodies must be present.
- Health and safety committees are to be set up in undertakings with at least 100 employees to exchange information and co-ordinate occupational safety installations. In addition to others, safety experts and occupational physicians are members of such committees.

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If a service institution (centre) is licensed as an occupational health centre and as an occupational safety centre then the Federal Minister for Labour, Health and Social Affairs can issue a directive splitting the overall intervention time for prevention staff differently from the standard statutory regulations governing intervention time. 

With regard to regulations governing the involvement of employee representatives in occupational safety and health services (see the requirement to advise staff bodies mentioned above), there are no differences between small and medium-sized enterprises and larger enterprises.

4. Summary

The statutory regulations in Austria provide for a staged extension of occupational safety and health services to cover all small and medium-sized enterprises employing at least one person by the year 2000. The first stage comes into force on 1.1.1998. Practical experience on the implementation of occupational safety and health services in small and medium-sized enterprises is therefore not available as yet.

The statutory regulations contain detailed requirements regarding the qualifications for persons that can be appointed as safety experts and occupational health physician. Minimum intervention times are laid down for safety and health services depending on the size of the enterprise. In enterprises employing fewer than 25 persons the task of safety expert can be performed in part by the employer. In small enterprises employing up to 10 persons special requirements exist for the implementation of safety and health services.

5. Important statutory regulations


1.1 §§ 73 ff. – Appointment of safety experts.

1.2 §§ 78 – Occupational safety and health services in small enterprises.

1.3 §§ 79 ff. – Appointment of occupational health physicians; operation of occupational health centres; tasks, information and involvement of occupational physicians; intervention times.


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C) **Switzerland – Experiences and solutions**

1. **Legal framework**

The statutory basis for health and safety at work in Switzerland is provided by the federal legislation on accident insurance (UVG), the federal legislation on work in industry, trade and commerce (ArG) and the directive on the prevention of occupational accidents and diseases (VUV). The institutional framework for occupational safety is mainly provided by the executive bodies at Canton and Confederation level for the ArG, the Swiss Accident Insurance Institute (SUVA) and the co-ordination commission.

The SUVA is an independent public-law body and is responsible for providing statutory insurance cover against occupational accidents and diseases for two-thirds of all persons employed in Switzerland. Another principal task of the SUVA is the prevention of occupational accidents and diseases. The SUVA also issues guidelines to promote safety at the workplace, inspects enterprises and advises employers and employees on all questions relating to safety at work.

The SUVA monitors the application of regulations governing the prevention of occupational diseases in all enterprises, stipulates the type of occupational preventive medical examinations an employer should have performed and monitors this. The SUVA can also have examinations performed itself.

Under article 11a VUV the employer must call in occupational health physicians and other occupational safety specialists if this is necessary for the protection of the health and safety of employees. This requirement to involve the relevant specialists varies according to the risk of employment accidents and diseases arising out of the statistics and risk analyses that are available, the number of persons employed and the degree of specialist knowledge necessary to guarantee health and safety in the enterprise.

Occupational safety specialists under the terms of the VUV are occupational health physicians, safety engineers, labour hygienists and so-called safety experts. Article 11d VUV lays down the qualifications required for each of these categories. The scope and terms of reference for occupational safety specialists are laid down in Article 11e VUV and correspond essentially to those laid down in German labour safety legislation. Special emphasis is placed on the position of occupational safety specialists with regard to the executive bodies (the VUV stipulates that these are the Canton and Confederation executive bodies for the ArG and the SUVA). Article 11e VUV requires occupational safety specialists in cases involving immediate and serious risk to the life and health of employees where the employer has refused to take the necessary measures to inform the relevant executive body without delay.

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In order to implement the accident prevention directive (VUV) the Federal Co-ordination Commission for Occupational Safety (EKAS) was tasked by the Swiss government (Bundesrat – Federal Council) to issue a directive on the involvement of occupational physicians and other occupational safety specialists. This directive (EKAS directive 6508) was drafted over a period of two years with the involvement of the federations representing occupational health physicians, occupational hygienists and safety engineers as well as the social partners and came into force on 1.1.1996. The directive’s requirements are not binding on enterprises employing fewer than five persons with an accident insurance premium of 5 per cent or less. Voluntary application of the directive is recommended in such cases.

The main body of the directive contains detailed provisions on how the requirement to involve experts is to be met. Essentially three groups of enterprises are identified: enterprises without special risks; enterprises with special risks to a limited extent (few employees effected, small number of machines and hazardous materials, low exposure time) and enterprises with special risks. A table at the end of the directive lists these risks. Where an employer elects not to apply the standard procedure allotted to each of these three categories he must meet the requirements of the so-called subsidiary model containing branch-related/economic sector-related intervention times for occupational physicians and specified intervention times on the basis of premium rates for occupational accidents for safety engineers, occupational hygienists and safety experts.

Section 2.5 of EKAS directive 6508 recognizes solutions for economic branches, enterprise groups and models as similarly defined under sections 2.1-2.3 of the directive. These can contain models for individual enterprises as well as models for outside consultancy services.

The manual on recognition for solutions for economic branches, enterprise groups and models is aimed at standardizing proposed solutions and making it easier for applicants to implement EKAS directive 6508. It deals with formal and substantive issues for proposals to be submitted to the EKAS for approval. The main emphasis in terms of content is the catalogue of measures for each economic branch which derives from hazard audits, risk assessments and analyses. Proposals also include details on technical equipment, organization and staff.

The requirement for approval is that solutions be worked out with the involvement of the social partners.

This directive lays down the technical qualifications required of safety specialists and differentiates between occupational health physicians, occupational hygienists, safety engineers and safety experts. It also specifies the form and content of ongoing training courses and the requirements for training institutes and courses to obtain recognition.

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2. Implementation of service provision

This directive on the involvement of occupational physicians and other occupational safety specialists (EKAS directive 6508) is binding on all entrepreneurs except those employing fewer than five persons with an accident insurance premium of 5 per cent or less. EKAS directive 6508 is therefore not binding on the typical small enterprise with a small compensation burden. For this area, application is merely recommended.

Implementing this directive should lead to a situation where occupational physicians and other occupational safety specialists are brought in only as required and therefore only in situations in which the actual situation of the enterprise and the degree of hazard warrant it. Their function is essentially consultative. Health and safety remain central tasks for the entrepreneur, which cannot be delegated to specialists. The directive places special emphasis on the individual responsibility of each enterprise.

What is decisive in terms of actual implementation is whether an enterprise falls into the category “without special hazards”, “with special hazards to a limited extent” or “with special hazards” (EKAS directive 6508, sections 2.1-2.3). The “special hazards” are listed in a table at the end of the directive.

Table 1 of the appendix to EKAS directive 6508 – List of special hazards

<table>
<thead>
<tr>
<th>Workplace conditions</th>
<th>Special fire and explosion hazards</th>
<th>Special chemical effects</th>
<th>Special physical installations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Work underground (tunnelling)</td>
<td>• Explosives, pyrotechnics</td>
<td>• Hazardous materials as defined in &quot;Threshold values at the workplace&quot;, SUVA form 1903</td>
<td></td>
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<tr>
<td>• Work under air pressure</td>
<td>• Flammable dusts, gases and fluids</td>
<td>• Potentially hazardous biological agents (risk groups 2, 3 and 4)</td>
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<tr>
<td>• Work involving no fixed workplace</td>
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<td>• Materials likely to cause allergies</td>
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<td>• High or low temperatures</td>
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<tr>
<td>• Manual lifting of heavy weights</td>
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<tr>
<td>• Work with solvents in large quantities</td>
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<td>• Tank maintenance</td>
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<tr>
<td>• Presses</td>
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<td></td>
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<tr>
<td>• Paper production machinery</td>
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<tr>
<td>• Slate production machinery</td>
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<tr>
<td>• Glass production machinery</td>
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<td></td>
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<tr>
<td>• Plaster, chalk and cement production machinery</td>
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<tr>
<td>• Textile production machinery</td>
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<tr>
<td>• Special or industrial waste</td>
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<td></td>
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<tr>
<td>• Nuclear power stations, radioactive materials, radiation emitting machines and equipment</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Technical installations and equipment under Article 49.2 VUV</td>
<td></td>
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</tr>
</tbody>
</table>

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a) Enterprises without special hazards

The enterprise is required to conduct a hazard audit based on what is known for that particular industrial branch and the necessary basic technical knowledge. This is a simple audit of hazards performed by persons with experience in the industrial branch. Courses for that industrial branch, SUVA or EKAS training courses or adult education institutes provide the necessary basic technical knowledge.

On the basis of this simple hazard audit the enterprise then defines tasks and procedures with regard to safety at work. **The involvement of occupational health physicians or other safety specialists is therefore not mandatory at this point.** Any occupational preventive medical examinations which prove necessary are not covered under this regulation and must naturally be requested by the employer.

The hazard audit must be reviewed at regular intervals. The hazard audit and any measures arising out of the audit must be documented.

b) Enterprises with special hazards to a limited extent

If the special hazards mentioned in Table 1 are only present to a limited extent (number of machines, materials, short duration of exposure to a hazard, small number of employees effected) an enterprise, in addition to the procedures mentioned under a), must **involve occupational safety specialists who will then carry out a risk evaluation and advise the employer on the necessary measures to be taken.** This evaluation and the measures decided on must be reviewed regularly and kept up to date.

c) Enterprises with special hazards

If the special hazards in an enterprise exceed the limits referred to under b) the enterprise must carry out a joint risk analysis with occupational safety specialists and formulate a safety plan.

Unlike the hazard audit, the risk analysis must be performed by safety specialists according to an approved method. The analysis should indicate the probability of the occurrence of occupational risks for individual workers (individual risk) and groups of workers (collective risk). In doing so the specialists will refer to occupational risks statistics from the SSUV (Sammelstelle für die Unfallversicherung – accident insurance clearing house) and epidemiological studies. The risk analysis will concentrate on analyses for workplaces, the enterprise as a whole and work flows with qualitative evaluations of the risks that could occur.

The results and findings of the risk analysis form the basis for a safety plan, which must then be drawn up. In particular, the plan must stipulate to what extent labour

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safety specialists must be involved and the specific tasks and duties that these experts must take on.

Both the risk analysis and the safety plan must be reviewed regularly and kept up to date. Documentation is mandatory.

d) Industrial branch and enterprise group solutions

Both branch federations and individual enterprises which have come together to form a group can, with the co-operation of the social partners, put forward proposals for solutions to implement EKAS directive 6508. In doing so they must apply the procedures laid down in the directive for the three enterprise categories (“without special hazards”, “with special hazards to a limited extent” and “with special hazards”). The proposed solutions must contain details of the branch structure and organization and details of the branch-specific hazard audit and the risk assessment and analysis in addition to a detailed presentation of the measures to be taken. The approving authority is the EKAS.

Industrial branch and enterprise group solutions are an efficient and attractive way for small and medium-sized enterprises to implement EKAS directive 6508.

e) Subsidiary model

If an employer elects to apply neither the procedure for individual enterprises laid down in the directive nor an industrial branch or enterprise group solution, then he is required to apply the subsidiary model. This sets out concrete intervention times for occupational safety specialists. The minimum intervention time for occupational physicians is a function of the risk factor for each occupational disease (i.e. insurance costs for occupational diseases in proportion to the overall insurance costs for an industrial branch) and is between 0.05 hours and 0.8 hours per worker per year. The times for safety services are a function of the accident insurance premium rate and the special hazards in the enterprise.

In Switzerland it is assumed that the number of available occupational health physicians and other safety specialists is insufficient to meet the requirements laid down in EKAS directive 6508. It is hoped that the transitional period up to 1.1.2000 will be sufficient to train the necessary additional technical staff. The transitional period can also be used to work out industrial branch and enterprise group solutions. The Swiss approach is also pragmatic with regard to occupational health examinations, which are currently carried out in the main by doctors practising in the area around an enterprise where no occupational physicians are available. In future these tasks will be performed increasingly by occupational physicians as part of the gradual implementation of EKAS directive 6508.

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3. **Summary**

Very small enterprises (less than five employees) with slight hazard potential are not required to implement EKAS directive 6508. All other small and medium-sized enterprises are not required to bring in safety specialists. The obligation to appoint such experts only arises where special hazards are present. These experts then have the task to produce risk assessments or analyses and safety plans where necessary. The necessary extent of further monitoring is set out jointly with the enterprise in question.

EKAS directive 6508 provides the framework for a differentiated and needs-based involvement of occupational safety specialists. Hence the absence of stipulated intervention times. Such times are secondary and figure in the so-called subsidiary model and are only important for those employers who do not wish to apply either the procedures laid down in the directive for individual enterprises or an industrial branch or enterprise group solution.

EKAS directive 6508 emphasizes both the individual responsibility of enterprises and the possibilities available to industrial branch federations. The activity and involvement of enterprises in their relevant federations make a needs-based and focused use of safety specialists possible. If enterprises show themselves to be passive in this area, this leads to a rigid form of support characterized by strict intervention times. Small and medium-sized enterprises need flexible and therefore practical implementation possibilities.

4. **Important statutory regulations**

Federal legislation on accident insurance (UVG) dated 20.3.1981.

Federal legislation on work in industry, trade and commerce (ArG) dated 13.3.1964.


Directive on the involvement of occupational health physicians and other occupational safety specialists (EKAS directive 6508) dated 1.1.1996.

Manual on recognition for solutions for economic branches, enterprise groups and models dated 31.3.1996.


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D) Germany – Experiences and solutions

1. Legal framework

In Germany occupational safety and health services for small and medium-sized enterprises are currently being introduced as mandatory. For over 20 years such enterprises were exempt from this requirement. Enterprise size ceilings are applied according to the degree of hazard involved and range typically from 20 to up to 100 employees per enterprise. This exemption has now been withdrawn from many enterprises and will be withdrawn gradually for those remaining until, by the year 2001, there should be no enterprise in Germany employing workers that does not have occupational safety and health services.

In the same way as larger enterprises have been since 1974, small and medium-sized enterprises are now required, or shall be in future, according to the degree of hazard that they face and the industrial branch to which they belong, to have such services, or will be required to have them in the near future.

The employment accident insurance funds have laid down accident prevention regulations for each industrial branch, stipulating the extent to which such services are necessary for which type of enterprise.

Small and medium-sized enterprises can elect to use the same forms of service that are available to larger enterprises, namely:

- An occupational safety and health service (this option is rather theoretical for small enterprise units since it is usually beyond the enterprise’s financial resources. It is only mentioned here for the sake of completeness.)

- The use of the occupational safety and health services of another enterprise, e.g. those of a neighbouring enterprise.

- The use of occupational safety and health services that cover a number of enterprises. These can be:
  - services operated by a group of enterprises, e.g. by a guild or corporation, or
  - independent services operated on a private economic basis.

- There is also the so-called “entrepreneur model” for certain types of small enterprise with regard to occupational safety services. This consists of:
  - training for the entrepreneur as the owner working in his own enterprise, so that he is in a position to

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• undertake the necessary hazard audit himself and know under which circumstances he has to bring in external consultants.

There are no State bodies providing safety and health services in Germany with the exception of the cover provided in State enterprises, which have their own services.

While the extent of the occupational safety and health care provided depends on the actual needs of each enterprise, minimum intervention times for each enterprise type are laid down for occupational safety specialists (e.g. for safety engineers) and occupational health physicians (e.g. specialists in occupational medicine).

Minimum intervention times for (smaller) enterprises, which were hitherto exempt from occupational safety and health services, are shorter than those for (larger) enterprises which were already subject to this requirement. The assumption here is that it does not make sense to carry out safety and health care tasks “on-site”, like in larger enterprises, but to expand personal contacts between enterprises and the specialists servicing them through information about health and safety through other channels such as sending printed guides on hazard auditing and how to choose safety measures.

Depending on the degree of hazard, minimum intervention times are between 0.2 hours and 5 hours per worker per year for safety services and between 0.1 hour and 1.2 hours for occupational health services. In cases involving very short intervention times it is permitted to “accumulate” these times over several years such that in the case of a very small enterprise employing two persons and involving no serious hazards it would not be necessary to carry out a 12-minute visit each year when requirements can be met by a 36-minute visit every three years.

In many cases occupational preventive medical examinations are prescribed for workers irrespective of the size of an enterprise in addition to general occupational safety and health supervision. These examinations can only be performed by medical practitioners specially appointed by the relevant authorities of employment accident insurance funds. In many cases, the occupational physicians providing occupational health supervision for an enterprise has this licence as well. It makes sense to have occupational preventive medical examinations and occupational health supervision provided by the same physician since he knows the working conditions in the enterprise as a result of his supervisory duties. Given the short intervention times laid down for smaller enterprises, however, it is not permitted to count such examinations towards the minimum intervention time for occupational health supervision.

Physicians providing occupational safety and health supervision for enterprises do not treat workers. Also they are not involved in rehabilitation programmes for workers from their enterprises suffering from occupational accidents or diseases. It is also not their task to check whether workers are unfit for work.
The same regulations apply with regard to qualifications for occupational safety and health services for small and medium-sized enterprises as for larger enterprises. Any supervising specialist for occupational safety must be legally entitled to use the designation safety engineer, safety technician or safety supervisor. Any supervising physician must be a specialist in occupational medicine or be entitled to the designation occupational health physician.

In Germany persons or organizations providing occupational safety and health services for small and medium-sized enterprises have purely consultative functions. They cannot issue directives. The owner of the supervised enterprise decides whether he follows the advice of the service provider or not. This decision is his responsibility. The service provider may not pass on information confidential to the enterprise or personal information to third persons, official bodies or employment accident insurance funds without permission of those concerned.

2. Implementation of service provision

There is no formal supervision of service providers. Enterprises are audited on a random-sample basis by both State bodies and employment accident insurance funds as to whether they are fulfilling their obligations under the occupational safety and health legislation and accident prevention regulations. In many areas this audit is performed using written questionnaires.

3. Summary

In Germany a system of occupational safety and health services has existed since 1974 covering all large and medium-sized enterprises. A similar system is currently being set up for small and so-called “micro” enterprises. This system is based on the one for larger enterprises, but leaves a solution open for certain small enterprises – the so-called “entrepreneur” model – which allows occupational health physicians, safety engineers and other occupational safety experts not to be involved on a regular basis. There is currently no information regarding experience on implementation available.

4. Important statutory regulations


b) Accident prevention regulations “Occupational safety specialists” (VBG 122) and “Occupational health physicians” (VBG 123) of the relevant statutory accident insurance institute (employment accident insurance fund) for each enterprise.

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E) Finland – Experiences and solutions

1. Legal framework

In Finland all employers are required to organize health services for their employees at their own expense. The only exceptions are self-employed persons including farmers. For these groups such services are voluntary.

Finland has had little difficulty in adjusting its regulations to European directives since its national regulations already corresponded to European standards and even went beyond these in certain cases.

There are no exemptions under the general statutory requirements which “favour” small and medium-sized enterprises.

The employer is responsible for paying for health services. He can, however, apply for a 50 per cent reimbursement of costs to the statutory health insurance scheme in cases where such services are provided by qualified professionals. There are special regulations for small and medium-sized enterprises in one case only: In the case of farming enterprises the costs for the initial hazard audit at the beginning of occupational health and safety supervision is 100 per cent subsidized. This subsidy is only 50 per cent for other areas.

District labour inspectors supervise employers’ compliance with the requirements to organize such services. The level of medical care provided and the qualification level of staff involved are controlled by the relevant health authorities at national, provincial and city level.

The statutory regulations governing occupational health allow the employer to choose between various organizational forms to provide services. His decision, however, must then be discussed in the safety and health committee. Normally city health centres (polyclinics) perform these tasks for small and medium-sized enterprises.

While there are no special institutes for occupational safety and health services for small-and medium-sized enterprises, the Finnish Institute for Occupational Health (FIOH) carried out an action programme aimed at small enterprises in Finland over the period 1995-1998.

Occupational health physicians are involved in the rehabilitation of employees since the preservation of the ability to work forms an important part of “good occupational health practice”. They do not only have to identify employees in need of rehabilitation and refer them for rehabilitation programmes to a specialized hospital or other central institution, but they must also co-operate with the specialists at such institutions both during and after such programmes.

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The provision of curative treatment is voluntary. This covers general medical treatment and referral for specialist treatment.

The dovetailing of occupational safety and occupational medicine in terms of content and organization is an integral part of the Finnish approach to health and safety at work. This applies equally to small and medium-sized enterprises and large enterprises.

Occupational health physicians and occupational safety specialists have no authority to issue directives.

Special requirements for persons providing such services to small and medium-sized enterprises are not laid down. They must possess the same qualifications as those acting for larger enterprises.

The curricula for doctors, nurses, engineers and psychologists contain a module on health and safety at work. In the case of doctors, this module contains between 20-60 hours of instruction, depending on the medical faculty. This ensures that every doctor has a basic level of knowledge in occupational medicine.

A recognized course of training exists for occupational health physicians. The Finnish health services employ approximately 1,400 doctors full-time and part-time. Approximately 400 of them are occupational health specialists and some 100 are specialists in other fields. Nurses, psychotherapists and psychologists receive systematic training at the FIOH. It also offers courses leading to a qualification as occupational hygienist. Safety engineers are trained at a variety of institutes. All these courses are subject to quality controls.

All persons providing occupational health and safety services must fulfill the minimum requirements laid down in the “good occupational health practice” guidelines to qualify for reimbursement of these services through the statutory health insurance fund. The FIOH and the Ministry for Social Affairs and health have laid down guidelines with regard to this.

The labour law stipulates that workers’ representatives shall be involved in laying down occupational health and safety measures.

2. Implementation of service provision

The substance of the services to be offered is laid down in the sections on employers' obligations of the labour legislation. The degree to which services are to be implemented is calculated on the basis of the figures for actual intervention times, service frequencies and other factors.

An estimated 90 per cent of small and medium-sized enterprises have access to occupational safety and health services.

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Occupational health examinations are performed at a variety of locations depending on the possibilities available: the health centre of a nearby large enterprise, in the occupational physician’s surgery, on the occupational health service’s premises, in mobile examination units or on-site at the enterprise itself. Four main forms of organization are used in Finland: Local health services, health centres run by enterprises, joint services for several small and medium-sized enterprises and private services.

Labour inspections by occupational physicians and safety engineers are not mandatory for small and medium-sized enterprises. They are normally performed at the request of the enterprise or at the request of a local labour inspector. The availability of such service providers for special consultations has improved significantly since local health services have been placed under a statutory obligation to take on the provision of such services.

To evaluate the effectiveness of safety and health services monitoring is carried out at national and large enterprise level in addition to at the workplace. A large-scale study of the effects on employees’ health was carried out in 1992. Follow-up studies are planned. One aspect of such studies, for example, is to examine the degree of exposure of the Finnish working population to mechanical, biological, psychological and chemical hazards. Small and medium-sized enterprises are treated no differently from large-scale enterprises.

3. Summary

Finland has a highly developed system for health and safety at work. This is not only extensively underpinned by legislation, but has also achieved a wide degree of coverage.

The high degree of implementation is certainly not just based on the traditionally strong sense of solidarity to be found in Northern European countries, but also on the fact that employers who satisfy certain requirements with regard to occupational health and safety services received 50 per cent of costs back. This procedure can be recommended for other countries to motivate employers to implement such services, since they usually adopt a wait-and-see policy with respect to any national occupational health and safety programmes.

4. Important statutory regulations

3. Legislation respecting labour protection administration (16/93).
F) France – Experiences and solutions

1. Legal framework

The Code du travail runs to nine volumes and is the central French regulatory work on labour matters. Volume 2 contains comprehensive regulations on health and safety protection at work. Part III of this volume deals with hygiene and safety. Part IV contains the regulations governing the occupational health services that each employer has to set up.

State supervision of labour legislation is performed by the inter-ministerial supervisory body for the Ministries of Labour, Agriculture and Traffic with the main responsibility lying with the Labour Ministry. There are separate authorities for the mining industry and the gas and electricity industries.

Field supervision is performed by the labour inspectorate’s 95 Département directorates which report to the 12 regional directorates. In addition to the implementation of labour legislation their task is to provide employers and employees with technical information and consultancy services in relation to labour law regulations.

The highest authority is the Committee on Occupational Risk Prevention (CSPRP) which is chaired by the Labour Minister and consists of representatives from government, employers, employees and other experts. It serves as a forum for the exchange of information and discussion at the highest level for the social partners and experts. There is also a technical offshoot committee responsible for questions of occupational medicine.

Under the legislation on the further development of preventative measures against occupational accidents dated 6.12.1976 the statutory health and accident insurance schemes received wide-ranging powers to promote prevention. The national health insurance fund for employees (CNAMTS) and its subordinate regional funds (CRAM) now have the task of promoting the prevention of occupational risks. Furthermore, regional funds now also have the possibility to issue accident prevention regulations (“General Regulations”) which can be made binding at national level through ministerial decree. Regional funds receive support from technical services that employ consulting engineers and joint technical regional committees and also have their own accident insurance services with powers to issue safety requirements. Legal sanctions, however, are not possible. The legislation contains provisions for co-ordinated cooperation between the State labour inspectorate and the regional funds and the exchange of information.

The national fund finances the national institute for research and employment protection (INRS) which performs studies and research and provides technical support, training and information.

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A special system of additional premiums and premium rebates makes it possible for the regional funds to take into account any preventative measures an employer may have taken or any failure to respect accident prevention regulations when setting insurance premiums. This can increase employers’ motivation to meet their health and safety responsibilities.

2. Implementation of service provision

In 1946 the legislation governing the organization and activity of occupational health services required employers to set up occupational health services irrespective of the size of the enterprise and the number of persons employed. These fundamental regulations were incorporated into Volume 2 part IV of the labour code and apply to industrial and commercial enterprises, public and private enterprises of a secular, religious or co-operative nature, welfare and occupational training institutions, public offices including ministries, liberal occupations, societies and associations of all types, as well as for hospitals and nursing homes. Several sets of regulations deal in detail with the organization and operation of occupational health services as well as their staff and equipment requirements. There are no separate regulations for occupational safety services similar to those for occupational medicine.

Statutory service intervention times depend on the number of workers employed and the health risks involved. Intervention times of occupational physicians are therefore one hour per month for 20 employees at low risk or 15 employees at medium risk and one hour per month for 10 employees requiring special monitoring, such as handicapped persons, pregnant women, mothers with children under the age of two, or employees who are exposed to special risks. The maximum number of employees that one physician can monitor is limited to 3,500.

The care provided is in relation to the medical intervention times needed. An enterprise must set up its own occupational health service if the occupational health physician works at the enterprise for at least 169 hours per month. An enterprise must join a service covering several enterprises if it employs an occupational physician for less than 20 hours per month.

The aim of prevention for occupational medicine was already emphasized in the fundamental legislation of 1946. Preventive medical examinations were the central concern of occupational medicine right from the start. The regulations governing the organization and operation of occupational health services dated 20.3.1979 and 28.12.1988 give priority to the supervision, assessment and influencing of working conditions. The occupational health physician should spend one-third of his working time on such tasks. The legislation dated 31.12.1991 amending the labour code in accordance with the directives of the European Union stresses the same broader scope to be allotted to prevention.

Occupational physicians are required to advise employers, employees and staff representatives with the following aims:

1. To improve living and working conditions in the enterprise.

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2. To adjust workplaces, techniques and work rates in line with human physiology.

3. To protect the employee from all injury, taking special account of accident risks and the use of dangerous materials.

4. To ensure a general level of cleanliness throughout the enterprise.

5. To ensure the necessary level of hygiene in works canteens.

6. To provide training for accident prevention and first aid throughout the enterprise with regard to each occupation in the enterprise.

The occupational health physician must be involved in the testing of any new production techniques. He is to be consulted on any new construction or conversion projects and on projects to refit equipment.

All employees are involved in yearly occupational preventive medical examinations. Special examinations are to be carried out on those exposed to special hazards, the handicapped, pregnant women and mothers with children under two years old, for example. There are also provisions for medical examinations for employment candidates, examinations for persons who have been absent for at least 21 days as a result of sickness, accident or occupational disease.

The occupational physician is also required to prepare an annual prevention action plan which is within budgetary limits and in line with the health needs of employees.

To carry out his task the occupational health physician must have access to the various workplaces and to information on the various products used. The physician cannot issue directives and acts merely in an advisory capacity. His professional independence is guaranteed by law. Thus, he can only be appointed or dismissed by the employer with the agreement of the staff representative body. The occupational physician’s employment contract must confirm his professional independence and be put before the relevant medical representative body for examination. Occupational health services must be licensed by the central authority and are audited by the relevant regional labour inspectorate. Annual reports must be submitted to the central authority.

Previously the necessary qualification to act as an occupational health physician was the two-year postgraduate diploma in occupational medicine. This is to be replaced in future by a four-year postgraduate medical course leading to the qualification as specialist in occupational medicine.

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3. **Summary**

What is remarkable in France is a tradition of statutory occupational health services that is more than 50 years old. The principle of requiring all enterprises to provide such services irrespective of size and the number of persons employed shows particular consistency and foresight. In practice, however, not every “micro” enterprise can be covered. In practical terms it is probably safe to assume that coverage for very small enterprises employing fewer than ten persons poses a problem in terms of their large number alone, and that implementation of services takes place on the ground in only a few individual cases.

The tasks of occupational health services are comprehensively laid down and detailed. They cover employees’ health protection both from the medical point of view and from the technical and ergonomic viewpoints. Thus, the regulations do not provide for separate safety services and these are not implemented in practice. This initial situation offers the opportunity to establish and reinforce interdisciplinary co-operation right from the start in the interests of a timely and effective service provision that meets requirements through a possible future specialization with regard to tasks and the increased involvement of technicians and engineers.

4. **Important statutory regulations**

- 1913 Labour Code (*Code du travail)*.
- Regulations governing the organization and operation of occupational health services dated 20.3.1979.
G) Lithuania – Experiences and solutions

1. Legal framework

In Lithuania all employers are required to organize occupational safety and health services at their own expense. Enterprises with over 300 workers must have their own in-house services. Lithuania has had little difficulty in adjusting its regulations to European directives.

The statutory regulations on health at work prescribe the establishment of safety and health committees.

The labour legislation requires the involvement of elected employees’ representatives in setting out occupational health and safety measures.

There are no quality assurance measures for the training of occupational health and safety experts or for the provision of such services.

The Ministry of Health has drawn up a catalogue of tasks for occupational health and safety services. There are no regulations governing minimum intervention times for performing such services.

The Ministry of Health runs a centre for occupational medicine, as part of its institute for hygiene, with departments for labour hygiene, labour physiology and epidemiology. The centre’s principal activities are research, ongoing training for its service experts, standard setting, the identification of work-related risks, the creation of health programmes and registers, the provision of information on health and safety at work and consultancy services.

There is no mandatory requirement for labour inspections by occupational health physicians and safety engineers in small and medium-sized enterprises.

Occupational physicians are not involved in rehabilitation measures for employees; there is also no provision for any tasks involving treatment.

Occupational physicians and safety specialists do not have the authority to issue directives.

There are no exemptions under the general statutory requirements which “favour” small and medium-sized enterprises, the sole exception being that they are not required to organize in-house occupational health and safety services.

The employer is responsible for financing such services. There is no exemption from this regulation for small and medium-sized enterprises.

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2. **Implementation of service provision**

It is not known how many small and medium-sized enterprises are covered by occupational safety and health services. It is, however, assumed that the shortfall in such coverage is still considerable.

Occupational health examinations are performed in polyclinics, where available, or in nearby large enterprises where these have the necessary staff and facilities.

The effectiveness of occupational safety and health services has not yet been evaluated.

The dovetailing of occupational safety and occupational health in terms of content and organization applies equally to small and medium-sized enterprises and large enterprises.

Employers’ compliance with the requirements to organize such services is monitored by the State labour inspectorate. Monitoring for the actual services is the responsibility of the State labour hygiene inspectorate.

3. **Summary**

Lithuania is currently introducing a new structure following the collapse of the previous occupational health and safety system. While the statutory framework now exists, country-wide coverage has not yet been achieved.

4. **Important statutory regulations**

Law No. I-266 on labour protection.

H) The Netherlands – Experiences and solutions

1. **Legal framework**

The EU directive EEC 89/391 dated 12 June 1989 on the implementation of measures to improve the health and safety of employees at work (see Introduction 4.4) became Dutch national law with effect from 1.1.1993. These statutory requirements stipulated, among other things, that occupational safety and health services for employees were to be guaranteed in all enterprises irrespective of industrial branch or enterprise size. Since 1996 a requirement has existed for industry branches with a high risk of accidents or illness to subscribe to a certified “Arbo” service. The remaining industrial sectors and administrative enterprises become subject to such requirements in January 1998. “Arbo” services are private enterprises offering occupational safety and health services and have to meet special requirements (see below). A new body of legislation governing “Arbo” services has been in force since 1. July 1997,
together with new regulations governing such services. After the cut-off date of 1.1.1998, the only exemption from membership of an “Arbo” service will be for self-employed individuals not employing other workers. Under certain circumstances enterprises employing only one worker may be exempt from individual labour protection regulations. Further statutory amendments with regard to safety and health services for small and medium-sized enterprises as against those for large enterprises do not exist. The government has therefore elected not to draw any fundamental conclusions from the regulation concerning article 118a, § 2, sentence 2 of the Treaty on the Foundation of the European Community. In particular the statutory regulations stipulate no special form of organization for the provision of services.

Dutch statutory regulations view occupational safety and health services as a single unit. “Arbo” services can be organized as in-house works services, a joint service covering several enterprises, or as independent external service providers.

The statutory task of an “Arbo” service (basic package) are:

- to support the employer in the establishment and assessment of a hazard audit: To provide advice on the measures to be taken;
- to support the employer in the provision of services for sick employees;
- to perform voluntary occupational health examinations;
- to offer set consultation times for employees for individual counselling on questions of occupational safety and health.

Beyond this basic package, the employer or staff representatives can ask the “Arbo” service for further consultancy services or for them to be involved in concrete occupational safety and health measures. There is no difference between small, medium-sized and large enterprises in this respect.

With regard to the time spent by “Arbo” services on service provision the statutory regulations lay down a sliding scale depending on the size of the enterprise. In principle labour inspections are not part of the basic package. Statutory hazard audits, however, (see above) normally presuppose that a labour inspection has been carried out.

“Arbo” services do not have the authority to exercise control or to issue directives. The employer has sole responsibility for the implementation of any occupational safety or health measures. Examinations for treatment purposes or treatment itself are not part of “Arbo” services’ tasks. This applies to all sizes of enterprise. The occupational health physician is involved in rehabilitation programmes for employees. If an employee is unable to work for more than 13 weeks, the employer is required to draw up a rehabilitation plan. In most cases employers take advice from “Arbo” service experts.

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Occupational safety and health services ("Arbo" services, including in-house occupational health services) must be licensed. Licensing requirements include that the service should employ one occupational health expert (minimum of two years specialist training on completion of medical training), one safety expert, one labour hygienist and one labour psychologist. The statutory regulations contain no special requirements for staff qualifications for "Arbo" services delivering services to small and medium-sized enterprises.

The performance of hazard audits and evaluations, in which "Arbo" services must be involved, are controlled by the Inspectorate of the central authority of the Ministry for Labour and Social Affairs. State control is on the basis of the requirements laid down in the "Arbo" directive and its additional regulations for safety in certain types of workplace.

Costs for safety and health services are to be met by the employer. "Arbo" services invoice employers directly. There is no statutory provision for special regulations concerning the financing of such services in small and medium-sized enterprises. See 3. below for the separate funding system under the collective agreement for the construction industry.

Occupational safety and health services for the construction industry and several allied branches are provided by the Arbouw Foundation based in Amsterdam. The Arbouw Foundation was founded as part of collective agreements between the employers’ and employees’ organizations. The agreements contain a series of special regulations with regard to benefits and the funding system for occupational safety and health services. This type of collective agreement is not found in other industrial branches. Given the fact that the organizational approach for occupational safety and health services adopted by the Arbouw Foundation offers interesting possibilities for the situation facing small and medium-sized enterprises, it will be examined in more detail in a separate section (see 3. below).

2. Implementation of service provision

Occupational safety and health services for the construction industry and several allied branches (e.g. painting enterprises, wet dredging enterprises) have already been implemented by the Arbouw Foundation (see 3. below) in all enterprises irrespective of size. It should be noted that the requirement to subscribe to an "Arbo" service mentioned under point 1. above does not come into force for all other enterprises (employing at least one worker) in remaining branches until January 1998.

A research study carried out by the Netherlands Institute for Work environment (NIA) showed that by mid-1996 as many as 79 per cent of all enterprises had already subscribed to an "Arbo" service or had their own occupational health service, thus meeting the statutory regulations for safety and health services, despite the fact that the requirements did not yet apply to the greater part of these enterprises. A study by the Social Ministry, carried out at the same time, showed that 89 per cent of all workers are employed in enterprises that have a contract with an "Arbo" service provider (before it was with the occupational health service).

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Quality assurance for “Arbo” services is to be guaranteed through the licensing process (see 1. above). The NIA released the following findings on the effectiveness of occupational safety and health services and the points on which they concentrated:

Almost all subscribing enterprises called in “Arbo” services in cases involving illness-related absences of workers. Approximately six out of ten of these enterprises transferred all statutory duties involved in sickness reports to their “Arbo” services. These include statutory reports and applications for benefits to insurance institutes, house visits to employees who have reported in sick, and the analysis of all the sick reports received by the enterprise. The findings do not distinguish between small and medium-sized enterprises and large enterprises. Such a distinction was made, however, with regard to the establishment of statutory hazard audits and their evaluation, which involved “Arbo” services. By mid-1996 18 per cent of enterprises employing one to nine workers had performed such audits. For enterprises employing 10 to 100 workers this figure rose to 35 per cent. For enterprises employing more than 100 workers this figure was 70 per cent. However, it was also reported that only a small percentage of enterprises carried out hazard audits and evaluations with the necessary regularity. Employers were asked about the extent to which they were satisfied with their “Arbo” services. The degree of satisfaction was relatively high overall, but small enterprises (2 to 9 employees) returned below average marks. The degree of satisfaction rises with the size of the enterprise.

3. Occupational safety and health services in the construction industry

In 1986 the Arbouw Foundation emerged as part of a new agreement between the social partners. Its antecedents were the occupational safety advisory office, which had been set up by the social partners in the construction industry in 1970, and the occupational health service for the construction industry which followed it in 1972. The Arbouw Foundation’s main task is to promote and guide the occupational safety and health services which the privately organized “Arbo” services provide to enterprises in the construction industry as well. With this aim in mind the Arbouw Foundation carries out research into health risks in the construction industry and develops strategies to minimize risks. Small and medium-sized enterprises take special advantage of this concept since, given their limited staffing and finances, they cannot carry out such studies on their own.

“Arbo” services wishing to provide services to the construction industry in co-operation with the Arbouw Foundation must meet special qualitative requirements. One particular requirement is that they have special knowledge and experience of health and safety risks in the construction industry. They must also use the forms provided by the Arbouw Foundation for safety assessments as well as the foundation’s work and emission profiles. This standardization of procedures provides greater possibilities for large-scale evaluations.

It is stipulated that “Arbo” staff servicing the construction industry must spend at least 50 per cent of their working time in this branch. “Arbo” services must employ at least one construction occupational health physician who is qualified as a specialist in social medicine.
and who has also undergone additional training as an occupational physician for the construction industry. This course of training also takes account of the particularities of providing such services to small and medium-sized enterprises.

The basic service package to the construction industry financed by the Arbouw Foundation also contains a requirement for “Arbo” services to actively consult with enterprises in cases involving individual problems in the workplace.

In the construction industry the Arbouw Foundation is responsible for special quality assurance programmes. On the basis of framework agreements the foundation has the authority to check staffing and equipment levels and the quality of services provided. With this aim in mind questionnaires can also be administered to workers. In addition, there is also provision for regular consultations between representatives of the Arbouw Foundation and the contracted “Arbo” services and their associations. There is also a final quality assurance tool which works through the funding system. “Arbo” services must present control vouchers when submitting their invoices for services provided to enterprises. In particular, these invoices must provide details of the number of services and examinations carried out, together with their extent. There is a further requirement that findings and other information relating to work be submitted without reference to named individuals. Payment therefore depends on the quality and quantity of services provided.

The data obtained from occupational safety inspections and occupational health examinations are evaluated regularly by the Arbouw Foundation and are used to provide subjects for research projects or campaigns. The Arbouw Foundation uses this information to initiate agreements between the social partners in the construction industry and other associations, for instance producers. The Arbouw Foundation regularly provides construction enterprises with information packs dealing with health and safety issues at the workplace for building trades. The foundation also offers training courses in safety techniques for all trades in the construction industry.

4. Summary

The Netherlands is currently in a phase of restructuring with regard to the provision of comprehensive occupational safety and health services for small and medium-sized enterprises. It is currently not possible to make any final statement about the number of enterprises receiving coverage with particular reference to small and medium-sized enterprises since membership requirements for all enterprises only come into force on 1.1.1998. The figures on subscriptions (see 2. above) before the general requirement comes into force do, however, indicate that the complete coverage of all enterprises, as envisaged by the government, is realistic.

With the exception of the construction industry a clear concentration by many “Arbo” services on activities related to sickness-related employee absences is noticeable. The special forms of

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organization for occupational safety and health services in the construction industry are aimed at taking the special needs of small and medium-sized enterprises into account.

5. **Important statutory regulations**


I) **Portugal – Experiences and solutions**

1. **Legal framework**

On 30.7.1991 the Minister for Labour Market Questions and Social Security signed the Agreement on hygiene, health protection and safety at work with the general Portuguese workers’ federation, the general workers’ union, the Portuguese agricultural federation, the Portuguese commercial federation and the Portuguese industrial federation. The agreement was a clear written declaration of the aim to promote humanization of working conditions and social security and thus to contribute to improved living conditions for all Portuguese. This statement of intent is part of the efforts to improve the ability of enterprises to compete and to modernize the Portuguese economy.

In November 1991 the body of statutory regulations DL No. 441/91 “Regulations governing the inclusion of safety, hygiene and health at work” came into force. These regulations laid down the standard framework for the effective prevention of occupational risks and was simultaneously the basis for the alignment of national legislation with EU directive 89/391. Article 13 of DL No. 441/91 lays down the obligation of the employer as being “to guarantee measures for safety, hygiene and health at work”.

Statutory regulation DL No. 26/94, “Regulation governing the organization and function of measures for safety, hygiene and health at work”, lays down the details for the implementation of the employers’ obligations set out in article 13 of DL No. 441/91. Statutory regulation DL No. 26/94 lays down the legal bases and details of the provision of occupational safety and health services.

The institutional responsibility for questions of occupational safety and health was greatly simplified in 1993. As a result of statutory regulations DL No. 215/93 and DL No. 219/93 only two institutions are now responsible for major safety and health tasks.

The General Directorate for Labour Conditions (DGCT) is a statutory body under the Ministry for Labour Market Questions and social Security and provides expert support for legislators.

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It produces concepts and political programmes dealing with working conditions in relation to safety, hygiene and health at work and labour relations (i.e. the relations between the social partners) in general. The DGCT is divided into the directorate for hygiene and safety at work, the directorate for labour administration, the studies group on labour productivity, the department for labour sociology and the general administration department.

The Development and Supervisory Institute for Labour Conditions (IDICT) is a public-law corporation reporting to the Ministry for Labour Market Questions and Social Security. Essentially its task is to promote and evaluate improvements in working conditions, monitor the conclusion of collective agreements, intervene in labour disputes, implement statutory regulations governing working conditions, employment and unemployment and promote the prevention of occupational risks.

The IDICT is divided into the following departments:

- Central authority (general labour inspectorate – IGT);
- Directorate for programme development and evaluation (promotes strategies for prevention of occupational risks);
- Directorate for preventative measures against occupational risks (supports the IGT field offices and develops guideline documents on health and safety issues);
- Management support directorate (support for planning and finance co-ordination within the institute);
- Directorate for legal affairs.

As a public law corporation IDICT has the following administrative bodies: board of directors, administrative council and general council. The latter body has the executive director as chairman, one representative each from the ministries of agriculture, industry and energy, education, health, labour market policies and social security, trade and tourism, and four representatives each from trades union and employers’ federations.

The general labour inspectorate (IGT) of the IDICT has branch offices covering the whole of Portugal in the form of 22 local labour inspectorate offices and 10 subsidiary offices.

2. Implementation of service provision

The provision of occupational safety and health services in Portugal is governed by the statutory regulation DL No. 26/94 “Regulation governing the organization and function of measures for safety, hygiene and health at work”. This body of regulations incorporates experience from occupational health services which have been operational for many years in large enterprises employing more than 200 workers. The statutory basis for these services is to be found in regulations No. 47511 and No. 47512 dating from 1967.
Statutory regulation DL No. 26/94 requires employers to organize activities for “safety, hygiene and health at work”, which will hereinafter be referred to using the Portuguese acronym “SHST”. The regulation does not differentiate according to the size of the enterprise. It therefore also applies to all small and medium-sized enterprises. These are especially important for the Portuguese economy. Some 50 per cent of all workers are employed in enterprises that have a workforce of less than 50. Some 70.4 per cent of the working population are employed in enterprises with a workforce of up to 200. The table and histogram below give the exact distribution in terms of size.

**Percentage distribution of enterprises in terms of size and workers employed**

<table>
<thead>
<tr>
<th>Enterprises in Portugal (1994)</th>
<th>Percentage of workers overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprises in per cent</td>
<td>Enterprise size in terms of workers employed</td>
</tr>
<tr>
<td>79.8</td>
<td>up to 9</td>
</tr>
<tr>
<td>16.9</td>
<td>from 10 to 49</td>
</tr>
<tr>
<td>1.9</td>
<td>from 50 to 99</td>
</tr>
<tr>
<td>0.8</td>
<td>from 100 to 199</td>
</tr>
<tr>
<td>0.4</td>
<td>from 200 to 499</td>
</tr>
<tr>
<td>0.2</td>
<td>500 and more</td>
</tr>
</tbody>
</table>

Source: M. Q. E. (Ministry for labour market questions and social security, Lisbon).

Statutory regulation DL No. 26/94 differentiates between three forms of organization for SHST services: In-house services, joint services covering several enterprises and independent external services. The provision of occupational safety and health services can also be organized separately by an enterprise choosing one of the three forms of organization mentioned.

If none of the three organizational forms is viable for the provision of safety coverage then this can be done directly by the employer if he has sufficient background or training. For such a solution, the size of the enterprise, the industry branch and the type of work-related risk must be taken into account. Occupational health services are obviously excluded from such cases. For these the employer must use the coverage provided by the national health service. Any local health centres that can be used must have at least one specialist in occupational medicine and the necessary support staff and equipment. The IDICT must give its approval before an employer can carry out any occupational safety functions.

The statutory regulation only recognizes restrictions in the choice of organizational forms for such services for large enterprises. If special hazards are involved, as defined under special legislation governing occupational risks, then enterprises employing more than 200 workers must organize their own in-house SHST service. This requirement only applies to large

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enterprises with no special risks and hazards when they employ more than 800 workers. Dispensations from these regulations to opt for another approach require IDICT approval.

For SHST enterprises organized jointly by groups of enterprises, the regulations stipulate that the written service contract must be submitted to the IDICT for approval. The fact of an employer making use of such services or of his calling in outside services does not absolve him from his primary statutory responsibility for health and safety at the workplace.

Irrespective of whether an employer elects to use joint SHST services or to call in outside independent services he is required to report the start of coverage activity to the IDICT within 30 days of that date. Amongst other things the report must contain: The date on which coverage began, the name(s) of the person(s) responsible for safety and health services, the number of employees covered and details on intervention times. Any changes in any of these items are also to be reported.

Occupational health measures can also be carried out by the national health service for the following groups of persons: seasonal or casual agricultural workers, external sales staff, artisans and apprentices, as well as employees in enterprises in which the employer fulfills the function of safety officer under statutory regulation DL No. 26/94.

With the exception of facilities integrated into national health service institutions all outside SHST services must be licensed by the IDICT. Licences are only granted if sufficient qualified staff are available. The requirements stipulate at least one specialist in occupational health and two safety engineers if the service is to provide coverage for all SHST activities. Services must also fulfill requirements regarding premises and equipment. National health service facilities providing occupational health services are monitored by the Portuguese Ministry of Health.

The principal tasks of SHST services are: Information on prevention measures for the workplace, tools and procedures, the investigation and assessment of work-related risks and regular controls on chemical, physical and biological hazards, the production of prevention programmes, the support of and provision of health care, the maintenance of an occupational medical prevention data base, information on and ongoing education in work-related risks and preventive measures, the display of prescribed safety stickers at the workplace, analysis of occupational risks and the collation and evaluation of statistical data.

With regard to the extent of service provision, statutory regulation DL No. 26/94 only contains references to minimum intervention times for occupational health physicians. An occupational physician must be available for one hour per month for every 10 workers in an industrial enterprise. This figure is set at 20 for workers in commercial enterprises and other institutions. The overall intervention time for a physician is restricted to 150 hours per month. The IDICT can lay down longer occupational health service times for an enterprise if necessary.
The employer is required to inform the SHST services of all details that are relevant for health and safety.

With regard to occupational health examinations statutory regulation DL No. 26/94 requires an examination prior to a person being employed and annual examinations thereafter for persons younger than 18 and older than 50 and examinations at 2-yearly intervals for all other workers. In enterprises employing more than 250 workers the occupational health physicians must have a qualified assistant.

The employer meets all costs for occupational safety and health services including exposure evaluations, tests and other measures to prevent work-related risks and for health treatment. Depending on the form of organization chosen, and other circumstances, services are invoiced on a lump-sum basis depending on the service provided.

The employer must inform the IDICT about the form of service provision that he has selected. He must also draw up an annual report on the SHST activities in his enterprise and send it to the relevant local labour inspectorate (general labour inspectorate of the IDICT).

3. Summary

Over the period 1991 to 1994 the basis in terms of health and safety standards and institutions in Portugal was created to bring national legislation and the economy into line with European requirements. The central point here was EU directive 89/391/EEC on the implementation of measures to improve safety and health protection of employees at work.

DL No. 26/94 deals with the organization and carrying out of programmes for safety, hygiene and health at work based on the Portuguese statutory regulation DL No. 441/91.

The obligation to provide safety and health services applies to all enterprises irrespective of size. The scope and terms of reference for SHST services as well as their organization and establishment are clearly laid down. The employer can choose between various forms of organization for the services with which he is provided.

One noteworthy feature is the regulation under article 4 section 4 of DL No. 26/94 which stipulates that an employer can take on responsibility for occupational safety himself under certain circumstances, if another form of service provision is not possible. This offers a potentially more flexible approach for small and medium-sized enterprises which could be attractive under certain circumstances. The possibility to resort to national health service institutions in certain areas represents an important logistical aid to achieving country-wide coverage for occupational health services, particularly for small enterprises.

It is important not to lose sight of the fact that the establishment of a safety and health system on the basis of EU directive 89/391/EEC and the introduction of occupational safety and health services...
services for all enterprises as a consequence represents a long and difficult process. It can be said in the case of Portugal that the statutory and institutional prerequisites have been developed systematically to allow differentiation. Priorities will have to be set in the introduction phase, however. Initially the greatest deficits will have to be filled with the limited resources available and conditions improved in those branches that typically have the highest occurrences of occupational risks. To do this the IDICT has decided to concentrate on the construction industry initially.

Like many other countries Portugal is still a long way away from providing occupational safety and health services for all small and medium-sized enterprises. The road, however, is now clearly marked. The formal requirements for flexible and needs-oriented solutions, on which small enterprises will have rely particularly, have already been created.

4. Important statutory regulations

- Statutory regulation DL No. 441/91 “Regulations governing the inclusion of safety, hygiene and health at work”.

- Statutory regulation DL No. 26/94 “Regulation governing the organization and function of measures for safety, hygiene and health at work”.

- Statutory regulation DL No. 215/93 “Establishment of the general directorate for working conditions”.

- Statutory regulation DL No. 219/93 “Establishment of the institute for development and monitoring of working conditions”.

J) Sweden – Experiences and solutions

1. Legal framework

In Sweden the framework for occupational safety and health services are not dealt with through State regulations in the same detail as in many other States. The Work Environment Act, however, does contain the basic requirement for the employer to make such coverage available as working conditions and the type of enterprise shall require.

No differences are made with respect to the size of enterprises.

The National Board of Occupational Safety and Health sets out detailed provisions in the form of directives in consultation with the social partners.

Compliance with the legislation and the various directives is monitored by officials of the National Board of Occupational Safety and Health. An earlier provision that the work

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environment in certain small enterprises could be monitored by local authority bodies was rescinded in 1986. These officials can require individual employers to set up or appoint occupational health and safety services or they can impose labour inspections by experts.

In addition to the State supervisory system smaller enterprises have a further external supporting service available to them in the form of the safety delegate. All enterprises are required to have one or more safety delegates, who are required to advise the employer and employees and carry out regular works inspections. They are elected from among the workforce and may not be placed at a disadvantage by their employer because of their activities in this additional capacity. While large enterprises have several safety delegates for individual departments, regional safety delegates, appointed by the regional employee associations, act for small enterprises. Their right to access to enterprises where they are not employed is covered by law. This approach provides for information on health and safety at the workplace in small enterprises to be gathered on a regional basis.

Independent service providers deliver occupational safety and health services, and an employer is free to choose from amongst them, unless he is running a large enterprise and has set up his own in-house service. The requirements for such service providers are jointly drawn up by the social partners.

Part of the task of occupational physicians in occupational health services is to treat work-related diseases. Safety experts and occupational health physicians do not have the right to issue directives.

Small and medium-sized enterprises also have centres for specific sectors available in addition to regional community centres to which enterprises of different industrial branches can be attached. These specific sector centres cover industry branches such as the construction industry, automobile assembly and transport.

The employer is required to meet the costs of these services.

2. Implementation of service provision

In Sweden occupational safety and health services are provided in very many enterprises. These enterprises account for a total of 73 per cent of the working population. The coverage quota differs according to enterprise size and is higher for larger enterprises than for smaller ones. It ranges from over one-third for the smallest enterprises to almost 100 per cent in the case of the largest enterprises, as the series of figures below shows.

<table>
<thead>
<tr>
<th></th>
<th>0-4</th>
<th>5-9</th>
<th>10-19</th>
<th>20-49</th>
<th>50-99</th>
<th>100-499</th>
<th>&gt; 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>36%</td>
<td>58%</td>
<td>74%</td>
<td>81%</td>
<td>85%</td>
<td>91%</td>
<td>94%</td>
</tr>
</tbody>
</table>

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While the type and extent of services is not laid down categorically, but is oriented towards the needs of the individual enterprise, they are of a very high quality. This is not only a result of the controls carried out by the supervising officials of the National Board of Occupational Safety and Health, but also due to the open discussions at enterprise level on labour protection measures between employer and employees.

3. Summary

Sweden has a well developed system of occupational safety and health services that does not differentiate between large enterprises and small and medium-sized enterprises. It is based on State regulations that are formulated in general terms without rigid provisions regarding the extent of services and is supported by good co-operation between the social partners. This system reaches a far higher proportion of small and medium-sized enterprises than is the case for systems in many other countries.

4. Important statutory regulations


K) Summary and evaluation of the national reports

In line with the aims stated in the introduction to this study, what follows is a summary and evaluation of the statutory frameworks of the countries participating in the study with regard to the way in which small and medium-sized enterprises are handled.

1. The extension of occupational safety and health services to cover small and medium-sized enterprises – regulatory exceptions and transitional arrangements

The questionnaire submitted to the selected countries revealed that the majority of the statutory frameworks also prescribed occupational safety and health services for all small and medium-sized enterprises employing at last one worker, with the Swedish legal situation representing a case apart. Leaving aside special regulations governing enterprises with special health risks, there is no statutory requirement for regular safety and health services. The sole statutory requirement is an obligation on the employer to provide for the supervision of health and medical examinations where necessary. Irrespective of this, occupational safety and health services are provided in the majority of enterprises employing more than five workers. In enterprises employing up to four workers at least a third of these receive occupational safety and health care (see national report for details).

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A further exception is to be found in Switzerland. Enterprises employing fewer than five workers with a low accident risk in terms of the accident insurance premium set are exempted from the otherwise mandatory requirement to provide for safety and health services.

In some of the countries selected belonging to the European community the directive issued by the Council of the European Communities on the implementation of measures to promote health and safety protection of employees at work (directive dated 12 June 1989 89/391/EEC, see A) 4.4) was taken as an opportunity to extend mandatory occupational safety and health care to all small and medium-sized enterprises, which had hitherto only been mandatory for larger enterprises or enterprises with special risk potential (see the national reports for Germany, the Netherlands and Austria). At the time the questionnaire was administered the existence of transitional arrangements in several countries meant that small and medium-sized enterprises were not yet fully covered by the statutory requirement for occupational safety and health services (cf. the transitional arrangements on Germany and Austria in particular). In the intervening period up to 1.1.1998 occupational safety and health have become mandatory for all enterprises irrespective of size in the Netherlands. This means that it is only possible to a very limited extent to make statements or prognoses about the implementation of the relevant regulations governing safety and health services in small and medium-sized enterprises.

Other countries elected not to introduce transitional arrangements for small and medium-sized enterprises, partly because regulations governing statutory occupational safety and health services for small and medium-sized enterprises were introduced only a few years ago. This also means that it is not possible to carry out any definitive evaluation of the implementation of the relevant regulations governing safety and health services in such enterprises in these countries either. This further means that any deliberations on a service model tailored to the special needs of small and medium-sized enterprises (see L) below) will depend on the experience gained in the coming years with the implementation of these regulations governing occupational safety and health services for small and medium-sized enterprises and may possibly meet with even wider interest from those institutions involved with such legislation.

2. Special regulations governing the implementation of occupational safety and health services in small and medium-sized enterprises

What is remarkable is the fact that only very few of the selected countries have special regulations governing methods of implementing occupational safety and health services that take account of the special needs of small and medium-sized enterprises.

Mention should be made here of the specific regulations for small and medium-sized enterprises in Austria and Germany with regard to safety coverage under the so-called “entrepreneur” model. In Austria employers operating enterprises employing fewer than 25 workers can perform the functions of safety experts themselves under certain conditions (see the national report for Austria, section 2.). In Germany comparable special regulations regarding occupational safety coverage for small and medium-sized enterprises exist under the

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accident prevention regulations issued by the accident insurance funds for particular industrial branches. In Portugal an employer can also perform the function of a safety expert in his own enterprise after suitable preparation and training. There is a similar arrangement in Switzerland for enterprises with no special hazards which allows the employer to dispense with calling in occupational health physicians and other safety specialists. Austrian legislation provides for special support for owners of enterprises employing up to 50 workers when introducing and implementing safety and health services in the form of consultancy services provided by accident insurance funds (see the national report for Austria, section 2.). Furthermore in Austria special requirements exist for enterprises employing up to 10 workers when implementing occupational safety and health services (see the national report for Austria, section 3.).

In other countries it could be observed that regulations aimed at easing the burden of occupational safety and health services for small and medium-sized enterprises compared with larger enterprises.

Examples here are regulations in Switzerland, which do not make the involvement of occupational safety specialists in small and medium-sized enterprises mandatory (see the national report for Switzerland, section 2.), and the regulations governing minimum intervention times in smaller enterprises in Germany, which have recently come under the provisions of the above-mentioned directive of the Council of the European Communities on health and safety at work (see the national report for Germany, section 3.).

It was not possible in any of the countries selected to identify regulations placing special requirements in terms of qualifications on doctors, safety experts and institutions involved specifically for the provision of occupational safety and health services to small and medium-sized enterprises.

3. Financing of occupational safety and health services

In all the countries selected the cost of providing occupational safety and health services is borne by employers. One exception is Finland, where employers can have 50 per cent of the cost of safety and health services reimbursed by the sickness insurance scheme (see the national report for Finland, section 1.). No special regulations could be found favouring the owners of small or medium-sized enterprises in terms of subsidies or cost-sharing through other institutions. Even in Sweden, where the provision of such services in small and medium-sized enterprises is not mandatory, the cost of such services is to be met by the employer.

The special regulation in Finland, which subsidizes the costs of hazard audits in agricultural enterprises to 100 per cent (see the national report for Finland, section 1.), can also be regarded as a special regulation favouring small and medium-sized enterprises given the structural conditions with regard to agriculture in that country.

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An example of financial regulations that take particular account of the needs of small and medium-sized enterprises, without having actually been designed with enterprises of this size in mind, is the finance system operated by the Arbouw Foundation in the Netherlands. Under this financing system employers still meet the costs for services provided. However, the central clearing system for invoice payment at the Arbouw Foundation is used to motivate service providers to deliver the right amount of high-quality services at the right price and thus to be paid accordingly (see the national report for the Netherlands for details, section 3.).

4. Other statutory frameworks of particular importance for small and medium-sized enterprises

Flexible regulations governing the choice of organizational forms for occupational safety and health services are particularly important for small and medium-sized enterprises. Normally the establishment of in-house safety and health services only makes sense for larger and very large enterprises. The regulations in the various countries selected take these economic and organizational factors into account and allow the involvement of external services. One example is Portugal, where larger enterprises are required to organize their own occupational safety and health services according to the risks in those enterprises, but where small enterprises can choose between various forms of organization for such services (see the national report for Portugal, section 2.). Similar regulations apply in Lithuania, where enterprises employing more than 300 workers have to maintain their own services, but where smaller enterprises are allowed to use outside services.

The statutory regulations in the countries selected give a variety of answers to the question about the extent to which the time spent in providing occupational safety and health services depends on the size of the enterprise.

Regulations governing intervention times can be found which stipulate that the prescribed minimum intervention times for technical safety and occupational medical staff should rise in proportion to the number of workers (e.g. in Austria, the Netherlands and Portugal). Regarding the particularities to be found in regulations governing intervention times in Germany for small and medium-sized enterprises as against those for larger enterprises reference is made to the observations under section 2 of that report. The Swiss approach is of particular interest here with regard to thoughts on how occupational safety and health services for small and medium-sized enterprises should be organized. Primary considerations here are the risks present in the enterprise and the effort involved in performing hazard audits which determine the time for which technical safety and occupational health specialists are involved. Any application of regulations governing intervention times is subsidiary to these considerations.

The question about the quality of services delivered by outside safety and health service providers and how this quality is assured and guaranteed by other institutions is particularly important for small and medium-sized enterprises since they usually lack the special knowledge
and expertise required. In the majority of countries selected the need for State labour inspectorates to ensure that employers comply with statutory requirements to provide occupational safety and health services has been recognized and accepted. In some countries accident insurance funds are involved in performing these supervisory tasks (e.g. in Germany and Switzerland). One example of a quality assurance system for occupational safety and health services operating at a level below that of the central authority is that for the construction industry in the Netherlands, which operates on the basis of collective agreements between the Arbouw Foundation and service providers (see the national report for the Netherlands, section 3.).

The agreements reached by the Arbouw Foundation for the whole construction industry with service providers set out the detailed requirements for the services to be provided and take account of the specific needs of the various industry branches.

Service quality is assessed through the evaluation of reports on the services provided and questionnaires submitted to employers. The returns are evaluated regularly in discussions with the service providers. The financing system (see above) also forms part of the quality assurance programme.

The primary aim of this quality assurance programme operated by the Arbouw Foundation is to achieve effective occupational safety and health services in the small and medium-sized enterprises in the construction industry.

L) Proposals for occupational safety and health services for small and medium-sized enterprises

1. General

Small and medium-sized enterprises differ from large-scale enterprises in terms of their economic situations, their workforces and other infrastructure issues and therefore on the basis of these specific characteristics they place special demands on the competence, effectiveness and organizational skill of occupational safety and health services. For example, there is no qualified in-house authority dealing with occupational health and safety and who could act as counterpart. In particular the premises and facilities at such enterprises are often insufficient for occupational medical examinations for workers and call for flexible solutions. Furthermore the financial resources available to small and medium-sized enterprises combined with the normally short intervention times in such enterprises set very narrow limits on services.

One rather theoretical optimal solution from the point of view of prevention would be to have all service tasks performed on-site and thus to have comparable conditions with those in large-scale enterprises. Gradual transitions to a more or less minimalist solution are marked by the abandoning of on-site programmes in such enterprises. An optimal model for small and

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medium-sized enterprises would contain both the provision of services on-site and services for groups of enterprises to the extent required. The distribution and weighting in each case would depend on the branch being serviced and its specific risks.

2. **Standard prerequisites**

a) **Bases**

ILO Convention No. 161 and ILO Recommendation No. 171 contain basic statements on the establishment, organization and operation of occupational safety and health services for small and medium-sized enterprises as well and serve as an orientation aid and basis for such services. Together with the EU directive 89/391, they serve as a source of statutory requirements for governments, employers, employees and for occupational safety and health services.

b) **Scope and terms of reference – mandatory service provision – financing**

Standard prerequisites should stipulate that occupational safety and health services are to be established for all employees including civil servants in all branches of the economy and in all enterprises. The employer should be required to guarantee the provision of safety and health services for the enterprise and to bear the costs for these. Taking account of the statutory and institutional framework existing in each country consideration should be given to instituting a system of financial incentives, such as, for example, reimbursement for contributions made to accident or sickness insurance schemes, to increase and reward motivation on the part of employers to accelerate efforts to implement such services. Consideration should be given to the possibility of providing occupational safety and health services free of charge or through collective solutions for certain sectors such as agriculture. Care must be taken in all cases that no costs arise to employees for such services.

c) **Scope of services**

The scope of the occupational safety and health services provided must be defined clearly. A differentiation according to industrial branch, the size and the potential risks in an enterprise is justified. Minimum requirements should be clearly set out. Regarding small and medium-sized enterprises the obvious requirement should nevertheless be stressed that all services should be appropriate to the needs and specific risks in the enterprise. In this context the standard framework should include particularly flexible and pragmatic solutions for small and medium-sized enterprises.
d) Task definition

The tasks of service providers delivering occupational safety and health services are to be defined. Account should be taken of the particular role of prevention in providing services to an enterprise or group of enterprises. Service providers must be independent and free from direction in applying their expert knowledge, but should be required to use existing regulatory emission profiles. They should be contractual partners with the enterprises they serve and not act as instruments of State or other supervisory bodies.

Regulations should stipulate the involvement of the workforce in all pertinent questions to do with safety and health services.

e) Requirements for service providers, supervision

Regulations governing staff and equipment requirements for occupational safety and health service providers, as well as the qualification requirements for the staff deployed, are of fundamental importance. Compliance with these criteria by the service provider should be controlled as part of an official and binding licensing procedure. There should be a requirement for documentation and, where necessary, for reporting, having due regard for all data protection issues so that the activity of the service provider can be traced and checked where necessary. There should be monitoring instruments and procedures to ascertain employers’ compliance with regard to the provision of occupational safety and health services.

3. Tasks of occupational safety and health service providers

Occupational safety and health service providers should support the employer and the workforce in all matters to do with health and safety at work. Since the employer is directly responsible for all aspects of safety within the enterprise, he is particularly reliant on competent expert support. Such experts, through their essentially consultative function, play a central role in accident prevention.

Occupational safety and health service providers should perform the following tasks laid down in a) to f) below:

a) Assessment of the work environment

- Investigation and assessment of the dangers and burdens for the employee in the performance of his work. A labour inspection is to be performed.
- Assessment of organizational factors that are significant for safety at work.
• Assessment of the implementation of and compliance with the necessary safety measures.

b) Monitoring of employees’ health (by occupational health service providers only)

• Regular general examinations and examinations as required to assess employees’ state of health.

• Medical examinations for employment candidates as required.

• Special occupational preventive medical examinations in cases of specific exposure and/or hazards in accordance with statutory requirements or branch-specific recommendations in each case.

• Individual health counselling for employees.

c) Investigation into the causes of occupational accidents and diseases

d) Advice to the employer, employees and staff representative body

• Proposal of measures to optimize health and safety protection and to remove any shortcomings detected as a result of activities a) to c).

• Advice on the acquisition of equipment and the introduction of working procedures and materials.

• Advice to the employer and staff representative body on safety measures that are necessary or recommended, such as safety-conscious behaviour and the use of personal protective equipment.

• Advice to the employer on potential safety problems and any relevant emergency plans.

e) Involvement in the planning and provision of in-house first aid

f) Information and training

• Information to employees on work-related hazards and emission levels.

• Instruction in safety-conscious behaviour.

• Instruction in the use of any personal protective equipment that may be required.

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• First aid training.

g) **Documentation and evaluation**

All the activities under points a) to f) must be suitably documented. Any personal data obtained under b) is subject to medical confidentiality rules and is to be treated accordingly. Any conclusions arrived at in relation to medical concerns about individuals performing certain activities or subject to certain exposures must, however, be made known to the employer in accordance with the relevant statutory regulations.

Anonymous assessment of findings from workers’ regular medical examinations and other activities can reveal shortcomings in the occupational safety situation and also provide valuable indications of where to concentrate prevention programmes.

4. **Organization and performance of tasks**

Occupational safety and health services can be set up by the individual enterprise, by groups of enterprises, by independent firms established specially to provide such services, by public authorities, social security institutions or by occupational federations or associations, chambers and guilds.

Since in-house services for small and medium-sized enterprises are not economically viable they need not be considered any further.

To implement such services for small and medium-sized enterprises sensibly, and to keep the financial burden for the individual enterprise within limits, a group service provider will have to be used. Wherever possible preference should be given to a single service provider delivering both occupational safety and occupational health services. This combination requires interdisciplinary co-operation and leads to effective service provision on-site both in terms of content and the time spent on service delivery. It may also be possible to achieve significant rationalization advantages through the use of services established for a particular occupational group or industrial branch capable of supplying and applying knowledge specific to that branch or group.

The tasks set out in 3 a) to f) have long been performed without difficulty in many large enterprises. However, in the case of small enterprises in particular, with their wide dispersion and other particularities in terms of infrastructure, the performance of the whole spectrum of these tasks on-site would often require disproportionate efforts and therefore be unacceptable. Furthermore, it should also be borne in mind that since small and medium-sized enterprises are in the vast majority in all national economies, hardly any country would have sufficient resources for service provision in terms of staff and facilities to ensure country-wide on-site coverage for these enterprises.

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It would be desirable for expert representatives from each of the occupational groups to be covered, together with the social partners, safety experts and the relevant authorities and other monitoring bodies, to draw up joint proposals for solutions based on the standard prerequisites that would take account of both the fundamental requirement to provide such services and of the particular implementation difficulties facing small and medium-sized enterprises.

It is conceivable that some of the tasks of occupational safety and health service providers could be performed outside the enterprise or for a group of enterprises. An important basis for such an approach would be the establishment of hazard and emission audits for each industrial branch and their incorporation in a register. This would allow a significant proportion of the tasks set out under 3. a), d) and f) to be dealt with systematically according to each industrial branch using examples to a certain extent. Findings could then be presented to employers and employees at joint-enterprise information and training meetings.

Where even this approach cannot be adopted, the employer should set out his own requirements for expert advice and be able to call on such advice as required. Standardized seminars on the relevant statutory framework should place the employer in a position where he can carry out the necessary systematic hazard and emissions audit in his own enterprise as a basis for assessing his requirements for expert advice. Documentation would then enable monitoring bodies to control such procedures.

Occupational safety and health tasks by their very nature, however, make flexible approaches covering several enterprises only possible to a limited extent. In all cases it must be certain that all required general and special medical examinations are performed and that the necessary staff, facilities and equipment are available. Depending on regional conditions use could be made of facilities in neighbouring large enterprises or any occupational health centres that are available. Mobile examination units could also be used. The use of local general health care facilities, such as out-patient treatment centres or medical practitioner’s practices, could also be considered. On-site occupational health consultations should at least be possible as an option.

5. Staff and equipment requirements

Requirements with regard to qualifications for occupational safety and health staff derive from the variety of service tasks to be performed and the high level of responsibility for competent advice that these tasks carry with them. With regard to safety services, engineers with special training or further training in occupational safety and experience in the industrial branch that they are to service should be available, under whose responsibility and guidance technicians could then be deployed for clearly defined ranges of tasks.

Occupational health services should be performed by specially trained and qualified doctors. All cases involving diagnoses and therapeutic measures following examinations must be under medical supervision and responsibility.

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Premises and equipment for occupational safety and health services must make it possible for all tasks to be performed and must meet the relevant regulatory standards.

6. Summary

The provision of occupational safety and health services for small and medium-sized enterprises calls for great organizational skill and a high degree of flexibility to fulfill tasks generally accepted as important and to achieve and maintain a level of practical implementation that balances service provider resources against the economic cost for the enterprise being serviced. This is the challenge facing governments, employers, employees and service providers.

The use of example-based standards specific to each industrial branch, such as a hazard register, emissions profile and the bundling of certain service tasks across groups of enterprises, together with a strong involvement of employers in certain service tasks since they carry the final responsibility for occupational safety and health anyway, should make it possible to achieve a clear reduction in on-site measures that need to be performed and thus remove a significant number of problems surrounding the provision of services to small and medium-sized enterprises.

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Appendix

Statistical data for the countries examined
**Statistical data for the countries examined**

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<tbody>
<tr>
<td>Austria</td>
<td>8.102 million</td>
<td>83.9 Tkm²</td>
<td>96.6 /km²</td>
<td>3.734 million</td>
<td>46.7 per cent</td>
<td>24950 US$</td>
<td>6.6 per cent</td>
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<tr>
<td>Switzerland</td>
<td>7.087 million</td>
<td>41.3 Tkm²</td>
<td>171.7 /km²</td>
<td>3.943 million</td>
<td>56.0 per cent</td>
<td>37180 US$</td>
<td>4.5 per cent</td>
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<tr>
<td>Germany</td>
<td>81.891 million</td>
<td>357.0 Tkm²</td>
<td>229.4 /km²</td>
<td>40.236 million</td>
<td>49.5 per cent</td>
<td>25580 US$</td>
<td>10.3 per cent</td>
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<tr>
<td>Finland</td>
<td>5.132 million</td>
<td>338.1 Tkm²</td>
<td>16.7 /km²</td>
<td>2.502 million</td>
<td>49.2 per cent</td>
<td>18850 US$</td>
<td>17.0 per cent</td>
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<tr>
<td>France</td>
<td>57.899 million</td>
<td>544.0 Tkm²</td>
<td>107.3 /km²</td>
<td>25.260 million</td>
<td>43.4 per cent</td>
<td>22760 US$</td>
<td>11.7 per cent</td>
</tr>
</tbody>
</table>

**Appendix**

Data not available from EUROSTAT

Data not available from EUROSTAT

Enterprise size DE

Workers by enterprise size

Enterprise size FI

Workers by enterprise size

Enterprise size FR

Workers by enterprise size
Appendix: (continued)

<table>
<thead>
<tr>
<th></th>
<th>Lithuania</th>
<th>Netherlands</th>
<th>Portugal</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Territory</strong></td>
<td>65.3 Tkm2</td>
<td>41.5 Tkm2</td>
<td>91.8 Tkm2</td>
<td>450.0 Tkm2</td>
</tr>
<tr>
<td><strong>Pop. Density</strong></td>
<td>56.8/km2</td>
<td>459.3/km2</td>
<td>108.1/km2</td>
<td>21.6/km2</td>
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<tr>
<td><strong>Working pop.</strong></td>
<td>25.260 million</td>
<td>7.184 million</td>
<td>4.561 million</td>
<td>4.267 million</td>
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<tr>
<td><strong>W/pop. %</strong></td>
<td>42.2 per cent</td>
<td>46.7 per cent</td>
<td>46.1 per cent</td>
<td>48.6 per cent</td>
</tr>
<tr>
<td><strong>GNP</strong></td>
<td>1350 US$</td>
<td>21970 US$</td>
<td>9370 US$</td>
<td>23630 US$</td>
</tr>
<tr>
<td><strong>Unemployed</strong></td>
<td>6.2 per cent</td>
<td>6.8 per cent</td>
<td>6.8 per cent</td>
<td>8.0 per cent</td>
</tr>
</tbody>
</table>


km2: Square kilometers  Tkm2: Thousand of square kilometers
W/pop.: Working population  GNP: Gross domestic product per capita and per annum