Access to Assistive Technology

in the European Union
Access to Assistive Technology
in the European Union

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2003 was declared by the EU the European Year of People with Disabilities. This provides a unique and bold opportunity to help raise awareness of disability as an issue, which concerns the whole of society. For its part, the European Commission considers that the European Year of People with Disabilities is also about making a move forward in disability policies, simultaneously in the areas of equal rights, empowerment and the full citizenship of people with disabilities. This is why we have decided to bring in some elements of reflection on the empowerment of people with disabilities to overcome the obstacles and barriers they face every day, including at the work place.

Assistive technologies (ATs) play an increasingly central role in equalising opportunities for people with disabilities in all aspects of life, since these technologies can contribute to providing compensation for functional limitations and help tackle barriers in all types of environment. The enhancement in quality of life that will result from a wider use of ATs will lead to a generation of new aspirations, new demands to promote improvement in such equipment to the benefit of people with disabilities, and thus to new innovations in a continuous positive feedback loop of market innovation and development. Already today it is estimated that more than 20.000 assistive technologies related products represent a market volume of over 30 billion Euro. Furthermore, we anticipate that the ageing of society will lead to an increase of people with registered disability from the current 11% to 17% by 2020, thus a greater demand for technologies, which allow people to participate more fully in society and enjoy a greater quality of life. ATs therefore have a major role to play in the field of disability to complement policies aimed at ensuring the rights of people with disabilities and equality of opportunities as well as the support provided by family, friends and society as a whole.

It is within this context that the Commission took the decision to launch the present study to investigate the current situation as regards ATs. The study had three objectives:

- to assess the effectiveness of current legal and regulatory frameworks to identify elements that would prevent EU producers, distributors and consumers from benefiting from internal market legislation;

- to identify good practices in providing access to assistive technologies related to accommodations in the labour market which, in the context of the forthcoming implementation of the Council Directive 2000/78/EC establishing a general framework for equal treatment in employment and occupation, are responsive to the needs of both employers and employees;

- to make policy recommendations aimed at improving access to ATs. In other words, the study was to consider specifically the supply side (production and delivery systems) of the AT market.

A number of conclusions can be drawn from the results of this study.

The major conclusion of the study is that the rules of the internal market seem to function properly for ATs. However, the market itself remains very unstructured and manufacturing demonstrates a trend towards delocalisation outside of the EU.

Overall, the study stresses the lack of market transparency and efficiency partly due to the complexity of both the regulatory environment and the delivery systems of ATs. While the offer of AT products is extremely diverse in the EU, availability and accessibility to information on the solutions available is very problematic at all levels. Most producers are highly specialised micro-enterprises (with the exception of some global players such as the producers of hearing aids
whose number is however decreasing) and their resources and capacity to invest in product and market development are restricted. Finally, the complexity and the diversity of the health care and social welfare systems under which the delivery systems are covered appear to have a negative impact on the availability of ATs. This means that there are certainly issues to be addressed by public authorities and intermediary organisations like social security, health and care insurance, that organise and regulate the provision of assistive devices.

Moreover, the conclusions of the study pinpoint in particular:

- The great difficulties arising from the specific structure and systems at national level which are there to regulate the processes by which an individual AT product reaches the end user, although Community law ensures that AT products can be marketed in the entire EU. These difficulties are mainly due to the lack of transparency and coherence of Member States' administrative requirements and eventual specific testing procedures regarding the ability of a product to respond to specific needs and to be financed by the various health care or social systems. One specific recommendation calls for co-ordination and streamlining throughout the EU of the criteria for getting access to social security schemes that would allow for uniform testing procedures and acceptance of the product by any MS funding system.

- The shift towards integrated assessment of the needs of people with disabilities and possible solutions, even though doctors often remain the only actors authorised to establish the prescription to gain access to ATs. It also appears that assessment leads to more efficient results when it takes place where the disabled person will use the ATs i.e. mainly at home and at the workplace.

- The complexity of reimbursement systems. One recommendation to be considered in this respect is the establishment of so-called "one stop shops" in order to offer tailor-made information for people with disabilities at a central point, notably as regards product classification according to functional needs as well as to funding possibilities. I note in particular that social workers play a critical role in providing access to ATs since they take a lead in directing the users towards financial resources.

As a result, the Commission is now considering – on a European level – the possibility of initiating dialogue with the relevant stakeholders in order to increase market transparency and facilitate the exchange of good practices. It goes without saying that user-involvement will be fundamental to the success of all measures taken to spread information, knowledge, transparency and finally access to AT products. However, this can only be a first step to improving access to ATs.

Indeed, when considering the broad decentralisation of decision-making power as well as of the delivery systems relating to ATs, it is clear that measures to improve the situation should first be taken at local, regional and national levels. I would therefore hope that the various stakeholders would profit from the impetus triggered by the European Year and start considering the numerous recommendations of the study. I am confident that this will lead - in the longer term - to an improved access to high-quality AT products and services for people with disabilities.”

ANNA DIAMANTOPOULOU
Commissioner for DG Employment and Social Affairs
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1. Executive Summary

**Context**

Assistive Technology refers to products, devices or equipment that are used to maintain, increase or improve the functional capabilities of people with disabilities. Assistive Technology can help to compensate functional limitations and enable people with disabilities to participate in the activities of daily life, including employment and training. Assistive Technology is used by an increasing number of people. Given the ageing of the EU population and the continuous technical developments in Assistive Technology itself, it is likely that total use and expenditure will increase considerably over the next 10 years. Being a very fragmented industry, particularly when it comes to specialised products, the EU market for Assistive Technology which is significant at present, is set to grow enormously in the near future.

**Scope of the study**

This study covers the current state of regulation and the organisation of the delivery and procurement of assistive devices in 8 Member States of the European Union: Denmark, France, Germany, Italy, the Netherlands, Spain, Sweden, and the United Kingdom. The study also covers the status on anti-discrimination legislation and specific regulation of Assistive Technology at the workplace.

**Main findings**

**Delivery systems**

There are wide variations in the delivery systems for Assistive Technology in the Member States considered. Information, prescription, assessment, delivery, financing, …mechanisms and procedures differ to a varying extent. In general, the way provision of Assistive Technology is regulated and organised also reflects differences in the way overall social protection of the individual is achieved.

**The end-user perspective**

Different though the systems may be, the problems encountered by the end-users often seem to resemble each other. User participation in the process of selecting assistive devices, professionalism of prescribers and assessors, product evaluation, and financial rules that ensure that the most appropriate product is provided at an acceptable cost, are all issues that play a very important role on the final outcome.
Provision of appropriate Assistive Technology

In most of countries reviewed, the factors which have an important bearing on the degree of quality, appropriateness and even the cost to the user of the assistive device are: the cause of the disability, the personal situation of the disabled person, personal income or financial resources, whether the person is working, studying or not economically active, and geographical location.

General market characteristics

The EU market for Assistive Technology is huge. Producers and distributors are mostly medium to small, even sometimes very small enterprises. The major exceptions to this rule concern mass-production items, such as basic hearing devices or basic wheelchairs. As has been demonstrated in earlier studies, markets are both geographically and sectorally very fragmented.

The openness of the market

The market for Assistive Technology within the EU can, in principle, be considered as an open market. It is no more difficult to export Assistive Technology products than other products. Inta-Community sales ought not to be a problem for products bearing the CE mark. But good marketing and preferably the use of a local agent in order to be able to sell to local retailers are vital.

What appears to be more difficult is getting a product included in the various public health care or social systems which finance provision of assistive devices. Getting through the current acceptance procedures in the different EU Member States requires, depending on the kind of assistive device, great effort and considerable organisational skill. One has to cope with difficult and complex administrative requirements and different testing procedures (if required), and have a very good knowledge of the different systems and local market conditions. The CE mark is not a quality label that confers automatic access to those systems.

Key decision-makers in the delivery and procurement process

More and more health insurers, local or regional public authorities and care providers are having a determining influence on the regulation and provision of Assistive Technology to the end-user. Their impact on the selection of products procured under the different systems is increasing because they are directly contracting producers and distributors. Product selection will more and more be a function of quality, durability, usability and last but not least price since public expenditure on the provision of assistive devices to people with disabilities is rising every year.

Information and advice

Information is an over-riding and crucial element in the provision of assistive devices. This is true for all parties, be it the end-user, the prescriber, the assessor, the intermediary organisation, the producer the distributor or the financing authority.
Moreover, exchange of information is rare, even within the Member States themselves. The knowledge of, the information on, and the quality of the device ultimately procured often depends very much on chance encounters during the process of gathering information.

In general the product information that is available is a compilation of facts on the product — dimensions, a technical description, design and price elements. Catalogues exist in one form or another in every country, but content differs significantly. This situation is evolving. More and more, a functional classification, focusing on the problem the device is designed to solve and the functional characteristics of the product, is replacing simple product description.

**Integration of people with disabilities and the role of Assistive Technology**

Integration into society starts with equal treatment. In order to guarantee this, some countries have introduced specific anti-discrimination legislation. Others have non-discrimination provisions in their general legislation on social and health services. Most constitutions contain a general or specific section on equal treatment of people with disabilities.

If people with disabilities are to be genuinely integrated into society, then it is crucial that provision of Assistive Technology be adequate. This means matching it to the real individual needs of the disabled, assessing the needs of end-users in such a way that the most appropriate solution is found and making the financial cost affordable.

In all Member States, efforts are made to integrate the disabled into the working environment. Most countries have a system where hiring someone with disabilities confers the entitlement to special funding or an abatement in social insurance costs. Most countries also have systems that partially or fully finance the costs of adaptations to the workplace. But overall, still a lot of progress can be made.

Adequate provision of Assistive Technology and legal protection are, however, not enough to guarantee full involvement in society. Creating awareness of disability issues and of the everyday problems of people with disabilities is a much more demanding but eventually more successful route to achieving equality.
Recommendations

Summary of high level recommendations

The report includes many recommendations in relation to the findings and conclusions. These recommendations can be grouped and summarised as follows:

- It is crucial to improve, coordinate, structure, share and validate information and advice on disability issues, Assistive Technology products, assessment procedures, experience, markets and above all practical solutions.

- Action must be taken to improve the theoretical and practical knowledge on functional problems, and the solutions that are imaginable through the use of Assistive Technology. Professionals, in particular prescribers and assessors must have sufficient expertise on assessment procedures and products.

- Significant efforts are required for creating transparency on markets, products, acceptance procedures and public procurement procedures.

- Systems should ensure that assistive devices are easily accessible to all people with impairments.

- Create awareness on the intrinsic possibilities of disabled people to perform tasks in regular enterprises.

- Create awareness on everyday problems people with disabilities through information campaigns focused on changing attitude.

Some of the key recommendations

Amongst the many recommendations formulated, four appear to be of particular importance:

- The complexity of the health care and social systems that organise and regulate the provision of assistive devices ought not to have a negative impact on those in need of Assistive Technology. Therefore a “one-stop shop” for people with disabilities would constitute tremendous progress in most countries. This would not prevent different systems co-existing for procurement, but it would transfer the burden from those with disabilities to organisational bodies. The practical outcome should reflect the objective need of the person with the disability, not be a reflection of the system, whether it be health-care or social-service-related.

- It would be advisable to make acceptance procedures for assistive devices more transparent and to set standards on quality levels to apply in all EU Member States. This would make it possible to have uniform testing procedures and even to expand them, since most products are not really thoroughly tested at present.
• Availability of useful product information classified according to functional needs is vital. Research centres and health and social welfare authorities within the EU should collaborate closely to exchange data and experience. The case for an EU-wide catalogue can even be made.

• If end users are to be satisfied with the product, they must be more involved in the selection process. Satisfaction is related to many quality factors such as the practical help conferred by the assistive device, delivery times, the user impact on the final choice, product quality, prescription and assessment and cost to the user. But the user participation is essential.

• In view of further integration of people with disabilities in the working force, transparent and consistent information should be available and be conveyed to employers and co-workers. Sharing information on practical assessment of both disabled workers and workplaces and on practical solutions must also be encouraged. It is suggested to take measures at EU level for creating awareness on the possibilities for hiring and integrating people with disabilities in regular enterprises making use of technical aids.
2. Introduction

2.1. Description and objectives of the study

This study on “access to Assistive Technology” deals with the different systems on provision of assistive devices in eight EU Member States: the UK, France, Germany, Sweden, Denmark, Italy, Spain and the Netherlands. The objectives of the study consist out of five main elements:

1. a description of the main features of the legislative and regulatory framework impacting on access and provision of Assistive Technology

This description is to be an analysis of the different legal systems on the access and the provision of Assistive Technology in order to assess how regulations and procedures on selling or reimbursing Assistive Technology products might constitute an unjustifiable barrier to the free movement of goods within the European Union single market.

The description of the different systems will focus on the practical and real situation in the different Member States and start from a user standpoint. It is not the aim of the study to cover all Assistive Technology products, but to focus on the different categories rather than on the products themselves.

This part shall cover any possible national rules that contain requirements which impose on producers or distributors established in one Member State the need to be established in another Member State if they wish to provide their products there, discriminate in reimbursement under the social security systems or make reimbursements conditional on the fulfilment of specific technical criteria.

2 a comparative analysis of the effectiveness, availability and efficacy of the Assistive Technology delivery system

The comparison of the effectiveness will focus on the different kinds of system within the Member States for procuring Assistive Technology for the end user and on the outcome in terms of participation, quality outcomes in terms of user satisfaction with the services and access in relation to people’s needs.

The study will not only take the user side into account, but also the supplier side where the aspects to be considered will include satisfaction with the system and market openness in the procurement of new products.

3. a description of best practice in providing access to Assistive Technology-based job adjustments which are reliable and responsive to the needs of employers and employees in the context of the implementation of the Council Directive of 27 November 2000, establishing a general framework for equal treatment in employment and occupation.

Since the Council Directive is not yet binding, the purpose is to find “best practice” within the Member States. The approach will be holistic and focus on the workplace rather than on specific products. Subsidies as such will not be a focus of the study.

The description of best practice will concentrate on what initiatives should be promoted across the European Union and what type of policy initiatives could be undertaken at EU level and national levels.
4. **Assessment of the impact of the findings on the internal market for these products.** This assessment should include an analysis of any possible elements in national legislation which would prevent EU producers, distributors and consumers from benefiting from closer market integration. This part of the study will not only focus on formal legislation and regulation, but also on real practice. The perception of the distributors and producers of Assistive Technology within the different Member States is an important issue since it has an important impact on cross-border activities in accessing the internal European market for Assistive Technology products.

5. **Recommendations from the conclusions of the different parts of the study.**

### 2.2. Assisted Technology

The term “Assistive Technology” will be used throughout this report. As this is a general and vague term which means little to most people, this section will attempt better to qualify what is meant by “Assistive Technology”. Essentially, however, Assistive Technology covers material or equipment aids as opposed to human or animal aids.

There are international definitions which specify the scope of Assistive Technology. ISO9999 defines Assistive Technology as "...products, devices or equipment, whether acquired commercially, modified or customized, that are used to maintain, increase or improve the functional capabilities of individuals with disabilities...". Recommendation 92 of the European Council refers to the ISO 9999 Standard and includes not only classical equipment, but also “any tool or technical system to facilitate mobility, manipulation, communication, environment control, and simple or complex activities of either daily life, education, professional or societal”.

Thus, it appears that the scope of Assistive Technology products is extremely broad and covers a set of various products. These products range from devices, such as prostheses, which are conceived specifically to supplement a functional impairment as far as is possible, or products targeted to the more general public in order to facilitate and improve daily life of people with disabilities. All these products can either be very specific or mass produced.

Assistive Technology always needs to be seen in the context of a human (or animal) aid. Technical aids may often reduce the need for human intervention, but they cannot entirely eliminate them. Moreover, it also depends on the disabled people themselves whether they really want to make maximal use of assistive technology to be as independent and autonomous as possible or if they prefer to make use of personal assistance. This is especially true of mental or psychiatric disabilities. From that point of view, Assistive Technology products could be put forward either for their cost-effectiveness or for their contribution to the disabled person’s quality of life.

In conclusion, considering Assistive Technology for the individual case must always be a preliminary to considering human aids and financing.

### Scope of Assistive Technology within the study

Assistive Technology is too wide a theme to be exhaustively discussed within the current study. The Expert Support Group agreed, therefore, to the following choices from the time of the kick-off meeting.
In terms of reducing—or rather the focus of—the scope of Assistive Technology products, consideration will be limited to classes 12, 21 and to a lesser extent 18 and 24 of the ISO 9999 classification. Class 06 is outside the scope of the study. As a reminder, ISO 9999 classes are illustrated in the table below:

<table>
<thead>
<tr>
<th>Assistive Technology classes</th>
<th>Class identifier</th>
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<td>Aids for personal medical treatment</td>
<td>03</td>
</tr>
<tr>
<td>Orthoses and prostheses</td>
<td>06</td>
</tr>
<tr>
<td>Aids for personal care and protection</td>
<td>09</td>
</tr>
<tr>
<td>Aids for personal mobility</td>
<td>12</td>
</tr>
<tr>
<td>Aids for housekeeping</td>
<td>15</td>
</tr>
<tr>
<td>Furnishings and adaptations to homes and other premises</td>
<td>18</td>
</tr>
<tr>
<td>Aids for communication, information and signalling</td>
<td>21</td>
</tr>
<tr>
<td>Aids for handling products and goods</td>
<td>24</td>
</tr>
<tr>
<td>Aids and equipment for environmental improvement, tools and machines</td>
<td>27</td>
</tr>
<tr>
<td>Aids for recreation</td>
<td>30</td>
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Source: ISO 9999 Standard

2.3. Methodology applied

The approach selected for addressing the different issues incorporated a range of different activities, such as desk research, interviews with key stakeholders, surveys and analysis of best practice.

In addition to the support provided by DG Employment and Social Affairs, an Expert Support Group was set up in order to provide guidance to the project team. The Expert Support Group comprised experts from various organisations who are active in the field of Assistive Technology.

In order to structure our approach, and to ensure consistent and comparable data gathering in all countries, we first established a comprehensive checklist that was introduced to the Expert Support Group in its preliminary form during the kick-off meeting of December 16th, 2002.

From that checklist, a questionnaire was derived that was used for both the interviews and the desk research in all countries. The objective of this questionnaire was not to be massively distributed (e.g., like an online survey). Instead, it aimed to serve as a guideline for the interviewer.

Based on the questionnaire, the data gathering phase could start. Our approach for accessing information in the countries has essentially been based on the following activities:

- extensive desk research: the desk research helped in identifying and classifying all relevant information in relation to the issues examined: legislation and related regulation, statistics, reports, and specific information that is available to key players or organisations active in the field, such as
public bodies (national or regional), research centres, organisations representing disabled people, industry and intermediary organisations.

− background documents provided by the Commission
− other documents or previous studies
− Internet sites of the different organisations
− documents provided by national contacts.

− interviews with players in the Member States:
  − the players within the Member States covered were identified in four main areas: the authorities, the suppliers, the intermediaries and the end-users. Several were interviewed during visits or by phone.
  − European-wide organisations were also included (e.g., the European Disability Forum).

− visits to national institutes or organisations, including:
  − the Swedish Handicap Institute
  − in Spain: Ceapat, Once, Real Patronato, Predif, Cocemfe, Imserso
  − in France: CEP (Centre d’Exposition Permanente), Strasbourg
  − …

− attendance at seminars and information sessions, including:
  − on-site visit to the SMART BUS, Brussels
  − the AAATE seminar (22nd - 23rd 2002 Hoensbroek iRv The Netherlands)
  − “Swedish Design without obstacles” (Brussels)
  − visit to the permanent exhibition of Technical Aids of CEAPAT, Madrid - Spain.

When evaluating the different delivery systems from an end-user point of view, we mainly collected data by means of the following activities:

− direct interviews with people with disabilities (either face-to-face or by phone);
− sending questionnaires directly to people with disabilities or their representative organisations. A 10-page questionnaire was produced in English and translated into French, Spanish, Italian and German. Due to data privacy difficulties in obtaining end-user addresses, not as many questionnaires could be sent as would have been required for obtaining statistically significant results. However, the responses received delivered useful qualitative information which led to new avenues of research.

When looking at the national systems for accepting and distributing Assistive Technology products, a similar approach was selected as for end-users:

− direct interviews with suppliers in the different countries;
− Sending questionnaires directly to suppliers. A 15-page questionnaire was produced in English and translated into French, Spanish, German and Italian. The objectives of the questionnaire were to obtain qualitative information on the different national markets.

Finally, for the analysis of Best Practice a general framework was established that enabled use to identify candidates within the Member States under review as early as possible. The Best Practice examples finally selected were then visited for one or two days, including interviews with stakeholders.
The activities were undertaken by a core team of Deloitte & Touche in Brussels, assisted by staff from the countries concerned, as well as some external experts in the field.

2.4. Structure of the final report

Chapter 3 of the final report starts with a description of Assistive Technology-related and more general disability legislation and regulation within the eight Member States covered. Of special interest for each country is a description of the structure of the legislation. This is followed by a status report on how discrimination is dealt with, then by a description of legislation specific to the workplace and finally by a brief review of future trends.

As far as possible, this chapter will remain objective and neutral.

Chapter 4 then addresses Assistive Technology market issues in each country. The focus will be on how Assistive Technology products are classified in each country. Then there are attempts to give a high-level view of both demand and supply. Due to the difficulty to obtain similar data in all countries, the objective of this chapter remains essentially descriptive.

Chapter 5 deals with how the delivery systems are organised in all countries, from both the end-user point of view and the supplier point of view. In order to be able to make cross-country comparisons, the same structure and similar data are provided for all the Member States under view. Each point of view is followed by a comparative analysis section which emphasises the main differences between the countries.

Assistive Technology in the workplace is described via best practice examples in Chapter 6. Seven best practice examples were selected. These are described and discussed. These can be seen as practical applications of both the legislation and regulation described in the previous chapters.

The European Union context is then briefly discussed in Chapter 7. This covers employment and anti-discrimination policies and two essential EU directives which are the Medical Devices Directive (93/42/EC) and the Equal Treatment Directive (2000/78/EC).

Chapter 8 recapitulates the main findings of the study and makes a number of recommendations on how to improve the access to Assistive Technology in the European Union.

The appendices list the contacts in each country and the bibliography on a country basis. All references to legal texts are directly inserted in the text with footnotes.
3. Legislative and regulatory framework

3.1. Introduction

This chapter provides a static description of the legislative and regulatory environment in separate sections for each of the Member States under review.

The common structure adopted for each country is as follows:

- structure of the legislation
- anti-discrimination legislation
- legislation on Assistive Technology in the workplace
- future trends.

Only legislation and regulation around the delivery of Assistive Technology products is considered in this chapter. For more in-depth reading, the reader should make use of the direct references to the original legal texts that are systematically provided.

3.2. Denmark

3.2.1. Structure of the legislation

At the top of the legal hierarchy stands Denmark’s Riges Grundlov (The Constitutional Act of the Kingdom of Denmark) of June 5th, 1953. In this constitution one finds references to the guarantee of work and to public assistance for people who are not able to support themselves. The Constitution also determines the conditions under which Acts are valid. Many Acts are given the form of framework laws containing general guidelines, leaving it to the Minister concerned to provide more precise regulations. Regulations can be determined administratively within the framework of an Act. Such provisions are often supplemented by government circulars, i.e. rules directed solely at the authorities.

The principal statutes governing the social policy area are the Social Services Act, the Social Pensions Act and the Act on the Rule of Law and administration in the Social Field. The Social Services Act\(^1\) is a general law that lays down the basic features of social policy for children and young people, adults, technical aids, intervention in the right of self-determination and the administration involved in this. The Social Pensions Act\(^2\) provides the basis for the payment of general state pensions on the grounds of age (old-age pension) and disability (early retirement pension). The Act on Legal Protec-

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\(^1\) Bekendtgørelse af lov om social service, LBK nr. 755 of September 9th, 2002

\(^2\) Bekendtgørelse af lov om social pension, LBK nr. 697 of August 21st, 2002
tion and Administration in Social Matters\(^3\) establishes a structure and fundamental principles for the administration of individual social needs.

The structure of legislation is also sectoral. This means that the rights and needs of people with disabilities must be taken into account in normal legislation. For example educational rights and needs are in educational legislation.

Danish society is a welfare state with an income-related tax-financed distribution policy and characterised by a decentralised public sector. Denmark is divided into 14 counties (the regional level) and 275 local authority districts (the local level). Counties and local authorities are in charge of those tasks that are closest to the citizens. The principal service of the local authorities are primary schools, kindergartens, care for the elderly, traffic and payment of social benefits, such as pensions, housing benefits and cash benefits. The counties are in charge of tasks that require a large population base, such as hospitals and functions of a more specialised nature, for example offers of special services for disabled people.

Assistive technology is divided into different categories. According to the category the device belongs to there are some specific characteristics. The actual assistive devices can be divided into four different categories (if cars and modifications to housing are excluded): (1) ‘particularly personal devices’ like for example prostheses; (2) ‘personal devices’ like hearing aids; (3) ‘technical devices’ like wheelchairs; (4) consumables – or mainstream products, which can be used to compensate for a person’s disability. Ownership of the first three resides with the municipality or the district. The disabled person can get all these three categories of assistive devices for free. Generally, the person with disabilities can only choose their supplier for the particularly personal devices. The technical devices are the only ones that will be reused if a person does not need the device any longer. The user has to pay 50% of the cost of consumables, has freedom of choice and owns them.

The Social Services Act\(^4\) describes in §§97 and 98 the rules on assistive devices and consumer durables. The principles applying to assistive devices and consumer durables are the same, and consumer durables are normally implicitly considered part of Assistive Technology. There are also some quite normal consumer durables which all people have like, for example, normal chairs, beds, and telephones. There is no financial support available for these.

In this law, we also find the division of responsibilities between municipalities and counties: “The municipalities shall give support to assistive devices for people with permanently diminished physical or mental functioning if these assistive devices can substantially remedy the diminished capabilities, can make daily life substantially easier or are necessary for the person in question to carry out an occupation. The county shall give support for optical visual aids and optics-supporting visual aids for people with a permanent visual impairment or medico-optically defined permanent diseases of the eye, arm and leg prostheses, hearing aids and special IT aids and IT-supporting aids.”

Municipalities and counties can decide that a specific supplier supply a certain product. However, user representatives are involved in drafting requirement specifications.

For particularly personal devices the applicant can if he/she wishes choose another supplier than the one chosen by the municipality or the county and can have all expenses reimbursed up to the price the

\(^{3}\) Lov om retssikkerhed og administration på det sociale område, LBK nr. 807 of September 26\(^{th}\), 2002

\(^{4}\) Bekendtgørelse af lov om social service. Lovbekendtgørelse nr. 755 of September 9th, 2002, all
municipality or county would have paid to their supplier. If there is no agreement between a supplier and the authority, the applicant can choose freely. Particularly personal devices are wheelchairs requiring personal adjustment that are necessarily used for most of the hours of the day; orthopaedic footwear; arm and leg prostheses; supportive corsets and bandages, etc.; wigs; artificial breasts; ostomy-related aids and visual aids borne on the body for persons with impaired vision or medico-optically defined permanent visual impairments. Wheelchairs for which support has been received under this Act are seen as loans and must be returned to the municipality when they are no longer needed.

A special regulation applies to hearing aids. When an applicant aged 18 or over chooses another supplier than the one named by the county authority, a subsidy of up to DKK5000 per hearing aid is be granted if the applicant has been referred for hearing-aid consultation by an ear, nose and throat specialist. This subsidy covers testing, the hearing aid, adjustment, servicing and guarantee and is inclusive of VAT. The amount of the subsidy cannot exceed the actual costs and is only granted for hearing aids from approved suppliers. The Minister of Health can decide regulations on the supply of hearing aids.

3.2.2. Anti-discrimination legislation

Denmark has no anti-discrimination legislation as such. At the beginning of the 1990s there was a debate in Europe on disability policy measures. The USA had just passed the Americans with Disabilities Act that prohibits discrimination against people with disabilities. Neither the disabled people’s organisations nor the political parties favoured this type of legislation. It was considered undesirable in the Danish context to pass laws which singled out this group as this could have risked undermining the principle of solidarity which otherwise characterises Danish disability policy. It was also feared that such legislation would, if anything, contribute to separating disabled citizens as a group from the rest of the society and thus prevent rather than promote equal opportunities and equal participation.

In 1993 the Danish parliament adopted BSF43, a Parliamentary Resolution on equal opportunities for and equal treatment of people with disabilities. This parliamentary resolution lays down that all public and private companies must comply with the principles of equal opportunities and equal treatment of people with disabilities with other citizens. The needs of the disabled must also be taken into account in preparing resolutions. People with disabilities must be treated on equal terms with other citizens in all areas of society.

In this same Resolution it was decided to establish an Equal Opportunities Centre for Disabled People under the Danish Disability Council: ‘This unit is to collect, initiate and communicate, nationally as well as internationally, the information and expertise required about the situation of disabled people and the effects of particular disabilities. Moreover, the unit is to pay attention to instances where people with disabilities are discriminated against, so that the Danish Disability Council can raise the issue with the relevant authority.’ The Danish Parliament requested that the parliamentary Ombudsman monitor developments in the field of equal treatment. While this Resolution does not have force of law, it is drawn on widely policy making, is gaining in prominence and is increasingly better known.

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5 B 43, Folketingsbeslutning om ligestilling og ligebehandling af handicappede med andre borgere, submitted by the Danish Minister for Social Affairs (Else Winther Andersen) on December 11th, 1992, passed at the second (last) reading on April 2nd, 1993.
The same year the United Nations adopted the **Standard Rules on the Equalization of Opportunities for Persons with Disabilities**, to which Denmark acceded. The objectives set out in these standard rules in many ways conform to the principle of equal opportunities laid down in the parliamentary resolution. The principle of equal opportunities and the demand for equal opportunities have since then been benchmarks for disability policy in Denmark.

The relevant EC Directive\(^6\) has not yet been implemented. Denmark obtained a one-year extension of time. That means that Denmark expects the directive to be incorporated in collective bargaining in May 2004 and after that to be transposed into law.

### 3.2.3. Assistive technology in the workplace

Having a job is not only about earning a living, but also about being part of society. Danes have an expression for a labour market where there is room for everyone: they talk about the spaciousness of the labour market. There is no quota legislation which seems to be the result of a concept that people with disabilities should be considered within the realm of normalcy and society should adapt to be fully integrated. Quota legislation would consider them as something special.

There are no exact figures on employment rates as in Denmark people are not registered on the basis of their disabilities. Several Acts regulate conditions in the Danish labour market, but there is no legislation providing specific protection, if for example, because a person cannot obtain employment or is fired because of their disability.

General social security schemes like unemployment benefit, early retirement, income support and sickness benefit also apply to people with a disability. In addition, there are some special schemes which can be found, for example, in the Compensation for Disabled People in Employment Act\(^7\), which is administered by job centres, and the Act on Active Social Policy\(^8\) and the Act on Social Services\(^9\), which are both administered by the local authorities.

The Compensation for Disabled People in Employment Act established the *Icebreaker Scheme*. This covers preferential access and personal assistance for disabled people in work and the provision of Assistive Technology. The ‘Icebreaker Scheme’ is a form of in-service training scheme, giving people with disabilities the chance to gain work experience. The employer gets a form of wage subsidy to make this possible.

Disabled people may also face barriers resulting from other people’s ignorance and prejudice. To combat this, rules about preferential access have been introduced. Disabled persons who apply for a job in the public sector are entitled to an interview, for example. Where an employer does not employ the disabled applicant, the employer must submit a written report to the public employment service explaining why the disabled person did not get the job. However, this scheme appears not to be work well.

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\(^6\) Council Directive 2000/78/EC establishing a general framework for equal treatment in employment and occupation  
\(^7\) Lov om om kompensation til handicappede i erhverv  
\(^8\) Lov om aktiv socialpolitik,  
\(^9\) Lov om social service, op.cit.
Personal assistance is available for disabled people in work to help them with practical things they cannot do themselves. This can be considered a ‘living aid’, the kind of aid which cannot be bought. Together with normal assistive devices, this constitutes a very strong tool for enabling people to have a job.

The Arbetsformedlingen (AF), the public employment service, has 16 disability consultants across the country, who help disabled employees familiarise themselves with the opportunities available for assistance in becoming employed or remaining in a job.

Denmark applies a principle of compensation that implies that society offers disabled persons a number of services and devices in order to limit or offset the consequences of their disabilities as much as possible. In this way permission can be given to acquire certain types of computer, lifts, etc. There is information on this on the AF’s website and from the AF itself.

Provision of devices for someone who has a disability which prevents them working in normal conditions is not means-tested either for the employee or the employer. Everything is taken care of directly between the person and the Danish state. If an assessment is needed, AF buys in expert help. All this can be done at very short notice. Most Assistive Technology (about 70 to 80%) is delivered on trial in order to ensure that it works well. From DKK1-2 million is spent on this annually. This system has a kind of natural follow-up. If the devices function well, people can get permanent permission to use them. If there are complaints, something else will be tried. This system seems to be working pretty well and fast.

Local authorities can also give support to disabled people in work. Under the Act on Social Policy and the Act on Social Services they can provide aids or make provision for changes to the workplace, they provide social rehabilitation and they make flexible working arrangements possible. This system seems to be more bureaucratic and time-consuming than getting aids for the workplace through AF.

3.2.4. Future trends

In general the Danish delivery system seems to work reasonably well, so there is no real pressure for change. Nevertheless, there will be some changes in mid-2003 in relation to the use of Assistive Technology in the workplace. From that time on, the public employment service will be responsible for all people with unemployment insurance. The others will be the responsibility of the municipalities. This change will have significant consequences since the public employment service will have to deal with far more people. For the time being, the service has no idea of how many people this will be. However, an AF disability consultant told us that he expects the change to provide to people who currently have difficulties in getting assistive devices from their local municipality.

\[10\] op.cit.
\[11\] op.cit.
3.3. France

3.3.1. Structure of the legislation

Social security in France operates as a public insurance system covering the whole population. Therefore anyone who is socially insured is entitled to receive social security benefits. The framework of the French system was set down in 1945-46. It combines the basic option of the social insurance approach with the philosophy of solidarity or shared risk within particular occupations. Since then, the system has evolved and integrated various elements inspired by the idea of solidarity or shared risk at national level.

French legislation for people with disabilities is based on the 1975 Disability Act\(^{12}\). This Act clearly shows the transition from an assistance-based paradigm to a new one based mainly on solidarity. This document lies down the guiding principles that constitute the jurisdictional framework for the public authorities, and that allow people with disabilities to attain the highest possible degree of autonomy, development and social integration. In summary, the 1975 Disability Act stipulates that early detection in children and adults of disabilities, whether motor, sensory or mental, provision of education and vocational training, and employment, guarantee of an income and social integration are a national obligation.

The only reference to Assistive Technology products in the 1975 Disability Act is in Article 53. It stipulates that “procedures and modalities for the allocation of orthoses, prostheses and appliances to people with disabilities will be progressively simplified.” The appliances mentioned are the only explicit references to technical aids and refer to parts of them (e.g., medical optics, vehicles for physically disabled, other mobility aids, etc.).

Before decentralisation, the State was the main player in policy on people with disabilities. In 1982, a number of laws on decentralisation and transfers of jurisdiction gave specific responsibilities to local governments.

As a result, the social action services of the regional General Councils are tasked with providing financial incentives for the autonomy of people with disabilities living independently. The social security agencies (e.g., CPAM) participate in financing solutions both through rates with a legal basis in the “TIPS” (Tarif Interministériel des Prestations Sanitaires) and with funding which they are not necessarily obliged by statute to provide.

The 1975 Disability Act delegates the recognition of the disability to two bodies of which there is one for each départment. They are the COTOREP and the CDES. Jurisdiction depends on the age of the disabled person. The CDES is responsible for people with disabilities up to the age of 20. The COTOREP is responsible for all aspects of dealings with people with disabilities: employment, professional education, guidance, placement, financial and social assistance.

The Law on Social Modernisation of January 17\(^{th}\), 2002\(^{13}\) has two distinct parts: health, solidarity and social security on the one hand, and the right to work on the other hand. Article 53 stipulates that “the person with a disability has the right to obtain compensation for the consequences of his or her dis-

\(^{12}\) Loi 75-534 of June 30\(^{th}\), 1975

\(^{13}\) Loi 2002-73 dite de modernisation sociale of January 17th, 2002
ability, whatever the origin and the nature of his or her impairment and whatever his or her age, and
has the right to sufficient resources to cover the essential needs of daily living.”

France stands out for the very limited contribution social security makes towards the acquisition of
technical aids for people with disabilities. The newly LPPR (“Loi sur les produits et prestations rem-
boursés” - based on the previous TIPS clearly states which products can benefit from reimbursement,
but this only partial reimbursement in some cases. The LPPR covers classical products like wheel-
chairs (manual or electric), walking sticks, beds and lifts. There is no regulation of and no legal obli-
gation to reimburse other products. The law leaves it open to the Regions to finance other aids.

3.3.2. Anti-discrimination legislation

Three basic principles govern professional insertion of people with disabilities:
− positive discrimination (the legislation imposes and enforces enterprise-based quotas for hiring
disabled people);
− freedom of choice (enterprises are free to hire people with disabilities);
− non-discrimination (approach based on the civil rights of people with disabilities).

Currently, France still largely operates on the principle of positive discrimination and an employment
obligation. However, like other countries, it is moving towards greater use of the principle of non-
discrimination logics. This is manifest in two pieces of legislation:
− Law of July 12th, 1990\(^{14}\), relating to the protection of people against discrimination due to their
health or their disability. This modifies the penal code so as to protect people with disabilities
against discrimination. It provides for patient associations of patients bring a civil case in the
courts, subject to the agreement of the person suffering discrimination.
− Law of November 16\(^{th}\), 2001\(^{15}\), relating to the fight against discrimination.

The Law of November 16\(^{th}\), 2001:
− widens the definition of discrimination beyond the prior restriction to recruitment or dismissal of
people with disabilities. The law now extends to access to training, remuneration, job reclassifi-
cation, qualifications, promotion, contract amendments and renewal of contract.
− transfers the burden of proof from the employee to the employer. Employees who consider they
have been discriminated against merely have to submit "factual elements" to the courts. Trade
unions can go to court on behalf of the employee. The employer must provide evidence that the
decision "is justified by objective elements, which are unrelated to any discrimination.

3.3.3. Assistive Technology in the workplace

The 1975 Disability Act established the Technical Commission for Vocational Guidance and Reha-
bilitation (COTOREP). There is one in each département. These commissions are responsible for
recognising the disability of adult workers and classifying them in accordance with the degree of dis-
ability (light or temporary, moderate or long-term, heavy or permanent). The COTOREP also gives a

\(^{14}\) Loi 90-602 of July 12th, 1990

\(^{15}\) Loi 2001-1066 of November 16th, 2001
view on vocational guidance of people with disabilities and the measures which will be required for their rehabilitation.

The Law of July 10th, 1987\textsuperscript{16}, requires that at least 6\% of the labour force of organisations with at least 20 employees and with an industrial or commercial focus, whether private or public, be made up of people with disabilities. There are different routes to compliance. Employers can decide to hire people with disabilities as stated in the Law, or they can decide to contribute financially each year to a fund which promotes professional insertion of the disabled, the AGEFIPH (Association nationale de Gestion du Fonds pour l’Insertion Professionnelle des Handicapés).

The primary objective of the AGEFIPH is to increase the resources dedicated to the insertion of people with disabilities in “standard” workplaces (even if there are fewer than 20 employees). Interestingly, with the exception of input devices for blind employees, Assistive Technology products are only seldom used as solutions in adapting the workplace. The AGEFIPH gives priority to the activities organisation process and therefore finances only the changes necessary to accommodate the disability of the employee.

The activities of AGEFIPH are clearly stipulated in the Law of July 10\textsuperscript{th}, 1987. It finances professional insertion, organises training and assessment for remaining in the workplace, and follows up to check whether the employee is properly integrated. Its activities do not include prevention and are restricted to the private sector.

For national public administrations where the industrial and commercial focus does not apply, the 1975 Disability Act envisages that resources will be reserved in the national budget for adapting machinery, tools and the workplace, and to make facilities accessible.

3.3.4. Future trends

The President of the French Republic stated on December 3\textsuperscript{rd}, 2002, that issues relating to disability was a priority for his mandate. Therefore, in combination with the European Year of People with Disabilities, all players are expecting a number of major legislative changes in the course of 2003. Some people even expect drastic changes in the 1975 Disability Act, but there is still no certainty about what is envisaged.

In December 2002, the French Ministry for Health, the Family and People with Disabilities set up a National Consultative Committee of People with Disabilities (CNCPH) in its new functions and composition. One of the tasks of the CNCPH is to make sure that society takes due account of the interests of people with disabilities.

An ongoing process under the Law of June 19\textsuperscript{th}, 2001,\textsuperscript{17} is deployment of Sites for Autonomous Living (SVA – Sites à la vie autonome). The Ministry of Social Affairs has designated 30 French départements which are to set up an SVA, but the objective is to have one SVA in each département. The objective of the SVAs is to facilitate access to Assistive Technology products for people with disabilities.

The approach is also seen as providing a single entry point for end-users that will allow:

\textsuperscript{16} Loi 87-517 of July 10th, 1987

\textsuperscript{17} Circulaire DGAS/PHAN/3A/n° 2001.275 of June 19th, 2001
identification of technical aids in order to really assess the needs of the person: technical aids are for all ages.

− better access to the various financial aids. This approach will allow for better co-ordination between the various financing organisations.

In 1999, CTNERHI (“Centre Technique National d’Etudes et de Recherches sur les Handicaps et les Inadaptations”) evaluated the results from four SVA pilot centres. The main conclusion of the report was that the SVA experiment should be broadened to include all France’s départements, with the constitution of a central committee in each département which should include in its membership representatives of those providing financial aid and of medico-social circles with decision-making powers over the provision of technical aids.

3.4. Germany

3.4.1. Structure of the legislation

A fundamental facet of the German political system – and the health care system specifically – is the sharing of decision-making powers between the Länder and the Federal government, with further powers governing statutory insurance schemes being delegated to nongovernmental corporatist bodies.

At the Federal level, the Federal Ministry for Health and the Parliament are the key players. The Ministry of Health has a division that deals with health care and statutory health insurance. But health is not an exclusively Federal responsibility. For example, social benefits, measures against diseases which are dangerous to public safety, certification of physicians and other health professionals, and of pharmaceuticals and drugs are covered by the legislation on the Länder. Implicitly, all other aspects of (public) health are therefore the responsibility of the Länder.

Corporatism has several important aspects. It hands over certain rights of the state as defined by law to corporatist self-governed institutions. Membership of the corporatist institutions is mandatory. These institutions can raise their own financial resources under the auspices of and subject to regulation by the state. The corporatist institutions have the right and obligation to negotiate and sign contracts with other corporatist institutions and to finance or deliver services to their members.

On the provider side, corporatism is represented in the statutory health insurance scheme by the legal associations representing physicians contracted with the statutory scheme. On the purchase side, it is represented by the health insurance funds. The latter are autonomous organisations organised on a Regional and/or Federal basis. In mid-1999, there were 453 statutory sickness funds. All funds have non-profit status and are self-governing, with leadership elected by the membership. If required, sickness funds can consult their Medical Advisory Board (MDS – Medizinischer Dienst der Spitzenverbände der Krankenkassen) which is a joint institution of all of them.

The 1962 Federal Social Assistance Act\(^\text{18}\) regulates social assistance. It makes it compulsory to offer integration assistance to people with temporary physical, mental or psychological impairment or disability. This assistance should aim to eliminate or alleviate the consequences of a disability, and to try

\(^{18}\) Bundessozialhilfegesetz / BSHG 1962
and reintegrate this person into the workplace. Technical aids can be considered in instances where they are not provided by the sickness funds.

All statutory social insurance schemes are regulated by the Social Law Code\(^\text{19}\). This is the cornerstone of social insurance legislation. SGB I defines the general rights and responsibilities of the insured and Chapter 1 defines the basic principles of statutory health insurance. Long-term care is also regulated under the authority of the Federal Ministry of Health through Social Law Code Book XI (SGB XI).

SGB IX, which deals with inclusion and rehabilitation of people with disabilities entered in force on July 1\(^\text{st}\), 2001. It simplified what had been an extremely complex environment by grouping the main contents of SGB I, IV and X. Central to SGB IX is the concept that rather than concentrating on the welfare and care for people with disabilities, the emphasis should be on their intrinsic inclusion in society by setting aside obstacles that might compromise their chances of equal treatment. Another essential element of SGB IX consists is the obligation for those bearing the cost of rehabilitation (“Rehabilitationsträger”) to offer integrated services.

The Severely Disabled Persons Act\(^\text{20}\) specifically aims at promoting the participation of severely disabled people in society. This Law has been inserted into Part 2 of the SGB IX. Its objective is to eliminate the disadvantages and social exclusion of severely disabled people.

The SGB IX distinguishes between different activity types\(^\text{21}\). These types are (1) medical rehabilitation, (2) professional life, (3) leisure and (4) life in society. The cost for each category is borne by different entities\(^\text{22}\):

- the sickness funds for groups (1) and (3)
- the Federal employment offices (“Bundesanstalt für Arbeit”) for groups (2) and (3)
- the accident insurers for all groups
- pension insurance for groups (1) to (3)
- war victims insurance for groups (1) to (4)
- public assistance for young people for groups (1), (2) and (4)
- social welfare for groups (1), (2) and (4).

The different entities carry out their tasks independently and under their own responsibility.

### 3.4.2. Anti-discrimination legislation

The Law on Equal Treatment for People with Disabilities\(^\text{23}\) came into force on May 1\(^\text{st}\), 2002, after a decade-long battle by associations of people with disabilities belonging to the umbrella group, Initiativkreis Gleichstellung Behindelter.

\(^{19}\) SGB – Sozialgesetzbuch

\(^{20}\) Schwerbehindertenrecht (SGB IX Teil 2)

\(^{21}\) SGB IX - §5

\(^{22}\) SGB IX - §6

\(^{23}\) Gesetz zur Gleichstellung behinderter Menschen, 2002
Under this law, the Federal government aims to achieve a barrier-free environment for people with disabilities, and to provide a firm footing in law for equal treatment. The core aspect of this law is the removal of all barriers for people with disabilities, as well as unrestricted access to real-life situations. This implies removing spatial barriers for wheelchair users, more visual contrast in design in the interests of the visually impaired people and wider use of sign language or appropriate electronic devices for the deaf.

The next step should be a complete anti-discrimination law. The current government had been expected to put one forward, but that finally has been postponed.

3.4.3. Legislation for Assistive technology in the workplace

Social Law Code Book III (SGB III) came into effect on January 1st, 1998, and replaced the previous Law on promotion of employment. The new Law encompasses measures and activities for promoting employment of people with disabilities, including vocational rehabilitation measures.

Chapters 4, 5 and 6 of SGB III deal in depth with the rights of the three main groups: the employee, the employer and the intermediary (the health insurer) respectively. Employees with disabilities have a right to special aids that can including carrying the cost of non-orthopaedic technical aids. Employers are eligible for subsidies if the workplace needs to be adapted to handle an employee’s disability. However, this is only possible when the measure is necessary to ensure or secure long-term insertion of the employee with a disability.

The Severely Disabled Persons Act (see 3.4.1) sets quotas for employment of the severely disabled by private or public employers with at least 20 employees. The standard quota is 5% of the workforce but it has been 6% in some cases since January 1st, 2003. An employer who fails to comply must pay a compensatory levy (“Ausgleichsabgabe”).

- At local level, labour exchanges deal with vocational rehabilitation in accordance with the provisions of SGB III on employment promotion. The tasks of the employment offices are set out in SGB IX. These apply especially to severely disabled persons advice on employment and mediation issues
- professional advice and mediation on vocational training
- promotion of employment in accordance with SGB III
- equal treatment.

In addition to the employment offices and still in accordance with SGB IX, the integration offices play a very important role. Their responsibilities are:
- collection and utilisation of the compensatory levy (“Ausgleichsabgabe”);

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24 Arbeitsförderungsgesetz (AFG)
25 § 114 SGB III
26 § 237 SGB III
27 § 71 SGB IX
28 Die Arbeitsämter, i.e. local representations of the federal employment agency, the Bundesanstalt für Arbeit
29 Die Integrationsämter
Integration offices can call on medical and psychological experts for advice and on technical experts, who can help with the adaptation of the workplace. Technical experts can advise people with disabilities and employers, can develop and cost proposals for workplace adaptation and monitor the adaptation process. Funding generally comes directly through the compensatory levy fund.

3.4.4. Future trends

The Federal government is looking for new directions in disability policy. It has already moved some way towards no longer considering people with disabilities as welfare cases, but rather as individuals with citizenship rights. A major step was taken with the introduction of SGB IX, but this has not solved all the problems. It only creates, which encourages greater societal inclusion of people with disabilities. The Federal government plans to carry out an evaluation in 2004 which will then be the cornerstone for further developments.

Discrimination against people with disabilities will not be fully outlawed until comprehensive antidiscrimination legislation for people is passed. Associations dealing with people with disabilities are pushing for this and it had been expected that the current government would put such legislation forward, but it has finally been postponed.

3.5. Italy

3.5.1. Structure of the legislation

There are two distinct legislative systems in Italy: a national and a Regional level. The national level set the general framework. The Regional level supplements this with administrative secondary legislation for each of the 20 regions. Italian legislation for the disabled is very fragmented, both at national and Regional levels. Laws exist for very specific target groups as well as per Region. The main laws dealing with classification of the disabled (blind, deaf, physically and mentally disabled) and the procurement of assistive devices are:

- Law no. 502 of December 30th, 1992\(^{30}\): the fundamental objectives are prevention, care and rehabilitation, provision of general guidelines for the health care system and definition of the level of assistance with which citizens will be supplied;
- Law no. 833 of December 23rd, 1978\(^{31}\): the fundamental objectives are raising awareness of what health care services are available, prevention of disease and injuries in all environments, rehabilitation of the disabled and promotion of general well being;
- Law no. 104 of February 5th, 1992\(^{32}\): this law guarantees full respect for human dignity, the autonomy of disabled persons, the promotion of the total integration of disabled persons in the

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\(^{30}\) Riordino della disciplina in materia sanitaria, a norma dell’articolo 1 della legge 23 ottobre 1992, n.421

\(^{31}\) Istituzione del Servizio Sanitario Nazionale
family, in schools, in the workplace, in society, and provision of means to eliminate the exclusion of the disabled;

- Law no. 284 August 28th, 1997\(^{33}\): the fundamental objectives are the prevention and rehabilitation of the blind, and the integration of blind people into the social and working environment (e.g. with the aid of established associations for the blind such as UIC (Unione Italiana per Ciechi));

- Law no. 68 of March 12th, 1999\(^{34}\): promotion of the inclusion and integration of disabled people into the workplace through with the help of support services;

- Ministerial Decree no. 332 of August 28th, 1999\(^{35}\): this decree regulates the supply of prosthetic assistance in the National Health care System;

- Law no. 328 of the November 8th, 2000\(^{36}\): this law ensures provision of integrated social services for individuals and families, promotes activities which will guarantee quality of life and equal opportunity, and eliminate or reduce the impact of the disability.

The Italian National Health System, the SSN (Servizio Sanitario Nazionale) has three distinctive levels; national, Regional, and local.

The **national authorities** are responsible for establishing basic principles and general objectives. The Ministry of Health’s National Health care Plan\(^{37}\), outlines fundamental objectives in the fields of prevention, therapy and rehabilitation. It also sets out minimum levels of health care provision and provides the guidelines on the organisation, delivery and financing of health care services.

The **Regional governments**, through the Regional Health Departments, are responsible for ensuring the delivery of a benefits package through the network of local health entities (ASLs), public and private accredited hospitals. The 20 Italian Regions organise the delivery of health care services through activities such as Regional health care plans. They determine the number of ASLs, establish operational guidelines, decide on the level of funds to be transferred to ASLs, determine the level of reimbursement to private organisations accredited to provide services to the SSN, and exercise control over the quality of such services.

The ASLs are territorially based organisations responsible for assessing needs and providing care. They are responsible for delivering the benefits package through the direct provision of services or by AOs and private accredited providers. IRCCS \(^{38}\) (Research hospitals) are also part of the local health care unit, but are financed directly by the Ministry of Health. In addition to receiving funds for research, they also receive a global budget which covers in-patient and out-patient care and specific health care services (e.g. transplants).

\(32\) Legge-quadro per l’assistenza, l’integrazione sociale e i diritti delle persone handicappate

\(33\) Norme a favore dei ciechi pluriminorati

\(34\) Norme per il Diritto al Lavoro dei Disabili

\(35\) Prescrizioni tecniche necessarie a garantire l’accessibilità, l’adattabilità e la visitabilità degli edifici privati e di edilizia residenziale pubblica sovvenzionata e agevolata, ai fini del superamento e dell’eliminazione delle barriere architettoniche

\(36\) Legge quadro per la realizzazione del sistema integrato di interventi e servizi sociali

\(37\) Piano Sanitario Nazionale

\(38\) Istituto di Ricovero e Cura a Carattere Scientifico
3.5.2. Anti-discrimination legislation

The Italian legislative framework governing anti-discrimination is vast. There is no single law on discrimination, but there are anti-discrimination provisions which contribute to equal treatment for the disabled in a wide range of legislation.

The Law on assistance to, social integration and rights of disabled people[^39] is one of the key pieces of legislation. This law:

- guarantees the full respect of the human rights, the right to freedom and to independence of disabled people and promotes full integration within families, schools, in the workplace and in society;
- removes conditions which impede the development of human beings, the achievement of as much autonomy as possible and the participation of the disabled person in the community, as well as the realisation of civil, political, and property rights;
- pursues the functional and social recovery of the person affected by a decrease in physical, psychological and sensory ability and ensures that services will be provided for the prevention of disability;
- makes available activities aimed at overcoming barriers as well as the social exclusion of disabled people;
- includes prosthetics, orthoses and assistive devices to help people with physical and sensory disabilities in the **Nomenclatore Tariffario delle Protesi e degli Ausili.** (National Register of Prostheses and Aids.);
- promotes the integration of disabled people in private and public workplaces by eliminating barriers for the physically disabled.

3.5.3. Legislation for Assistive Technology in the workplace

Italy currently has various laws governing disabled people in the workplace in such areas as the adaptation of the working environment, elimination of architectural barriers, remuneration, compulsory employment and others. These laws enable the workplace to be an environment which disabled people are able to access without being constrained by “architectural barriers” defined in Art. 2 of Law no. 236, 1989[^40] as:

- those obstacles that limit and obstruct the mobility of citizens (thus not only disabled people), primarily those who have reduced or no capacity of movement;
- those obstacles that impede the use of facilities or services;
- the absence of technical devices which impedes those who have sensory disabilities (blind, deaf or mute) from finding their way or recognizing dangerous objects and areas.

The following are the main laws relating to the structural re-engineering of both private and public workplaces, and detailing the norms governing the construction, renovation and compensation, and guidelines to render the workplace accessible to disabled people:

*Law on Regulations for the right of disabled people to work[^40]*: in 1999, Italy enacted a new law (no. 68/1999) governing the mandatory placement of disabled people in the workplace. This applies to

[^39]: Law no. 104 of February 5th, 1992: Legge-quadro per l’assistenza, l’integrazione sociale e i diritti delle persone handicappate

[^40]: Law no.68 of March 12th, 1999, op.cit.
employers with as few as 15 employees. The law acknowledges that the right of the disabled to work is part of the exercise of their right to social inclusion. Companies are required to pay specific attention to this sector by actually employing disabled people.

The law is closely correlated with the assessment of the residual working capacity of disabled people by combining positive action and solutions to problems within a working environment. The law defines the following:

- the obligation to employ disabled people;
- the required quota of disabled employees for every workplace;
- the aim of inclusion of the disabled in the workplace;
- those entities excluded from the obligation to employ the disabled (e.g. public airline carriers, sea transportation companies);
- services for the inclusion of the disabled in the workplace;
- incentives to employment of the disabled.

### 3.5.4. Future trends

The following paragraphs provide a brief description of future trends which may have a bearing on the SSN and people with disabilities:

- the ability to enact legislation at a Regional level may have disadvantages for the future of the health care system because decentralised legislation could lead to varying levels of health care service. As a result, people may favour health care services being provided in a particular Region to that offered in another;
- a steady increase in the number of elderly in future will mean a larger amount of funds will have to be devoted to this group. As funds will remain relatively constant, other groups, such as the disabled, may in turn receive less support;
- an increase in the elderly population has meant that more emphasis is being placed on providing health care services in the home and in nursing homes and this will have an increased bearing on the demand for private health care services;
- the Government’s Action Programme on policies for the disabled 2000-2003, which was approved on July 28th, 2000, has emphasised the need for proposals for new legislative and administrative initiatives and future areas of work. These will favour improved integration and better quality of life for disabled persons.
- the objective of the Action Programme is to translate fully into practice law no.104/92 and the principles which it is inspired. There are four fundamental principles which the Government wants to respect and promote in activity relating to the disabled:
  - non-discrimination;
  - equal opportunities;
  - action towards people with severe disabilities;
  - positive integration.
- access to information systems: the government has introduced draft legislation to discourage the virtual barriers that disabled people face in accessing information technology. The law is designed to make it easier for disabled people to accessing Innovation and Communication Technology (ICT). One of the primary objectives is to render Internet sites accessible (whereas only 3% are meet standards for the disabled at present) and thus make telematics accessible;
a lowering of the minimum age for entry into primary schools will increase the number of schoolchildren. The relevant decree (no. 114/99) states that there may be no more than twenty five students per classroom for every disabled student and twenty students for every classroom with two disabled students. The increase in the number of students is likely to have an adverse effect on the number of students sustainable per classroom for every disabled student.

3.6. Netherlands

3.6.1. Structure of the legislation

As in most western countries, care for the disabled in the Netherlands falls under both the health care system and the social welfare system.

The Dutch health care system makes a distinction between what is seen as basic medical care and the exceptional costs of long time care and high-cost treatment.

The health system for basic care in the Netherlands is governed by the Health Insurance Act. In the Netherlands sickness insurance is organised under public and private insurance systems. Income dictates which applies. People with an income beneath a certain level are covered under the public system and covered by the sickness funds. A similar system exists for civil servants and the military.

People on higher incomes, which in the 2002 year meant income above €30,700 for salaried employees and €19,650 for the self-employed must subscribe to private insurance. Although these are private companies, the social security legislation obliges those companies to accept all individuals who apply for subscription. In addition, the law establishes a ‘basic package’ which every private insurance company must cover. Additional private insurance of risks and costs is possible.

As of the age of 65 years, people not insured through the public Sickness funds, can enter this system if their income is less than €19,550 a year. In 2001 about 10.29 million people were covered through the public systems’ sickness funds and 5.45 million through private insurance.

Most Assistive Technology devices fall under the Health Insurance Act and are as such covered through the health care system. The procurement of assistive devices is regulated by a specific regulation on assistive aids. This regulation is revised every year by the Ministry of Health. The application of this system is in the hands of the Health Care Insurers (private or public). It is they who ultimately decide if and how a disabled person is entitled to get a specific assistive device. The decision can be appealed.

The cost of medical and nursing care for in-patients and people residing in institutions (which are regarded as the exceptional costs of long time care and high-cost treatment) is by the General Law on

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41 Ziekenfondswet – ZFW
42 Zorgverzekeraar
43 Regeling Hulpmiddelen 1996
Exceptional Costs of Sickness.\textsuperscript{44} This law also regulates provision of assistive devices (including wheelchairs, for example) to those in-patients or residents and organises home care services.

The concept of a personal budget was introduced a few years ago. People can get a certain amount of money to buy health services. They are, within certain limits, free to spend this amount of money to “buy” the needed care services. All residents are automatically covered by this law and can apply for the services it offers.

The Netherlands has a specific Law on Provisions for the Disabled.\textsuperscript{45}

This Law deals specifically with people with disabilities and organises and regulates adaptation at home, procurement of wheelchairs, other means of mobility and access to public transportation services. It only applies to disabled people residing at home and is primarily meant to assure integration in society.

This system comes under the jurisdiction of the Ministry of Social Affairs and Employment. The actual procurement of aids for people with disabilities has been devolved to local level, in this case the municipalities.

A national umbrella agreement negotiated between the Ministry of Social Affairs, disability associations and the Association of Dutch Municipalities helps guarantee a certain level of uniformity in the application of the regulation on aids to disabled people by the municipalities.\textsuperscript{46} The agreement is not binding, but has strong moral force. Nevertheless, not all municipalities are completely applying this convention yet.\textsuperscript{47}

In general, municipalities may ask for a personal contribution from the beneficiary if their financial situation allows. Wheelchairs are an exception. They are free.

The Dutch social welfare system provides financial support to help the disabled with special costs. This is regulated through the Law on Special Assistance \textsuperscript{48}.

This system is also administered via the municipalities. In principle all kind of costs can be accepted under this system, including medical costs, the expenses of daily living, heating and assistive devices. It applies to over 21’s. The full cost is met for those who have high costs and low income, (i.e. an income below what is regarded as the minimum. Those on higher incomes may have to pay part of the cost. A procedure of appeal exists. Decisions can be appealed.

Specific legislation covers occupational integration of people with disabilities. The Law on the Reintegration of Disabled Workers\textsuperscript{49} regulates financial subsidies for employers who (re)integrate disabled workers into their enterprises and covers assistance for these workers.

There is a separate system of financial assistance for disabled children who live at home.\textsuperscript{50}

\textsuperscript{44} Algemene wet bijzondere ziektekosten – AWBZ
\textsuperscript{45} Wet voorzieningen gehandicapten – WVG
\textsuperscript{46} Landelijk WVG Protocol, March 25\textsuperscript{46}, 2002
\textsuperscript{47} Gehandicaptenraad Nederland
\textsuperscript{48} Algemene wet bijzondere bijstand - ABW
\textsuperscript{49} Wet reintegratie arbeidsgehandicapten - REA
The sick, disabled or elderly can take a tax deduction of special impairment-related costs arising from illness or disability and not refunded under any of these schemes.

3.6.2. Anti-discrimination legislation

In the Netherlands a General Law on Equal Treatment\footnote{Algemene wet gelijke behandeling - AWGB}\footnote{Tegemoetkoming onderhoudskosten thuiswonende gehandicapte kinderen – TOG (About €194 per quarter per year in 2002)} prohibits discrimination against groups of people. This Law established a specific Committee on equal treatment to which individuals can complain. However, this Committee does not deal with specific discrimination on the grounds of disability. As such there is no quota system meaning companies in the Netherlands are not required to have a minimum percentage of disabled workers in their labour force.

A specific law deals with discrimination against the disabled and chronically sick\footnote{Wet gelijke behandeling voor mensen met een handicap of chronisch Zieken - WGBG/CZ  1 April 2003.}. This Law will apply from December 1st, 2003. This \textbf{Law on Equal Treatment for the Disabled or Chronically Sick} protects people with disabilities against discrimination. The Law covers specific areas such as education, labour and public transport. It requires adaptation of busses to make them accessible for the disabled by 2010.

Besides regulating access to education and work (labour), this law also deals with the right to accessibility and adaptation of the educational or work environment. Concerning these adaptations, this Law introduces criteria of proportionality\footnote{Onevenredige belastbaarheid}. The cost of any adaptation must be reasonable when balanced against the reimbursement provisions and the practicalities.

The employer is legally obliged to adapt the workplace and to adapt the accessibility of the workplace to people with disabilities. Employers may not distinguish between the disabled and those who are not disabled people in terms and conditions, i.e. in the job offer, candidate selection, hiring and firing, promotion and in pay. Health and safety are the only grounds on which the disabled can be treated differently.

3.6.3. Legislation for Assistive Technology in the workplace

\textbf{REGULATION ON DISABILITY AND THE WORKPLACE:}

As indicated above, different Laws apply to the situation of people with disabilities in the work environment.

In the case of a disability acquired as a result of sickness or accident, people can benefit from the special rules on (re)integration in under the \textbf{Law on the Reintegration of Disabled Workers}\footnote{Wet (re)integratie arbeidsgehandicapten - Wet REA}. It is not imperative that he have worked before. If a person is disabled, willing to work and able to do so, then assistance is available under this law, which also covers education of the disabled.
The disabled receive direct refunds of some personal costs, like the cost of travel to work by taxi, personal car or public transport, are refunded to the disabled worker directly. This reimbursement is only available to those whose personal income is below some €29,000 (2002 figure). This law also covers recovery of other costs, such as special communication devices for the deaf.

If it is not possible for a disabled person to return to their original workplace, then a personal reintegration budget\textsuperscript{55} is available. This allowance of up to €3,630 annually is for help with finding a suitable alternative work environment and can be used to meet the cost of working through an intermediary, for advice, assistance or re-training.

A €2,042 social security tax abatement (rising to €3,402 for young people) is available for one to three years to employers contracting or re-hiring a disabled person. In case of reintegration, a reintegration plan must be drawn up.\textsuperscript{56} The employer is also not liable for sick pay for the first five years.

Employers prepared to hire a person with a disability are allowed to apply a trial period of 6 months. During that time the disabled person keeps his personal allowance and the employer has nothing to pay. If the disabled person is not able to work at the same level worker who is not disabled, the employer can obtain a special dispensation to pay the disabled worker less.

The financial incentives for the employer are meant to cover the extra costs of hiring or reintegrating disabled workers. However if the actual costs are higher than the subsidies, then the employer can get an additional subsidy. This can occur when the workplace has to be especially adapted.

In a study on the application of this regulation, the Dutch Social and Cultural Planning Office\textsuperscript{57} has concluded that the system is not a great success. Only 39% of people with disabilities in the 15-64 age group are in paid work. This employment rate for this age group is 61%. Since 2001 over a period of one year and a half only 17,000 people with disabilities were integrated into the workplace under this system.

Special subsidies are also available for people with disabilities who take up self-employment.

There is a tax incentive for disabled people who benefit from an allowance and get paid employment. They get a tax deduction (net) of €1,361 for the first year, and of €454 for the second and third years.

A specific regulation covers the sheltered workplaces. This is outside the scope of this study. Suffice it to say that since 2002 a special system of integration in a regular work environment has been introduced. If a commission accepts a candidate’s application (based on an impartial investigation at municipal level), then the candidate can enter a special programme. At first the disabled person will be prepared for the future work environment through special training. An assistant will accompany the disabled worker to the new workplace and may provide assistance for up to 15% of the work-time. In principle, this is possible for as long as needed, even a period of years.

\textsuperscript{55} Persoonsgebonden reintegratiebudget – PRB
\textsuperscript{56} Wet verbetering Poortwachter
\textsuperscript{57} Sociaal en Cultureel Planbureau – Rapportage Gehandicapten 2002
COSTS OF ADAPTATION OF THE WORKPLACE

The costs of adapting the workplace, providing equipment, organisational changes or special training can be refunded to the employer if agreed by a special service established for this. These costs can be refunded if they exceed the amount of the social security tax abatement mentioned in the previous section and provided the disabled person is hired for a period of at least 6 months.

The request for assistive devices and/or specific adaptations of the workplace can be made by the disabled worker or by the enterprise that is (re)hiring the person concerned.

Before a request for funding for workplace adaptations or equipment can be submitted, the employee will have to be recognised as eligible on the basis of a medical examination by an enterprise or UWV doctor.59

The request for the devices or/and the adaptations with relation to the workplace has to be made by the employer. It is the UWV which decides based on costs and benefits. Payment is made to the employer, so that a disabled worker who changes jobs cannot transfer special equipment paid for in this way. Some more personal devices are reimbursed for direct and are transferable.

This system has been deemed to be rather bureaucratic and slow, with the overall procedure taking more than six months in some cases. Changes are under way.

3.6.4. Future trends

Deregulation is under way which will give care insurers more freedom in organising supply and procurement of Assistive Technology devices.60 The Care Insurers have a legal obligation to procure an “at all times appropriate functioning assistive device” taking into account the specific needs of the disabled person. Providing the care insurers respect the basic regulation, they are having more and more autonomy in deciding how to do this.

The Ministry of Health has concluded an agreement with the Dutch Care Insurers Association61 which commits the Care Insurers to produce assistive devices more effectively, provide end-users with better information, standardise assistive devices, improve monitoring of prescribing behaviour and introduce more effective distribution channels. This agreement also offers them the possibility of experimenting in the procurement of assistive devices.62

One of these experiments is the product-related budget which should be seen in the context of the overall trend to give more influence to the end-user and to more from a care-driven system to a demand-driven system. The product-related budget is meant to increase the possibilities for choice. It

59 Uitvoering Werknemersverzekeringen (UVW is a kind of semi-public insurance company where employers have to insure their employees.)
60 Zorgverzekeraars Nederland
61 CVZ - College voor Zorgverzekeringen
gives the care user the possibility of buying and choosing the device personally. At this moment only a few of those experiments are running.\textsuperscript{63} They will be evaluated in the near future.

A general trend in The Netherlands is to take action to control expenditure on health in general and on assistive devices in particular. The overall expenditure on assistive aids increased by more than 15\% per year\textsuperscript{64} in the period 1995-1999, for example.

The increasing role of the care insurers in the organisation of health care and the trend towards ensuring they take financial responsibility for their decision has to be seen in that context. There is also a general trend to attempt to increase the quality and effectiveness of the aids provided.

3.7. Spain

3.7.1. Structure of the legislation

The basic principles on the social and legal treatment of people with disabilities are to be found in the Spanish Constitution. The Constitution of 1978 states in its Article 49 that all public authorities shall pursue a policy of provision, treatment, rehabilitation and integration of people with disabilities. Public Authorities will ensure that people with disabilities can enjoy their fundamental rights as guaranteed to all citizens.

Starting from these principles, the Law on the Social Integration of the Disabled was introduced in 1982.\textsuperscript{65}

This Law establishes a general framework and obliges all Public Authorities to provide the disable with everything they need to enable them to exercise their right to social and educational integration as well as integration in the workplace. This Law determines the principles on which recognition of a person as disabled are based. The procedure for recognition is established in a Royal Decree.\textsuperscript{66}

Also relevant to the field of public health is the basic General Law on Social Security\textsuperscript{67}. This Law establishes the social security system for the whole of Spain and regulates general principles on provision of medical and pharmaceutical assistance.

The General Law on Health\textsuperscript{68} established the National Health System (Sistema Nacional de Salud - SNS). It extends equal access to health provision to all Spaniards without any distinction. The Law differentiates between basic, additional and complementary services. The SNS is publicly funded (at first through the social security contributions, later fully by tax income) Basic services are totally free

\textsuperscript{63} Three experiments of which one on computer adaptations for visual impaired – CVZ Nederland.
\textsuperscript{64} Zorgnota 2001 - VWS
\textsuperscript{65} Ley 13/1982, de 7 de Abril, de Integración Social de los Minusvalidos – LISMI
\textsuperscript{66} Real Decreto 1971/1999, de 23 de diciembre, de procedimiento para el reconocimiento, declaración y calificación del grado de minusvalía
\textsuperscript{67} Ley General de Seguridad Social, - texto refundido por Decreto 2065/1974 de 30 de mayo
\textsuperscript{68} Ley General de Sanidad, 14/1986 de 25 de abril
of charge. Partial user payment may be needed for additional and complementary services, such as pharmaceutical products and some orthoprostheses.

A Royal Decree\(^69\) regulates the different types of medical services covered by the SNS. It distinguishes between primary care, specialised care, pharmaceutical aids, complementary services and health information and documentation services.

The provision of medical devices (including Assistive Technology) is considered to be a complementary service. This means the principle of user financial participation is applicable, but most devices are fully financed by the system.

Spain’s system of health and social services has been evolving. Health and social systems used to be purely national matters. However, the Spanish Constitution of 1978 established 17 Autonomous Regions (Comunidades Autonomas) and conferred relatively important powers on them in the field of social services and public health. The powers of the national health system, the Social Security system (partially) and over Social Services were progressively transferred to the different Autonomous Regions over a rather long period of time, i.e. between 1978 and 2002. During this transitional phase, the gaps were filled by two national institutions (INSALUD and IMSERSO\(^70\)).

The national authorities still make the basic rules and provide the budget transfer to the Autonomous Regions to operate the basic health care and social systems. Decisions on whether to expand those systems are a matter for the Autonomous Regions, but they must find the money for any expansion themselves. This can lead to differences between Regions which can result in inequality for citizens in areas other than basic care (to which they have a statutory right). A national co-ordination office was set up in 1987 to minimise this phenomenon,\(^71\) but it has no legal powers.

Currently, all Autonomous Regions have their own laws on social services and health care. For public health the basis is still common, but there appear to be sometimes significant differences in provision of services and products within the system and financial conditions for patients.\(^72\)

### 3.7.2. Anti-discrimination legislation

The Spanish Constitution states in Article 14 that all people are equal and that no personal characteristic may lead to any discrimination. Disability, as such, is explicitly mentioned in these personal characteristics.

Further, Article 49 of the Spanish Constitution requires the public authorities to enable people with disabilities to exercise their fundamental rights. The article refers to policy of provision, treatment, rehabilitation and integration for people with physical, sensory or mental disabilities.

To put this equality on a firm footing, Spain has passed a Law on Social Integration of People with Disabilities.\(^73\)

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\(^69\) Real decreto 63/1995, de 20 de enero, de ordenacion de las prestaciones sanitarias del Sistema Nacional de Salud

\(^70\) INSALUD: Instituto Nacional de Salud; IMSERSO: Instituto de Migraciones y Servicios Sociales

\(^71\) Consejo Interterritorial del Sistema Nacional de Salud

\(^72\) This statement was made in various interviews with disabled people and their representative organisations

\(^73\) Ley 13/1982 de 7 de abril de Integración Social de los Menosvalidos
At this stage, there is no specific anti-discrimination legislation but discrimination is a crime under the penal code.

### 3.7.3. Legislation for Assistive Technology in the workplace

**REGULATION ON DISABILITY AND THE WORKPLACE:**

Different Laws apply to the situation of people with disabilities in the work environment:

- The 1982 **Law on Social Integration of People with Disabilities** (LISMI) Chapter 7 of this law deals with integration in the labour market. Article 32 regulates functional rehabilitation, professional guidance and training, re-education and re-adaptation in order to be able to (re-)enter the labour market. There is also a network of protected workshops for people with disabilities.\(^{74}\) In practice, however, it appears that the authorities have set up a system of income support for people with disabilities, but that they do not regard real integration in society as a priority.\(^{75}\)

- The **Law on Prevention of Risk at Work**\(^{76}\) established the principle of adaptation of the workplace to the worker’s personal situation, both in terms of workplace accommodation and organisation of the work itself.

- Royal Decree on compliance with the LISMI regulating selective employment and promotion of employment for the disabled.\(^{77-78}\)

  This regulation makes post-rehabilitation reintegration compulsory in the case of a worker disabled as the result of an accident. However there is no penalty for non-compliance.

  Disabled people can obtain an allowance for transportation costs outside their home if they are not able to use public transport. This allowance is €37.59 per month (€451.12 per year) and is claimed by more than 33% of the disabled.

  A system of assisted work (empleo con apoyo) is being developed. This system gives personal assistance to disabled people inside as well as outside the workplace to enable them to work in ordinary companies. A general framework exists and some experiments are running. Some Autonomous Regions seem to have gone further on this than others.

  In addition, there is a system\(^{79}\) to encourage self-employment (empleo autonomo) for people with disabilities, so that disabled people can set up their own business and create their own work environment. It consists out of a subsidy of 100% of the cost of technical assistance for preparing for self-employment, such as drawing up a business plan and organising a feasibility study.

  There are subsidies towards the cost of borrowing and a subsidy of €3,906.58 towards investment costs.

\(^{74}\) Real Decreto 1368/1985 de 17 julio, por el que se regula la relacion laboral de caracter especial de los minusvalidos que trabajan en los centros especiales de empleo – changed by R.D. 427/1999 de 12 marzo.

\(^{75}\) Definiciones de discapacidad en Espana: Una analisís de la normative y la legislacion mas relevante, SID, 2002. p 12.

\(^{76}\) Ley de Prevencion de Riesgos Laborales 31/1995

\(^{77}\) Real Decreto 1451/1983 de 11 de Mayo por el que en cumplimiento de lo previsto en la Ley 13/1982 de 7 de abril, se regula el empleo selectivo y las medidas de fomento del empleo para los trabajadores minusvalidos

\(^{78}\) Amended by Royal Decree 4/1999

\(^{79}\) Regulated in Royal Decree 620/1981
The law on Social Integration and the Royal Decree 27/2000\textsuperscript{80} establish \textit{positive discrimination} in favour of people with disabilities. If a private enterprise has more than 50 workers, at least 2\% of its workforce must be people with physical disabilities. Since 2000, enterprises have been able to choose alternative ways as contracting with sheltered employment centres\textsuperscript{81}, or making donations to schemes designed to promote occupational integration people with disabilities.

For the public serve, the minimum quota is 3\%.

In reality neither private enterprise nor the public service comply. Organisations representing people with disabilities are very critical of this and have been pushing the authorities to respect the Law themselves and to strengthen labour inspection of enterprises to ensure they observe the rules. They appear to have made some headway and more and more enterprises are becoming aware of their obligation, which they generally fulfil by using the alternative of subcontracting to social employment centres or making a donation to fund promotion of employment for the disabled.

The difficulties in enforcing the quota have led the Ministry of Labour and Social Affairs (Ministerio de Trabajo y Asuntos Sociales) and the Spanish Committee of Representatives of People with Disabilities (CERMI) reached an agreement to elaborate a plan of urgent for promotion of inclusion of people with disabilities in the labour market.

Other incentives to hiring people with disabilities are:

\begin{itemize}
  \item a 50\% abatement of social security contributions for workers being re-integrated after being disabled by an accident;
  \item a one-time subsidy of €3,907 for employing someone with disabilities (on permanent contract) and a 70-90\% social security abatement;
  \item a one time deduction from corporate tax of €4,808;
  \item a 50\% abatement of social security contributions for special contracts (training and teaching practice).
\end{itemize}

\textbf{COSTS OF ADAPTATION OF THE WORKPLACE}

The Ministry of Labour and Social affairs grants a onetime subsidy of up to €901 for adapting the workplace when a disabled person is hired on permanent contract. The subsidy rises to €1,803 when the job is in a centre for special employment for a worker recognised as a disabled person and registered with the Labour Office.

In 2001 the National Employment Institute\textsuperscript{82} adapted workplaces for 273 people at a cost of €246,136. A study by IMSERSO and CEAPAT\textsuperscript{83} shows that the average real cost of the adaptations is about €1,800 €. In 60\% of the cases the cost was below the level of the subsidy (€901).

ONCE \textsuperscript{84} pays the full cost of adapting workplaces for the visually impaired if they are ONCE affiliate, which means their vision must be 1/10 at most. It must be said this only applies to its affiliates.

\textsuperscript{80} Real Decreto 27/2000 de 14 enero por el que se establecen las medidas alternativas de carácter excepcional al cumplimiento de la cuota de reserva del 2 por 100 a favor de los trabajadores discapacitados en las empresas de 50 o más trabajadores

\textsuperscript{81} Centros Especiales de empleo

\textsuperscript{82} Instituto Nacional del Empleo

\textsuperscript{83} Centro Estatal de Autonomía Personal y Ayudas Técnicas

\textsuperscript{84} Organizacion National de los Ciegos de España
(must have maximum assisted vision of 1/10). In 2002, ONCE spent €2.47 million on 906 workplace alterations.

3.7.4. Future trends

A new list of Assistive Technology (medical devices) types is being drawn up. Some major changes are expected which should improve the variety of assistive devices covered by the health care system. It is expected, for example, that financing of aluminium wheelchairs and carbon fibre and titanium products will be included and that free audiphones will be available to everyone under an age between 21 and 23 rather than those under 17.

In order to create more uniformity between the different catalogues from the different Autonomous Communities, CEAPAT is pursuing introduction of a common ISO9999 Classification of assistive devices (non-medical). Negotiations with the different authorities are under way.

In addition, a new law on the National Health System has been put forward by the Minister of Health.85 This Law should improve the National Health System. Its objectives are to improve health status, guarantee equity, quality and participation for all in the health care system and establish greater cohesion.

3.8. Sweden

3.8.1. Structure of the legislation

Swedish legislation on the rights of people with disabilities is characterized by an ambition to integrate disability issues in their proper context.

There is no special reference to people with disabilities in the Constitution, though the personal, economic and cultural welfare of the individual is mentioned as a fundamental aim of public activity. The Swedish legal and governmental framework on Assistive Technology is set out at a national level, while execution is in the hands of local government. Framework laws specify the framework and objectives. Within this framework, local government has ample opportunity to interpret the law and shape its activities according to its own guidelines.

There are two types of local government bodies in Sweden, with the municipality (kommun) as the local unit and the county council (landsting, which is some cases is called a “region”) as the regional unit. There are 290 municipalities. There are 18 county councils, two regions and the municipality of Gotland. The division of labour between counties and municipalities is based on the principle that tasks requiring a larger population base should be handled by the counties. Health care is a typical example. The roles of municipalities, county councils and regions are defined in the Local Government Act, but there are also some specially regulated tasks.

General welfare policy is fundamental to the structure of Swedish society. The basis of this policy is a tax system in which all taxpayers contribute for the good of all, according to capacity. Funds are redistributed with the objective of levelling out differences in people’s living conditions, according to

85 Ley de Cohesion y Calidad del Sistema Nacional de Salud
the principle of an egalitarian society. The ambition is to guarantee all citizens financial security and social rights. Naturally, this general system also benefits people with disabilities. It is a key principle that people who need Assistive Technology shall have it free of charge, regardless of their financial situation.

For Assistive Technology, Sweden has a decentralized system. HSL, the Health and Medical Services Act86 defines the role of the County Councils and municipalities in providing assistive devices. In most cases, the counties are responsible for Assistive Technology. They organize provision through Assistive Technology centres for mobility-impaired people, hearing centres, low-vision centres, orthopaedic workshops and interpreter service centres. Primary health care centres and hospital clinics also take an active part. The municipalities are responsible for giving Assistive Technology to people in some specific cases. Their responsibility primarily involves assistive devices for older people with impaired mobility. In many of the municipalities there are rehabilitation teams that prescribe devices. Special rules apply for some consumables. Nevertheless, a county can come to an agreement with a municipality that the municipality offers the Assistive Technology. Consequently, the division of responsibilities between the counties and the municipalities is not always clear and can be different throughout Sweden. In order to obtain the maximum benefit, a person’s whole life situation is taken into account and evaluated from a broad perspective and not only from a single, Assistive-Technology, point of view.

Assistive Technology for everyday life consists of devices that mean that people can take care of the following things themselves or assisted by someone else: primary personal needs (getting dressed, eating, taking care of personal hygiene), moving around, communicating with the outside world, functioning at home and in the near neighbourhood, orientating themselves, managing daily routines at home, going to school and taking part in normal leisure and recreational activities.

Assistive devices for every day life are mostly provided free of charge. In some cases small personal contributions can be asked for. This only applies to the assistive devices for which the County councils are responsible. However, the range of their services varies sharply between different parts of the country. It can happen that a certain assistive device is not available in one county, while it is in another. Sometimes what is offered in different counties can also be slightly different (e.g. hearing devices for one or for two ears).

The Swedish Handicap Institute also plays an important role in Assistive Technology in Sweden. It is a national resource centre on Assistive Technology and accessibility aiming at improving the quality of life for people with disabilities. Its major tasks are to ensure access to high quality and well-functioning Assistive Technology and to work for increased access to society. The Institute's work includes stimulation of research and development, analyses of needs and testing of Assistive Technology. It also gives out information and trains professionals in Assistive Technology for different categories of disability. The Institute is also involved in international research and co-operation projects in the field of Assistive Technology and accessibility.

The Act Concerning Support and Service for Persons with Certain Functional Impairments87 recommends working with an individual total plan for each person. People have the possibility to choose when different treatment alternatives are possible. This Act deals in particular with citizens with severe disabilities and covers support and services like personal assistance.

86 Hälso- och sjukvårdslagen (1982:763)
87 Lagen om stöd till vissa funktionshindrade (LSS) (1993:387)
The EU Medical Device Directive (MDD: 93/42/EEC) has been transposed as the Law on medical technical products\(^88\) (SFS 1993:584), an Ordinance (SFS 1993:876) and Regulations (LVFS 2001:5, LVFS 2001:6 and LVFS 2001:7). The implementation is almost a word-for-word transposition of the directive’s texts. The Law on medical technical products is valid for all assistive devices mentioned in the HSL. Products have to be appropriate for their use and the government or an authority designated by the government can decide on the regulations and conditions for achieving this.

### 3.8.2. Anti-discrimination legislation

Sweden has a specific government agency that works for people with disabilities: the Disability Ombudsman (Handikappombudsmannen - HO). This organisation monitors the rights and interests of people with disability. The objective is that people with various kinds of disability should be able to participate fully in the life of the community and live on the same terms as others. The Disability Ombudsman Act\(^89\) and The Disability Ombudsman Instructions Ordinance\(^90\) are key pieces of legislation in this field.

A special law prohibits discrimination in working life of people with disabilities: Prohibition of Discrimination in Working Life of People with Disability Act\(^91\). The Act applies both to direct and indirect discrimination. This Act came into force on May 1\(^{st}\), 1999, and was the first law in Sweden prohibiting discrimination on grounds of disability. With this law, the national Swedish legislation already partly anticipated the Employment Directive 2000/78/EC\(^92\).

The current Swedish legislation only covers the relationship between employer and employee or employer and job applicants. A new law will cover employment offices, access for carrying on business operations and a profession, membership and involvement in an organisation of workers or employees or any professional organisation, goods, services and housing. There will be some amendments to the current Prohibition of Discrimination in Working Life of People with Disability Act. The proposed changes are in legislation which will also implementing in full Directives 2000/78/EC and 2000/43/EC\(^93\). The proposals have been presented to the Swedish Parliament and could enter into force on July 1\(^{st}\), 2003.

Under the law as it stands at present an employer has to provide reasonable facilities in the following situations: when employing a new employee, when promoting an employee or when deciding on training for promotion of an employee. Failure to do so can be discrimination. Reasonable facilities are defined in the preparatory work for the existing law. It may mean investment in Assistive Technology or alterations to improve accessibility to the workplace. It can also mean organisational or administrative changes, such as change the way work is organised, working hours or work assignments.

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\(^{88}\) Lag om medicintekniska produkter (1993:584)
\(^{89}\) Lag (1994:749) om Handikappombudsmannen
\(^{90}\) Förordning (1994:949) med instruktion för Handikappombudsmannen
\(^{91}\) Lag (1999:132) om förbud mot diskriminering i arbetslivet av personer med funktionshinder
\(^{93}\) Council Directive 2000/43/EC of June 29\(^{th}\), 2000, implementing the principle of equal treatment between persons irrespective of racial or ethnic origin
Neither existing law nor the proposed amendments cover reasonable facilities for those that are already employed. The Government’s position is that other measures, for instance the Occupational Safety and Health Law, provide adequate protection, though the Disability Ombudsman disagrees.

The Equal Treatment of Students at Universities Act\(^9^4\) combats discrimination on ground of gender, race, ethnic origin, religion, sexual orientation and disability. This Act came into force on March 1\(^st\), 2002.

### 3.8.3. Assistive Technology in the workplace

In 2002, 56 % of disabled people of working age are in employment, against 78 % of total people of working age\(^9^5\). Both rates are expected to increase over the coming years, but the gap will remain. It could also become more difficult for the disabled to find jobs as the labour market becomes more demanding. The Swedish experience is that employers are reluctant to hire the disabled initially, but are more positive after an initial experience.

Sweden has never had any quota legislation. Other policies like the Prohibition of Discrimination in Working Life of People with Disability Act and the establishment of the Disability Ombudsman are used to strengthen the position of disabled workers. One of the aims of Swedish Labour Market policy is that the labour market be accessible for all.

Apart from the disability pension system and normal labour market programmes there are some specific designed labour market programmes. These make it easier for the occupationally disabled to get a job, while compensating the employer for possible extra expenses entailed in hiring a person with reduced work capacity. The major programmes are:

- a wage subsidy (lönebidrag) to compensate employers who hire someone with reduced work capacity;
- supported employment (SIUS). This is a relatively new programme which provides a subsidy to a person who coaches a disabled worker in the initial period of employment;
- Employment in Samhall, which is a conglomerate of sheltered workshops for those who cannot find jobs in the regular labour market;
- Sheltered jobs in the public sector.\(^9^6\)

Responsibility for the use of Assistive Technology in the workplace is divided between the Swedish National Labour Market Administration\(^9^7\) and the Social Insurance Office\(^9^8\). The former helps disabled people to get a new job and during the first 12 months of employment. The latter ensures the disabled person has the devices they need in order to be able to work.

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\(^9^4\) Lag (2001:1286) om likabehandling av studenter i högskolan
\(^9^5\) Guy Lööv of the Swedish Ministry of Industry presented these figures and the associated conclusions at a seminar organised by the embassy of Sweden and the Swedish Trade Council (Swedish Design without Obstacles: seminar on Awareness and on New Technologies in Assistive devices, Brussels, January 31\(^st\), 2003).
\(^9^6\) OSA (offentligt skyddat arbete)
\(^9^7\) Arbetsförmedlingen
\(^9^8\) Försäkringskassan
The Ordinance on particular contributions for people with an occupational disability\textsuperscript{99} contains decisions on the labour market policy programme for disabled people during the first 12 months of employment. Incentives include grants for employers who adapt their workplaces to the needs of people with functional impairments or install Assistive Technology. The objective is to facilitate access to the labour market for the disabled, whether it be to get a job, start their own business or take part in a labour market programme or vocational training. This support is designed to compensate for the reductions in occupational capacity of people with a disability and at strengthening these people’s ability to get or keep a job.

The Labour Market Administration provides grants of up to SEK50,000 each for the employer and the disabled employee. This support for assistive devices is available both for individual working aids allocated to a person with an occupational disability and to special devices in the workplace allocated to the employer. Support for computer-based assistive devices can be awarded at higher rates. Grants are awarded to cover the full cost if the assistive device is of no value to anybody but the disabled employee. Otherwise grants are paid to cover at least half the cost. Trial of the devices, adaptation and development is carried out in cooperation between the Institute of Social Research, private firms and units within AMV.\textsuperscript{100} The Labour Market Administration also provides free education in how to use computer-related Assistive Technology. The number of participants in this programme of grants for workplace adjustment was 1163 in 1998, with a total expenditure of SEK 58 million\textsuperscript{101}.

The Social Insurance Office works in the same way for people who need these assistive devices at work after the first 12 months of employment. Both the employer and the employee can get a grant. The amounts granted are comparable to the ones the Labour Market Administration offers. The social insurance office also takes care of the any repairs, operational issues and follow-up costs of devices provided by the Labour Market Administration.

3.8.4. Future trends

At the time of writing a public government inquiry into the LSS (Act Concerning Support and Service for Persons with Certain Functional Impairments) and assistive devices was under way. This inquiry will analyse certain questions in the area of assistive devices and the LSS and propose changes. The five topics related to assistive devices at which it will look are: the delivery of assistive devices in education, the system for Assistive Technology in the workplace, developments in IT, communication technology and digital technology, the fee system for assistive devices, establishing a boundary between individual assistive devices and labour-technical devices. The results of this inquiry will be presented to the government on 15 September 2003 at the latest.

Looking at Assistive Technology from a broader perspective, it is clear that many efforts are being made to make society as a whole more accessible. It is, for example, no use helping people get a job with all the necessary devices if they are not able to reach their workplace. Accessibility for all, but also the image of disabled people in society, will certainly be major topics over the next few years.

\textsuperscript{99} (2000:630) Förordning om särskilda insatser för personer med arbetshandikapp

\textsuperscript{100} (AMV: Arbetsmarknadsverket - National Labour Market Administration

\textsuperscript{101} Active labour market programmes for people with disabilities, country profile: Sweden, July 2002
3.9. United Kingdom

3.9.1. Structure of the legislation

In the UK, health care is provided by the National Health Service (NHS) while social care is provided separately by social services.

Government responsibility for providing or arranging assistance for disabled people in England (arrangements and legislation differ in Scotland and Wales) is shared by a number of departments. These are: the Department for Work and Pensions (DWP), the Department of Health (DH), the Office of the Deputy Prime Minister (ODPM), the Department for Education and Skills (DfES), the Department for Transport (DfT), and the Inland Revenue (IR). At a local level, councils’ social services departments and health service organisations (primary care trusts and hospitals) are the primary contacts for older and disabled people.

The DWP administers relevant benefits — in particular ‘extra costs’ disability benefits (Disability Living Allowance and Attendance Allowance), Carers Allowance, Incapacity Benefit and Industrial Injuries Disablement Benefit. DWP funds the Independent Living Fund which offers people with high support needs the opportunity of living independently at home instead of in residential care, by helping to pay towards the costs of their personal and/or domestic assistance. The DWP also administers the diversion of payments of the higher rate mobility component of Disability Living Allowance to the charity Motability. Motability provides highly adapted vehicles for severely disabled people to drive or to travel in as passengers. In addition, DWP has responsibility for civil rights legislation for disabled people. The IR administers the Child Tax Credit and the Working Tax Credit which can include additional amounts to recognise disability.

For people with mental health problems, and for older people, the Department of Health has published National Service Frameworks (NSF) that set out standards for service provision. Valuing People: A New Strategy for Learning Disability for the 21st century does the same for people with learning disabilities. Government Ministers are keen to improve the coherence of the policy framework for services for people with physical, sensory and cognitive impairments. An NSF for people with long-term conditions is in development and will cover many conditions that lead to disability.

Section 29 of the National Assistance Act 1948 enables a local authority to make arrangements for promoting the welfare of people with disabilities ordinarily resident in its area. Section 1 of the Chronically Sick and Disabled Persons Act 1970 imposes a duty on a local council having functions under section 29 of the 1948 Act to gather information about how many disabled persons live in its area and to assess how it should plan to meet their needs. Authorities must also publish general information about available services, and ensure that every disabled person who uses those services is given information about other services relevant to their needs. Section 2 of the 1970 Act imposes a duty on local authorities to arrange specified services where it is satisfied that those services are necessary to meet the needs of a disabled person. The help that the local authority may be obliged to provide can cover many areas including: practical help in the home, radio and/or television, help to use the local library, help to take advantage of educational facilities (including transport), adaptations or special equipment to maintain independence or for safety, holidays, meals and telephone (and special equipment to use it if needed).

The 1986 Disabled Persons (Services Consultation and Representation) Act reinforces the duties imposed by the 1970 Act. For example, when requested to do so, a local authority must decide whether
the needs of a disabled person call for the provision of any services under section 2 of the 1970 Act. Services are dependent upon an assessment of need. If a local authority decides that services are required under the 1970 Act, then they must be provided, although a local authority’s resources can be taken into account in assessing need.

Also relevant to disabled persons is the NHS and Community Care Act 1990. Where it appears to a local authority that a person for whom it may provide community care services may be in need of such services, the 1990 Act imposes a duty on that local authority to carry out an assessment of that person’s needs for those care services. Having regard to the results of that assessment, the authority must then decide whether his needs call for the provision of community care services. Social services assess the needs of people and arrange for the provision of social care services to meet these needs. Other responsibilities include procedures for receiving comments and complaints, registration and inspection procedures, and for assessing the individual’s ability to contribute.

The Community Care, Services for Carers and Children’s Services (Direct Payments) (England) Regulations 2003 provide that local authority social services departments may make direct cash payments to individuals instead of providing the community care services they have assessed those individuals as needing. People who receive the payments use the money to secure for themselves services to meet assessed requirements.

The Local Government Act 1999 gives authorities a statutory duty to provide best value, and this requires effective joint working and partnerships with the private sector. Authorities also have new discretionary powers to engage in partnership arrangements with other bodies, including NHS bodies that operate locally for any purpose that supports their functions.

The Health Act 1999 made a number of significant provisions to help health and social services integrate services by enabling the pooling of funding and the identification of a lead provider organisation. These ‘Health Act flexibilities’ as they are known will facilitate improved co-ordination of local services.

The Learning and Skills Act 2000 (LSA) requires the Learning and Skill Council (LSC) to help young people and adults with learning difficulties and/or disabilities access suitable provision which meets their needs and, where appropriate, the additional support they require to undertake it. In addition, Section 140 of the Act sets out the statutory provision for the assessment of young people with learning difficulties and disabilities. The Connexions Service delivers this requirement, conducting assessments for all young people with learning difficulties and disabilities. Both the Connexions Service and the LSC recognise that their local services must work closely together to ensure the needs of these learners are met.

3.9.2. Anti-discrimination legislation

The Disability Discrimination Act 1995 (DDA) introduced new rights and measures aimed at ending the discrimination which many disabled people face. Disabled people now have new rights in the areas of employment, goods and services, and buying or renting property.

The Employment Provisions of the DDA prevent an employer from discriminating against a disabled person on account of their disability, unless this can be justified. If arrangements made by the employer or the employer’s premises place a disabled person at a substantial disadvantage in comparison with persons who are not disabled, the employer needs to consider whether a ‘reasonable adjustment’ might make it easier for a disabled person to enter or remain in employment.
Rights of access to goods and services to protect disabled people from discrimination are being phased in. Since October 1999, service providers have been required to make reasonable adjustments to policies, procedures and practices, to provide auxiliary aids and services and, to provide their services by a reasonable alternative means to overcome a physical feature where access to that service would otherwise be impossible or unreasonably difficult for a disabled customer.

There may be situations where it is appropriate for an employer, or a service provider, to provide a disabled person with some aspects of Assistive Technology to fulfil these obligations to make reasonable adjustments under the Act. The scope for this may increase as new developments occur.

However, the DDA 1995 exempted educational institutions from its provisions. The Act was amended by the Special Educational Needs and Disability Act 2001 to bring bodies responsible for the provision of further and higher education, adult and community learning (ALC) and youth services within the scope of its provisions. From September 2002 it has been unlawful to discriminate against disabled students by treating them less favourably than others. In addition, responsible bodies have a duty to provide reasonable adjustments to provision where disabled students might otherwise be substantially disadvantaged. From September 2003, adjustments include the provision of auxiliary aids and services and from September 2005, the physical features of premises.

The Disability Rights Commission (DRC) is an independent statutory body, established in April 2000 by Act of Parliament to work towards the elimination of the discrimination faced by disabled people, promote equality of opportunity, encourage good practice and keep the working of the DDA and the DRC Acts under review. The DRC has specific functions and powers to: assist disabled people by offering information and advice about their rights under the DDA, and legal support in taking cases forward; provide information and advice to employers, service providers and education providers about their DDA obligations and guidance on good practice; prepare statutory codes of practice providing practical guidance on how to comply with Parts II (employment), III (access to goods and services) and IV (education) of the DDA for the approval of the relevant Secretary of State; arrange independent conciliation between service/education providers and disabled people for disputes arising under Parts III and IV of the DDA; undertake formal investigations and carry out research; raise awareness of and sensitivity to disability issues in society; and provide the Government with advice on policy issues within its remit. The DRC produced Codes of Practice (2002) to support the implementation of the DDA in schools, further and higher education institutions.

3.9.3. Assistive technology in the workplace

The New Deal for Disabled People (NDDP) is designed to support people in receipt of disability or health-related benefits in finding and sustaining paid employment. It is delivered through a network of job brokers across England, Scotland and Wales who agree with each customer what is the most appropriate route into employment for them, and work closely with providers of training and other provision where the customer needs additional help. Involvement in NDDP is entirely voluntary so customers can decide whether or not to participate, and which job broker to register with.

The Access to Work programme (AtW) is run by Jobcentre Plus. It provides financial assistance towards the extra costs of employing someone with a disability. It is available to unemployed, employed and self-employed people and can apply to any type of paid employment, full-time or part-time, permanent or temporary. The type of support available includes, among others: a reader at work for someone who is blind or has a visual impairment; adaptations to a vehicle if someone cannot use public transport to get to work because of disability, special equipment (or alterations to existing equipment) necessary because of an individual’s disability; alterations to premises or a working environ-
ment necessary because of a person’s disability. The funding available depends on the employment status of the disabled individual at the time of application. In some cases Access to Work solutions may incur a business benefit, for example, if other members of staff use the specialist equipment as part of their own work. In these instances the business benefit costs will be estimated and deducted from the Access to Work costs.

Access to Work advisers administers the Access to Work programme. Other specialist disability advisers are disability employment advisers. Disability employment advisers aim to provide a coherent employment advice and assessment service for employers and people with disabilities. They can be contacted through the local Jobcentre, Jobcentre Plus or social security office. Disability Employment advisers can advise on developing good employment practices, recruiting disabled people, financial help to employ them, work preparation and employment rehabilitation, equipment and ergonomics in the workplace, accessibility of premises, and communicators for deaf people attending a job interview.

WORKSTEP is a Jobcentre Plus programme that provides support in jobs for disabled people who have more complex barriers to finding and keeping work. The programme offers an individually tailored package of support and access to development opportunities to enable individuals to make a valuable contribution in the workplace and to reach their full potential.

The programme places emphasis on helping people to progress to unsupported work if this is the right option for them. Long term support is available for supported employees who need it. WORKSTEP provides a wide range of supported employment opportunities that meet the needs of disabled people and reflect the demands of the local labour market. Supported employees work in jobs in mainstream employment or in supported factories and businesses. Around 240 providers deliver WORKSTEP including local authorities, private sector, voluntary organisations and Remploy Ltd.

### 3.9.4. Future trends

It is well established that barriers have grown up between the health and social services at a time when the number of people affected at the interface between health and social care is increasing. These co-ordination problems frustrate the objective of ‘seamless’ service provision and contribute to inequalities in access to services.

Without proper co-ordination, especially across organisational boundaries, there is every likelihood that services will be duplicated or go by default, leading to poor quality, higher costs and attempts to shift responsibility.

The UK Government is making a significant investment in modernising and expanding community equipment services so that more people can benefit from an integrated approach to meeting their needs. NHS organisations and local councils should now be starting to use the organisational flexibilities introduced by the Health Act 1999 to remove those boundaries by pooling budgets and integrating services.

The challenge is with service providers to:

- meet the NHS Plan target to modernise service delivery by combining health and social care provision into single, integrated community equipment services by 2004;
- increase by 50% the number of individuals who benefit from these services, and to improve the quality and range of equipment on offer;
– increase efficiency by modernising purchasing, supply and recall systems;
– extend the use of new ‘telecare’ technologies in supporting frail and vulnerable people.

The UK government has asked the NHS and councils to improve the delivery system by integrating their separate equipment services by 2004 into a coherent local service. One of the elements of this modernisation of the services is to have demonstration facilities available for end-users.

Efforts are currently being undertaken by the UK government to recognise the strategic utility of communication aids to support independent living. Until now communication aids have been rather marginally provided to people with disabilities. A programme has been launched in the education sector to provide communication aids to schoolchildren who need them. A number of charities are actively campaigning towards the extension of this system.

Assistive technology delivery is a lengthy process, notably due to the insufficient number of occupational therapists at local level to process requests and to assess peoples’ needs. Efforts are being taken by the government to give social workers more training so that they can play a more active role in the delivery process.

The Learning and Skills Council (LSC) has responded to the Valuing People initiative by encouraging local LSCs to engage with local partners in forming Learning Disability Partnership Boards (LDPBs). A joint programme of LSC/DH activity has been planned to strengthen local inter-agency arrangements for joint provision of learning and care packages.
4. Market structure

4.1. Introduction

This chapter is designed to give a high-level market view on the structure of the Assistive Technology market within the countries under review. Due to the differences in data available in each country, it has not been possible to provide a consolidated view of the overall European Union market.

Not only are there differences in data available between countries, but in some Member States it even proved extremely difficult to get access to any data on the market. Although the issue was systematically raised during all interviews or visits, the most frequent answer was: “It would be nice if we could have access to such data …”.

The European Commission (Medical Devices in DG Enterprise) currently does not have data covering Assistive Technology products. However, the Commission has commissioned a study on Competitiveness of the Medical Devices Industry in Europe. This will contain some data voluntarily made available by the European trade associations. It is expected that this study will be available (for publication) in the first half of 2004.

In the meantime, the chapter is structured as follows:

− Classification: this will describe how Assistive Technology devices are referred to in the country (e.g. national classification or use of ISO 9999);

− Demand side: this will indicate (when available) an estimate of the size of the national market (without going too deeply into demographic data).

− Supply side: this will focus on the structure of the market in the country (e.g. types of player, their size, and the professional associations) and the degree of innovation. Whenever figures are available for Assistive Technology products, an extract of these will be provided with the sources to access original data.

4.2. Denmark

4.2.1. Classification of Assistive Technology products

In Denmark ISO9999 is used. A database of Assistive Technology products can be found on the website of the Danish Centre for Technical Aids for Rehabilitation and Education\(^\text{102}\). The organisation of this database is consistent with the ISO classification.

A distinction is made between Assistive Technology products and medical devices. Some fall under the EU Medical Device Directive and others, such as powered stair lifts and vertical lift platforms are covered by the Machine Directive.

\(^{102}\) http://www.hmi.dk
4.2.2. Demand side

In Denmark, people with disabilities are not registered. There is therefore only limited documentation on users of different types of Assistive Technology. However, the user plays an important role. Great attention is paid to user involvement in the delivery process and the user can, for example, choose who should be the supplier of his or her personal Assistive Technology (e.g. wheelchair).

4.2.3. Supply side

The Ministry of Finance published a report in 1999 on public grants in the area of assistive devices. This publication gives a good overview of the Assistive Technology products market. Expenditure on assistive devices increased from DKK1.5 billion in 1987 to DKK2.0 billion in 1997. This is an increase of 33% over this period or an average annual increase of 2.9%.

0.3% of this annual increase can be explained by trends in demographics. The other 2.6% is attributable to the purchase of more expensive devices and an increase in the number of people that get these devices. If the growth rate remains similar in the years ahead, expenditure will have doubled by 2020.

The report mentions six factors that could explain this increase in expenditure:

- the elderly are staying at home as long as possible. This implies a higher need for assistive devices for home care.
- it is a policy to let disabled people live their lives as independently as possible. Fewer people are in institutions as they can live in their own home with the required assistive devices.
- changes in the labour environment. Municipalities are, for example, obliged to keep a form of store assistive devices that can be used for home care by private nurses.
- new technology and technological development of existing devices.
- changing norms and attitudes in society.
- the ageing of the Danish population. Expenditure on people aged 65 or more is higher than on younger people.

According to the Rehabgroup, there are no real detailed figures on the market. The closest of we could get is an estimate from the Ministry of Finance\textsuperscript{103} based on a sample survey. The market for particularly personal devices is estimated at DKK600 million DKK, for personal devices at DKK 400 million and for technical devices at DKK600 million.

The estimated relative share of hearing devices in the category of personal devices is 50%. From this we can conclude that about DKK200 million DKK is spent on hearing devices each year. We note below some of the estimated relative shares for technical devices.

\textsuperscript{103} in Offentlig tilskud på hjælpemiddelområdet: 3.2 Udgifterna fordelt på typer af hjælpemidler, Ministry of Finance, 1999
### Estimated relative market shares of AT by product category (\%) 

<table>
<thead>
<tr>
<th>Product category</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mopeds and wheelchairs</td>
<td>35</td>
</tr>
<tr>
<td>Beds, mattresses and chairs</td>
<td>18</td>
</tr>
<tr>
<td>Personal lifts and walking aids</td>
<td>16</td>
</tr>
<tr>
<td>Alarm systems</td>
<td>9</td>
</tr>
<tr>
<td>Computers and typewriters</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: Ministry of Finance, 1999

### 4.3. France

#### 4.3.1. Classification of Assistive Technology products

There is no special French classification of Assistive Technology products. As a working, but informal tool, the ISO9999 classification is used. For reimbursement issues, the LPPR \(^{104}\) is the reference “classification”. The LPPR is the new name of the former and well known TIPS system \(^{105}\). However, the LPPR cannot be considered as a classification per se because it is incomplete. There are, for example, no modern electronic devices on the list).

Manufacturers, whether French or foreign, have to go through quite a complex producer for their products to be included in the LPPR. This procedure is described in a later part of this report.

Finally, the exact distinction between Assistive Technology and medical devices is far from clear for most players.

#### 4.3.2. Demand side

The disabled population in France is to a large extent an unknown. There is no real consolidated data available that can be usefully used for either statistical or commercial purposes. The French statistical office, INSEE \(^{106}\) carried out the HID survey (Handicaps-Incapacités-Dépendance) in 1998 on people living either at home or in specialised institutes. This was the first time France had tried to establish a detailed estimate of the number of people affected by the various types of disability. Besides this, there are no epidemiology studies carried out on a systematic basis in France.

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104 Liste des Produits et Prestations remboursés  
105 Tarif Interministériel des Prestations de Santé  
106 Institut National de la Statistique et des Études Économiques
A number of organisations do have figures, however, on the number of people with disabilities. However, in all cases, the data is partial and caution is needed in interpreting it.

– Ministry of Health: figures can be provided for all equipment that benefited from financing. Such equipment is either on the LPPR or the previous denomination TIPS. The Ministry of Health has plans to try and deliver more consolidated figures. At the time of writing, it was anticipated that these would be available in March or April 2003 [current status?].

– Regional Councils: these decentralised structures can sometimes provide accurate figures on disability in their respective regions, but the quality of this information will greatly differ from one region to the other, therefore making any consolidation at national level virtually impossible.

– INSEE: the first results of INSEE’s HID survey were published at end-2000. However this was based on a limited sample. They cannot, therefore, be considered as adequate for the time being. This is especially true for market study. The data is not useful for business.

– Associations of people with disabilities: some have quite accurate figures on their membership. For example, the AFM\textsuperscript{107} knows exactly how many new cases there are each year, but there are no figures on the total number of tetraplegic people ). The numbers are significant, but nevertheless insufficient for drawing conclusions. Other organisations like the APF\textsuperscript{108} also has data on membership.

It is hard to arrive at figures for devices that do not benefit from financing by the social security system, as these are acquired directly by the disabled person. It is likely that local associations, charities, municipalities and insurers participate partially in the financing, but there is no co-ordination of this. A notable study was published in March 2003 by the French Ministry of Health.\textsuperscript{109} The following figures can be obtained by extrapolating from figures of the HID survey in relation to people with disabilities living independently:

\begin{center}
\textit{Number of users per type of aid}
\end{center}

\begin{tabular}{ll}
\hline
\textbf{Type of Technical aid} & \textbf{Number of users} \\
\hline
Aids for mobility & 1,846,000 \\
Aids for incontinence & 1,187,000 \\
Aids for communication & 946,000 \\
Aids for care for long-term diseases & 641,000 \\
Adapted furniture and building equipment & 397,000 \\
Aids for transfer & 108,000 \\
Aids for manipulation & 31,000 \\
\hline
\end{tabular}

Source: INSEE, Etude HID 2000

Note: Only people living outside institutions

\textsuperscript{107} Association Française contre les Myopathies

\textsuperscript{108} Association des Paralysés de France

\textsuperscript{109} Rapport – Aides techniques – Situation actuelle, Données économiques, Propositions de classification et de prise en charge: Prof. D. Lecomte
Two main conclusions can be drawn from the HID survey results. First, use of the most sophisticated equipment (high-tech, computer-based, …) is rare. Second, when looking at volumes, most technical aids are “small” aids (such as walking sticks).

4.3.3. Supply side

In France, manufacturers, importers, or distributors supply Assistive Technology products. The market is highly fragmented and strongly oriented towards imports (especially when reimbursement via the LPPR is envisaged). This fact is due to the relatively small size of the internal publicly funded French market. The result is a rather limited Assistive Technology industry. For example, there are fewer than 10 suppliers of wheelchairs in France (most of which are in fact subsidiaries of foreign suppliers) and about 13 manufacturers or importers of hearing aids

Manufacturing of many Assistive Technology products is now carried out in or outsourced to Eastern Asia (especially China). Moreover, a shift towards these countries taken place since the mid-80’s and has accelerated since 1992 and 1995. French companies were not initially involved. Originally they were not involved in a process involving U.S., German, Scandinavian, and Dutch players. Since then two of the pre-eminent French players Poirier and Biotrol have been acquired by Invacare of the US and BBraun of Germany respectively.

Although there is national research funding for assistive technology, there is not enough research in France to conceptualise and create new products.

The French industry of Assistive Technology considers the market too small to justify investing in new products and technologies. Moreover, this limited market is a disincentive to private firms obtaining returns on investment which are good enough and fast enough. As a consequence, France’s position is expected to decline even more in the future.

Similarly, foreign suppliers of Assistive Technology products consider the French market as being too limited because people with disabilities do not have the financial resources to acquire their products. Foreign firms often use local importers who may represent up to 25 different foreign suppliers at the same time. As a consequence, it often happens that the catalogue of products available is restricted in France when compared with the country of origin (e.g. German manufacturer Meyra does not provide all its products to the French market). Another consequence is that foreign suppliers often discard some accessories to their products in order to make them financially less expensive for French end-users.

SNITEM\textsuperscript{110} (the National Association of Medical Technology Industries) was set up on January 1st, 1987, and brought together several technological segments of the Medical Device, or Medical Technology industry (imagery, consumables, medico-surgical). Its purpose was to find their place within the health care system and to voice their proposals and expectations. The SNITEM has 200 members, representing the rich diversity of the industrial fabric from small businesses to leading French, European and international groups. SNITEM’s turnover covers 85% of the French medical technology sector in France, where the size of the market is estimated at €4.6 billion. The industry employs 20,000 people. There are no specific figures for Assistive Technology.

\textsuperscript{110} Syndicat National de l’Industrie des Technologies Médicales
In terms of distributors (i.e. those with close contact with patients, not importers or commercial distributors), SYNALAM is a major association of distributors of Assistive Technology products.

4.4. Germany

4.4.1. Classification of Assistive Technology products

The health insurers’ umbrella groups jointly provide a listing of aids together (das Hilfsmittelverzeichnis\textsuperscript{111}). In this document, all aids covered by the insurance scheme are listed with either the agreed prices or the fixed amounts that are paid by the sickness fund. The law provides for the listing is to be updated regularly. The large variety of existing technical aids is grouped into 34 product groups. The products are highly differentiated depending on their therapeutic use, their technical details, and their quality. Only technical aids that comply with minimum requirements can be inserted in the listing through a continuous process of updating. Manufacturers can have their products added by following a procedure that is managed by one sickness fund (the IKK).

4.4.2. Demand side

There are 6.6 million people with severe disabilities (i.e. more than a 50% degree of disability\textsuperscript{112}) now living in Germany. In addition, there are approximately 1.4 million less severely disabled, and another significant but not well defined number of people who claim to be disabled but are not registered with any social scheme. This makes a total of around 10% of the population.

The following tables are taken from figures from the Federal Statistics Office for 2000.

\[
\begin{array}{|c|c|}
\hline
\text{Year} & \text{Population with severe disabilities} \\
\hline
1993 & 6.38 \\
1995 & 6.50 \\
1997 & 6.62 \\
1999 & 6.63 \\
\hline
\end{array}
\]

\textit{Source: Statistisches Bundesamt / Stand: Anfang 2000}

\textsuperscript{111} § 128 SGB V

\textsuperscript{112} GdB – Grad der Behinderung
### Disabled by age as % of all severely disabled

<table>
<thead>
<tr>
<th>Age range</th>
<th>Population with severe disabilities (as % of all disabled)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 18</td>
<td>2</td>
</tr>
<tr>
<td>18 to 60</td>
<td>32</td>
</tr>
<tr>
<td>Over 60</td>
<td>65</td>
</tr>
</tbody>
</table>

Source: Statistisches Bundesamt / Stand: Anfang 2000

### Disabled by type of handicap (as % of all severely disabled)

<table>
<thead>
<tr>
<th>Type of disability</th>
<th>Population with severe disabilities (as % of severely disabled)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dysfunctional internal organs</td>
<td>26</td>
</tr>
<tr>
<td>Other</td>
<td>23</td>
</tr>
<tr>
<td>Neurological/neuromuscular disorders</td>
<td>15</td>
</tr>
<tr>
<td>Functional impairment of the limbs</td>
<td>14</td>
</tr>
<tr>
<td>Functional impairment of the spine or body</td>
<td>13</td>
</tr>
<tr>
<td>Blindness</td>
<td>5</td>
</tr>
<tr>
<td>Speech difficulties or deafness</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: Statistisches Bundesamt / Stand: Anfang 2000

### 4.4.3. Supply side

The German market is characterised on the one hand by a number of small players (the Sanitätshaus) that are active at local level. Most of them are small to very small businesses that offer a limited choice of products. On the other hand, there are larger players active at national level (the Medizin-fachhändler) that are able to use their size to leverage their relations with both customers and especially sickness funds. These organisations merely distribute products on the German market. Finally, there are also large commercial organisations that manufacture and deliver products. There is a trend towards concentration in supply with the disappearance of the smallest actors.

An ideal source for obtaining consolidated data on the market of Assistive Technology products in Germany ought to be the sickness funds themselves. However, as there are so many and they all keep data differently, this turned out not to be the case. When asked, the sickness funds acknowledged that they only have working documents without any consolidated view and only for internal use.
Finally, the market in Germany is characterised by strong cost pressures on the part of the paying organisations (e.g. the sickness funds). This has led to numerous bankruptcies and take-overs of suppliers and retailers. Due to its complexity, the health care system in Germany is a real challenge for authorities, economy and the individuals. The procedures for dealing with technical aids are especially complex and supporting structures are outdated (e.g. the final delivery of a technical aid may require up to 17 document exchanges between the parties involved). As a consequence, the players are moving towards more efficient processes based on electronic data exchange.

4.5. Italy

4.5.1. Classification of Assistive Technology products

The SSN currently provides two distinctive classifications for Assistive Technology devices in Italy, namely: ISO9999, and the National Register of Prostheses and Aids.

The classification of assistive devices s set out in the “Decreto del Ministero della Sanità 27 August 1999, law no. 332”, uses ISO standard 9999 of 1998. The classification is based on a functional subdivision which classifies devices by their principal function and on the basis of three hierarchical levels: classes, subclasses and divisions. Each class, subclass and division consists of a code, a name, and in some cases also a definition.

The Nomenclatore Tariffario is a detailed list of prostheses, orthoses and technical devices that can be supplied by the SSN free of charge to Italian citizens who have physical, psychological or sensory disabilities. The National Register is generally approved on a triennial basis and is valid for the whole of Italy.

4.5.2. Demand side

The demographic composition of the disabled community makes it possible to gain an understanding of the demand for assistive devices based on the types of disability and the number of people with each type of disability. Italy has an estimated 2.8 million disabled citizens. They make up approximately 5 percent of the total population of 6 years and above. Of these, approximately 2.6 million live with their family and 170,000 thousand in institutions.

The most common causes of disability are as follows:

---

113 ISTAT, “Indagine sulle condizioni di salute e ricorso ai servizi sanitari, 1999-2000”
People with disabilities ('000)

<table>
<thead>
<tr>
<th>Type of disability</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housebound(^{114})</td>
<td>344</td>
<td>809</td>
<td>1,153</td>
</tr>
<tr>
<td>Functional difficulty(^{115})</td>
<td>516</td>
<td>1,039</td>
<td>1,555</td>
</tr>
<tr>
<td>Impaired mobility(^{116})</td>
<td>383</td>
<td>821</td>
<td>1,204</td>
</tr>
<tr>
<td>Sensory difficulties(^{117})</td>
<td>245</td>
<td>355</td>
<td>600</td>
</tr>
</tbody>
</table>

Source: ISTAT, “Indagine sulle condizioni di salute e ricorso ai servizi sanitari, 1999-2000”

Note: A person may have more than one disability

The table illustrates that:

- the most significant type of disability, i.e. functional difficulties, makes up 34 percent of the disabled population, and of these 67 percent are females;
- the second largest proportion of disabled people are those who with impaired mobility (27%), of whom 68 percent are females.

Within all the four types of disability, females make up a significant proportion. In most cases, the number of females is well over twice that of males.

The following table illustrates the number of disabled people of six years and over that live with their families, aggregated by sex and age class.

Disabled living at home by age and sex ('000)

<table>
<thead>
<tr>
<th>AGE</th>
<th>6-14</th>
<th>15-24</th>
<th>25-44</th>
<th>45-65</th>
<th>65-74</th>
<th>75+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>40</td>
<td>27</td>
<td>81</td>
<td>153</td>
<td>204</td>
<td>389</td>
<td>894</td>
</tr>
<tr>
<td>Females</td>
<td>40</td>
<td>32</td>
<td>82</td>
<td>209</td>
<td>323</td>
<td>1,035</td>
<td>1,721</td>
</tr>
<tr>
<td>Males and Female</td>
<td>80</td>
<td>59</td>
<td>163</td>
<td>362</td>
<td>527</td>
<td>1,424</td>
<td>2,615</td>
</tr>
</tbody>
</table>

Source: ISTAT, “Indagine sulle condizioni di salute e ricorso ai servizi sanitari, 1999-2000”

The table above shows that:

- females make up 66 percent of the disabled population and males 34 percent. This is 6.2 percent of the total female population and 3.4 percent of males.

\(^{114}\) Confined to a bed, chair or home
\(^{115}\) Difficulty in getting dressed, washing oneself or eating
\(^{116}\) Difficulty in walking, going up stairs, sitting down or leaning over
\(^{117}\) Difficulty in hearing, seeing or speaking
the elderly people (over 65) make up 75 percent of the disabled population. This rises to 79 percent for females. It is 66 percent for males.

As previously mentioned, one of the key elements affecting the health care system is the demographic profile of the population. The increase in the elderly population is set to increase the need for home health care and nursing homes.

### 4.5.3. Supply side

Italy has a number of companies operating in some capacity in the field of assistive device and rehabilitation equipment for the disabled. The total number of companies takes into account manufacturers, distributors, sales, and repairers. These break down as follows:

<table>
<thead>
<tr>
<th>Assistive device companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Producers: 336</td>
</tr>
<tr>
<td>Distributors: 272</td>
</tr>
<tr>
<td>Sales and assistance: 2,215</td>
</tr>
<tr>
<td>Repairs and assistance: 236</td>
</tr>
</tbody>
</table>

*Source: SIVA Dec. 2002*

The following table illustrates the number of companies by type of assistive device (wheelchairs, input and output devices, and writing and text processing systems) and their field of competence.

<table>
<thead>
<tr>
<th>Assistive device companies by type of product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistive device</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Wheelchairs</td>
</tr>
<tr>
<td>Input and output devices</td>
</tr>
<tr>
<td>Writing and text processing systems</td>
</tr>
</tbody>
</table>

*Source: Siva Dec. 2002*

**IMPORT MARKET**

The estimated value of the import market for assistive devices (wheelchairs, hearing devices, and devices for the visually impaired) is some €195.6 million. The following paragraphs provide an analysis of the import market for these assistive devices, and the countries which have the greatest bearing on the market:

- the major source countries for wheelchairs are Germany, United Kingdom, and the United States with a total market share of approximately 55.9 percent (€13,444,735);
– the major source countries for hearing devices are United Kingdom, Denmark, and Switzerland with a total market share of approximately 43.7 percent (€20,974,305);
– the major source countries for devices for the visually impaired are France and Belgium with a total market share of approximately 82.8 percent (€19,479,237).

The following table shows the major source countries by share of the market and value of imports.

<table>
<thead>
<tr>
<th>Country</th>
<th>Market share (%)</th>
<th>Value (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>15.6</td>
<td>14,931,010</td>
</tr>
<tr>
<td>Germany</td>
<td>13.4</td>
<td>12,836,773</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>11.4</td>
<td>10,873,840</td>
</tr>
<tr>
<td>Denmark</td>
<td>9.1</td>
<td>8,681,492</td>
</tr>
<tr>
<td>United States</td>
<td>8.8</td>
<td>8,430,428</td>
</tr>
<tr>
<td>France</td>
<td>8.0</td>
<td>7,624,887</td>
</tr>
</tbody>
</table>

Source: ISTAT 2002

Companies wishing to sell their device in Italy should look at the small and medium-sized manufacturers/distributors or importers/exporters interested in acquiring innovation, high quality, reliability, good pre-and post sales assistance, timely delivery, and cost-effective devices and who wish to add to their sales lines. The reason is that the vast majority of clients require maintenance and repair activities by the company, on the premises. This means that in order to be able to provide such a service, the producer/distributor will need the facilities and personnel necessary locally.

The local market is very receptive to foreign devices, provided that they can offer a devices/service that is advanced in technology and performance features.

The total import market for these assistive devices is considerably greater value than the export market (€95.7 million as opposed to €15.8 million). This may be attributable to:
– the small number of manufacturers established in Italy, supplying the market;
– the size of the manufacturers established in Italy;
– a large number of international companies offering devices to the Italian market;
– foreign companies’ ability to provide a product that is less costly and offers more features;
– foreign companies’ ability to provide better after-sales assistance (repairs, guarantees, parts and accessories etc.).
4.6. Netherlands

4.6.1. Classification of Assistive Technology products

In the Netherlands assistive devices are classified according to the ISO9999 standard. This classification has been adapted and expanded in accordance with ISO instructions. The Netherlands has also introduced the ICF classification (International Classification of Functioning, Disability and Health - ICIDH) of the World Health Organization. Where the ISO9999 classification is a supply-driven classification, the ICF classification is more demand-driven and based on human characteristics and activities. The ICF classification is a method that can be used to describe the possible use of an assistive device. Efforts are being made to link both classifications.119

4.6.2. Demand side

There are an estimated 1.7 million people with severe or very severe functional disabilities in the Netherlands, of whom around 500,000 have very several disabilities. The Netherlands uses the ICIDH to measure degrees of disability.

Other estimates give figures as high as 2.5 million people with severe and very severe physical impairment living outside institutions. This is about 17% of the Dutch population. About 1.5 million between 15 and 65 years old, or nearly 14% of the work population, are recognised as occupationally disabled.120

Severity of impairment, by age

<table>
<thead>
<tr>
<th>Age group (%)</th>
<th>6-19</th>
<th>20-64</th>
<th>65+</th>
<th>Total population (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No impairment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impairments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>light</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>moderate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>severe</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>('000)</td>
<td></td>
<td>('000)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>light</td>
<td>176</td>
<td>1,267</td>
<td>480</td>
<td>1,945</td>
</tr>
<tr>
<td>moderate</td>
<td>54</td>
<td>495</td>
<td>415</td>
<td>980</td>
</tr>
<tr>
<td>severe</td>
<td>178</td>
<td>316</td>
<td>512</td>
<td>152</td>
</tr>
</tbody>
</table>

Source: Centraal Planbureau, Rapportage gehandicapten 2002


120 Centraal Planbureau, Rapportage gehandicapten 2002.
Using the OECD indicator for measuring disability, about 12.5 % of the Dutch population has physical limitations, 2.9% has hearing problems, 4.1% visual impairment and 7.7% mobility problems.121

<table>
<thead>
<tr>
<th>Type of Limitation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic activities</td>
<td>499</td>
</tr>
<tr>
<td>Sitting and standing up (long-time)</td>
<td>431</td>
</tr>
<tr>
<td>Mobility limitations</td>
<td>371</td>
</tr>
<tr>
<td>Limitations on personal care</td>
<td>237</td>
</tr>
<tr>
<td>Hearing limitations</td>
<td>208</td>
</tr>
<tr>
<td>Visual limitations</td>
<td>118</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>!Invalid</td>
</tr>
<tr>
<td>Character</td>
<td></td>
</tr>
<tr>
<td>Setting</td>
<td></td>
</tr>
</tbody>
</table>

There are no reliable data on the actual demand for assistive devices.122

The Netherlands Bureau for Economic Policy Analysis has made estimates of number of people with light, moderate and severe physical impairments. In total about 1.2 million people with sickness insurance made use of assistive aids in 2000. The sickness funds covered expenditure on those aids for an amount of €627 million. The figure for those privately insured people was about €150 million.123 In 2001 expenditure on assistive aids through the care assurers was about €776 million. The number of users of assistive devices is estimated at around 450 million (see Table below).

---

121 Centraal bureau statistiek, Gezondheidstoestand van de Nederlands bevolking , Heerlen 2002.
123 Including dental devices.
Users of assistive devices (estimate) 1997 1998

<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>1998</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prosthesis</td>
<td>35,640</td>
<td>36,667</td>
</tr>
<tr>
<td>Orthesis</td>
<td>81,180</td>
<td>85,226</td>
</tr>
<tr>
<td>Orthopaedic shoes</td>
<td>53,460</td>
<td>56,487</td>
</tr>
<tr>
<td>Mobility aids</td>
<td>60,390</td>
<td>71,352</td>
</tr>
<tr>
<td>Aids for the home</td>
<td>46,530</td>
<td>55,496</td>
</tr>
<tr>
<td>Computer devices</td>
<td>990</td>
<td>991</td>
</tr>
<tr>
<td>Communication devices</td>
<td>9,900</td>
<td>8,919</td>
</tr>
<tr>
<td>Signalling &amp; Alarm systems</td>
<td>42,570</td>
<td>48,559</td>
</tr>
<tr>
<td>Visual aids</td>
<td>10,890</td>
<td>11,892</td>
</tr>
<tr>
<td>Hearing aids</td>
<td>83,160</td>
<td>88,199</td>
</tr>
</tbody>
</table>

424,710 463,788

Source: GIPhulpmiddelen, 1997-1998

4.6.3. Supply side

As in the other countries the assistive devices market in the Netherlands is very fragmented.

Assistive devices (products) cover a whole range of products. Many of them can be described as “care” products which should not to be considered as real Assistive Technology. These care products are merely provided through pharmacies and also mail-order business and specialised medical supply shops or home care shops. On those “care” the care insurers have a considerable influence for over the choice of products by purchasing them through public tendering.

The official ‘hulpmiddelen’ list of assistive devices differentiates between 16 different submarkets. There is no systematic quantitative data available for those markets. The only data is on costs reimbursed by the sickness fund (Regeling Hulpmiddelen). For the private insurance companies data are only available on the costs paid through them for standard packages. These figures exclude the user co-payment. There are no figures on these co-payments or on private purchases. Consequently, there are no real figures on volume of the assistive devices acquired each year. On the producer and distributor side, little quantitative information exists. In order to get more adequate data Public authorities and the Care insurers will monitor price and volumes more closely. Some figures on assistive devices provided under the Law on Provisions for the Disabled, some figures from the care insurers and from some professional organisations active in the field are presented below, but should be treated with caution.

The Dutch Ministry of Health, Welfare and Sport publishes a report every year on the amounts and costs of supplies under the Law on Provisions for the Disabled. This law covers provision of wheelchairs and scooters by municipalities. 47,660 wheelchairs were provided in 2001 at a total cost of €93.02 million (excluding management and other costs). This also includes sports wheelchairs. In the same year, 23,780 scooters were supplied for a total cost of €79.5 million.
The following table illustrates how supply of wheelchairs under the Law on Provisions for the Disabled has increased every year since 1994 except 2000:

*Newly supplied wheelchairs, 1994-2001 (’000 and € million)*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Newly provided</td>
<td>16.1</td>
<td>29.8</td>
<td>39.5</td>
<td>39.7</td>
<td>42.5</td>
<td>47.2</td>
<td>43.5</td>
<td>47.7</td>
</tr>
<tr>
<td>Expenses</td>
<td>6.81</td>
<td>29.18</td>
<td>54.41</td>
<td>71.70</td>
<td>86.26</td>
<td>91.71</td>
<td>81.77</td>
<td>93.02</td>
</tr>
</tbody>
</table>

Source: SGBO, “Kerncijfers Wvg 2001”

The following table shows expenditure on assistive technology under the Health Insurance Act in 2001:

*Expenditure on assistive technology (€’000)*

<table>
<thead>
<tr>
<th>Health Insurance Act</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care items</td>
<td>161 130</td>
</tr>
<tr>
<td>Dentures</td>
<td>55 441</td>
</tr>
<tr>
<td>Orthoses and special footwear</td>
<td>79 839</td>
</tr>
<tr>
<td>Audiology devices</td>
<td>51 538</td>
</tr>
<tr>
<td>Aids for diabetes</td>
<td>56 203</td>
</tr>
<tr>
<td>Adaptations for the home</td>
<td>40 712</td>
</tr>
<tr>
<td>Elastic stockings</td>
<td>24 011</td>
</tr>
<tr>
<td>Assistive devices for treatment</td>
<td>24 405</td>
</tr>
<tr>
<td>Assistive devices for respiratory problems</td>
<td>24 264</td>
</tr>
<tr>
<td>Prostheses</td>
<td>14 460</td>
</tr>
<tr>
<td>Communication and signalling devices</td>
<td>14 193</td>
</tr>
<tr>
<td>Mobility aids</td>
<td>12 808</td>
</tr>
<tr>
<td>Visual devices</td>
<td>11 443</td>
</tr>
<tr>
<td>Devices for administering food</td>
<td>9886</td>
</tr>
<tr>
<td>Other assistive devices</td>
<td>5373</td>
</tr>
<tr>
<td>Repairs and maintenance</td>
<td>41 134</td>
</tr>
<tr>
<td><strong>Total assistive devices</strong></td>
<td><strong>626 841</strong></td>
</tr>
</tbody>
</table>

Source: Ziekenfondswet, Zorgverzekeraars Nederland

The Netherlands has only one producer of hearing devices and about 14 importers. The trade association of suppliers of hearing devices is GAIN. They estimate that about 130,000 hearing devices were
sold on the Dutch market in 2002. The market is expanding due to the increase in the number of elderly part. Estimates for 1999 give a figure of 117,000 devices.

The smallest company has 7 employees, the biggest a little more than 100. In the care insurers’ figures hearing devices come within audiology devices and account for expenditure of €43,458. It is estimated that about 300 audiologists are active in The Netherlands. There is a branch association that groups those audiologist centres (NVAB). \(^{124}\)

Competition on the market for hearing devices is growing and this has a direct influence on prices. In 1999, a major Dutch chain of opticians decided to sell hearing devices as well. They imported cheap hearing devices from Germany and sold them at a price close to the amount (about €455) financed under the health system (Regeling hulpmiddelen). As a result, other distributors also started to put such devices on the market. Previously, the average price was in the €900 to €1600 range.

Revaned, the sectoral organisation for Dutch retailers if Assistive Technology used for rehabilitation, has 29 members in about one thousand locations through the country. They have around 2,000 employees and had a total turnover of €300.6 million in 2001 (of which €203.48 million under the WVG regulation\(^{125}\); €36.47 million in nursing homes; €21.67 million through Care Insurers and €10.30 million on the private market).

It is estimated that the total domestic market for mobility aids (excluding wheelchairs) is about €2 million annually in expenditure and €9 million in leasing. For these products there are two main sectoral organisations: VNFR (Vereniging van Nederlandse fabrikanten van revalidatieproducten) and VERIN (Vereniging van revalidatiehulpmiddelen Importeurs Nederland).

There is a tendency to move the production of assistive devices which are not high tech to low wage countries. There are no real Dutch producers of mobility aids left on the market. The effect of this trend can be illustrated for rolators. As a consequence of the move of production of rolators to low wage countries, the market price came down from a range of €432 to €591 in 1990 to a price level of around €80 in 1998.

In the Netherlands, there are several major national wholesalers: OPG-Group, Interpharma and Brocacef. There are several national professional associations as Orthobanda, Revaned, KNMP (Dutch association of pharmacists) and the Stichting Overleg Medische Technologie (SOMT) for medical technology. An important umbrella organisation for producers and distributors side is NEFAMED (Nederlandse Federatie van Producenenten, Importeurs en Handelaren van Medische producten).

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\(^{124}\) Nederlandse Vereniging van Audicenbedrijven.

\(^{125}\) WVG – Wet Voorzienigen Gehandicapten.
4.7. Spain

4.7.1. Classification of Assistive Technology products

ISO1999 is used for classifying medical devices. The classification is updated and expanded in accordance with ISO instructions.

The Autonomous Regions use various types of classification for the non-medical assistive devices. The CEAPAT uses the ISO classification and is attempting to introduce a common ISO classification for all Autonomous Regions.

4.7.2. Demand side

More than 3.5 million people are disabled (1999) which is about 9% of the total Spanish population. There are more than 6.5 million over-65s.

Of the disabled persons 1,771,636 people had been assessed of which 1,555,431 persons have been recognised as being a disabled person.

<table>
<thead>
<tr>
<th>Age</th>
<th>Number</th>
<th>(% of total population per age group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>49,576</td>
<td>2.2</td>
</tr>
<tr>
<td>6-14</td>
<td>61,337</td>
<td>1.7</td>
</tr>
<tr>
<td>15-24</td>
<td>110,285</td>
<td>1.9</td>
</tr>
<tr>
<td>25-34</td>
<td>185,906</td>
<td>2.8</td>
</tr>
<tr>
<td>35-44</td>
<td>230,251</td>
<td>4.0</td>
</tr>
<tr>
<td>45-55</td>
<td>305,909</td>
<td>6.4</td>
</tr>
<tr>
<td>55-64</td>
<td>512,304</td>
<td>13.0</td>
</tr>
<tr>
<td>65+</td>
<td>2,072,652</td>
<td>32.2</td>
</tr>
<tr>
<td>Total</td>
<td>3,528,220</td>
<td></td>
</tr>
</tbody>
</table>
The severity of the disabilities is rather high in the group of assessed persons.

<table>
<thead>
<tr>
<th>Severity of the disability (following assessment) (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than -33%</td>
<td>216,205</td>
</tr>
<tr>
<td>33%-64%</td>
<td>744,831</td>
</tr>
<tr>
<td>65%-74%</td>
<td>470,560</td>
</tr>
<tr>
<td>75% or more</td>
<td>340,040</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,771,636</strong></td>
</tr>
</tbody>
</table>

Looking at the different types of disability in the population as a whole, it is clear that mobility problems, hearing and visual impairment are the major issues.

<table>
<thead>
<tr>
<th>Type of disability by age group</th>
<th>6-16</th>
<th>17-24</th>
<th>25-44</th>
<th>45-64</th>
<th>65+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental impairment</td>
<td>36,383</td>
<td>38,641</td>
<td>127,919</td>
<td>84,198</td>
<td>227,030</td>
<td>514,071</td>
</tr>
<tr>
<td>Visual impairment</td>
<td>14,339</td>
<td>19,428</td>
<td>77,392</td>
<td>154,822</td>
<td>573,735</td>
<td>839,716</td>
</tr>
<tr>
<td>Hearing impairment</td>
<td>13,068</td>
<td>15,971</td>
<td>78,318</td>
<td>171,902</td>
<td>548,102</td>
<td>827,361</td>
</tr>
<tr>
<td>Speech impairment</td>
<td>4,299</td>
<td>1,774</td>
<td>4,280</td>
<td>9,910</td>
<td>31,256</td>
<td>51,519</td>
</tr>
<tr>
<td>Ostoarticular impairment</td>
<td>8,808</td>
<td>14,607</td>
<td>110,114</td>
<td>364,552</td>
<td>757,761</td>
<td>1,255,842</td>
</tr>
<tr>
<td>Nervous impairment</td>
<td>8,954</td>
<td>13,028</td>
<td>41,869</td>
<td>67,513</td>
<td>168,210</td>
<td>299,574</td>
</tr>
<tr>
<td>Visceral impairment</td>
<td>1,547</td>
<td>1,813</td>
<td>20,559</td>
<td>92,388</td>
<td>208,836</td>
<td>325,143</td>
</tr>
<tr>
<td>Other impairment</td>
<td>3,118</td>
<td>1,426</td>
<td>5,908</td>
<td>36,514</td>
<td>474,623</td>
<td>521,589</td>
</tr>
<tr>
<td>Unknown</td>
<td>671</td>
<td>2,886</td>
<td>6,788</td>
<td>18,000</td>
<td>47,492</td>
<td>75,837</td>
</tr>
<tr>
<td>Number of disabilities</td>
<td>91,087</td>
<td>109,574</td>
<td>473,147</td>
<td>999,799</td>
<td>3,037,045</td>
<td>4,710,652</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>80,261</td>
<td>91,361</td>
<td>416,157</td>
<td>818,213</td>
<td>2,072,652</td>
<td>3,478,644</td>
</tr>
</tbody>
</table>

Note: The number of disabilities is more than the total number of disabled because of multiple disabilities.

A study performed by IMSERSO and CEAPAT shows that the use of assistive devices is low. Only half the disabled population uses assistive devices. The major reasons give are the high prices, the lack of information on devices which is felt by both users and professionals, the influence of the public provider systems, and the fragmentation and rather low level of development of the market on assistive devices.

Users of assistive devices are mostly on moderate incomes. The use of assistive devices seems to be income-related. Of those with a degree of disability of more than 33% but on incomes of below €300

126 Children under 5 years old are not included
a month, only 36.8% use assistive devices. This rises to 49.3% amongst those with monthly incomes of between €900 and €1,499.

4.7.3. Supply side

Spain is a major importer of Assistive Technology. Of all assistive devices about 70% are imported from other countries and about 30% are produced within Spain itself. Imports come mainly from the United States, northern Europe and to a lesser extent from Asian counties.

The Assistive Technology market in Spain can be described as very heterogeneous, very fragmented and underdeveloped. The wide range of professional, organisations, public authorities involved in the assessment of needs and the wide range of research centres and enterprises make the market very complex.

The overall impression is that there are too many obstacles to market developments. Problems that are mentioned include the lack specific regulation on technical standards and design, the absence of financial incentives for research, innovation and the application of new solutions, lack of scale in national production, inadequate professional training, problems with distribution and the excessively weak economic and financial position of the users which prevents them acquiring technically advanced assistive devices.

Most local manufacturers are small enterprises with often only a few workers and few products. As a result, more and more of these small enterprises are being forced out of the market by big foreign enterprises.

MOBILITY AND ORTOPROTHESIS:

The total Spanish domestic market for mobility aids and orthoprotheses is estimated at about €215 million. Orthoses account for about 37% or €80 million, protheses for 14% or €30 million and mobility aids for 42% or €90 million. These markets are growing at about 7% annually.\footnote{127 Libro Blanco, Ministerio de Trabajo y Asuntos Sociales-Ceapat-Cermi-IBV, 2003}

There are an estimated of between 400,000 and 500,000 potential wheelchairs users and between 75,000 and 100,000 potential electric wheelchair users.

About 50% of these products are imported, mainly from EU Member States (Germany, France and the UK.) In Spain about 100 enterprises manufacture or distribute mobility aids and orthoses. Most of these enterprises are small with mostly from 1 to 50 employees and turnover of between €0.6 and €6 million annually. In total, there are about 1,700 orthopaedic centres of which 1,000 are small and medium-sized businesses and 700 are micro-enterprises. Most of them (74%) have only between 1 and 5 employees. Only 1% has more than 50 employees.
Spanish production of protheses and mobility aids

<table>
<thead>
<tr>
<th></th>
<th>(€ mn)</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheelchairs</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>Anti-decubitus aids</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Walking devices</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Crutches and walking sticks</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>Person lifts and hoists</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Protheses</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Orthoses</td>
<td>60</td>
<td>45</td>
</tr>
<tr>
<td>AT for bathing</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>131</td>
<td>100</td>
</tr>
</tbody>
</table>

**VISUAL AIDS:**

The total Spanish market for visual aids is totally covered by ONCE and amounted to €5,353,367 in 2001. Most products are imported. Only 26% were made in Spain. Domestic production increased 12% in 2001 compared with 2000.

ONCE has a very special position in visual aids. Any visually impaired person with vision of 0.1 or less on the Wecker scale or a vision field of 10 degrees or less can be part of ONCE. About 62,000 people have access to aids through ONCE.

This huge organisation has its own research, assembly and production plant, CIDAT. Many Spanish enterprises work as a subcontractor for this centre. Around 40 mostly small and medium enterprises are active in the market for products for those with poor vision.

**HEARING DEVICES:**

Over the last 10 years the market for hearing aids has increased by more than 50% — from an estimated 70,000 units in 1994 to more than 105,000 in 2002. This represents a market value of about €146 million. The market is expected to increase by 3% annually over the next two years.

Spain mainly imports hearing aids. Internal production is very low. Only one Spanish producer has a product on the market (Microson). Most devices are imported from the US, Germany, Denmark, the Netherlands and Switzerland.

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128 Organización Nacional de Ciegos de España
129 Centro de Investigación, Desarrollo y Aplicación Tiflotécnica
Imports from the US are decreasing to the benefit of the European producing countries. Distribution is organised through multiple audiological centres and opticians. More recently, pharmacists have begun selling hearing aids.

**PC INPUT – OUTPUT DEVICES:**

The number of disabled people with specific communication problems and as such potential users of PC devices is estimated at 372,000. (This number does not include people with other disabilities that could also benefit from such devices)

Within Spain about 92 enterprises are active on this specific market as either a producer or distributor. Most of them are also small enterprises with an average of 1 to 10 employees. Many basic input and output devices are purchased through mainstream PC retailers.

**DISTRIBUTION CHANNELS:**

Most assistive devices are distributed via specialised enterprises which mostly started out as traditional orthopaedics resellers. Many of these enterprises have grown significantly in the last decade and have reached a level of specialisation enabling them to import directly from abroad. About 250 enterprises mass produce products themselves.

Ways of distribution of assistive aids:

<table>
<thead>
<tr>
<th>Overall through</th>
<th>Distribution Elderly people (%)</th>
<th>Disabled people (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialised shop</td>
<td>80</td>
<td>41.6</td>
</tr>
<tr>
<td>Traditional orthopaedic outlets(^{(1)})</td>
<td>9</td>
<td>24.8</td>
</tr>
<tr>
<td>Pharmacies/drug stores</td>
<td>13</td>
<td>17.2</td>
</tr>
<tr>
<td>Public organisations</td>
<td>-</td>
<td>12.8</td>
</tr>
<tr>
<td>Commercial outlets</td>
<td>-</td>
<td>5.6</td>
</tr>
<tr>
<td>Private organisations</td>
<td>-</td>
<td>2.8</td>
</tr>
</tbody>
</table>

\(^{(1)}\)(of which there are some 1,100 in Spain)

Source: Libro verde
4.8. Sweden

4.8.1. Classification of Assistive Technology products
Assistive technology products are mostly classified according to ISO9999, Classification of Technical Aids for Disabled Persons.

4.8.2. Demand side
Sweden has a population of about 8.9 million people. In a study\textsuperscript{130} on living conditions Statistics Sweden\textsuperscript{131} has given an indication on the number of people with a degree of functional reduction. Some diseases are also included here.

<table>
<thead>
<tr>
<th>People with certain functional reductions (est.)</th>
<th>Aged 25–64</th>
<th>Aged 65–84</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart disease</td>
<td>80,000</td>
<td>220,000</td>
</tr>
<tr>
<td>Asthmatic</td>
<td>270,000</td>
<td>110,000</td>
</tr>
<tr>
<td>Allergy</td>
<td>380,000</td>
<td>85,000</td>
</tr>
<tr>
<td>Diabetes</td>
<td>85,000</td>
<td>115,000</td>
</tr>
<tr>
<td>Stomach or intestine disorder</td>
<td>125,000</td>
<td>55,000</td>
</tr>
<tr>
<td>Psoriasis</td>
<td>180,000</td>
<td>40,000</td>
</tr>
<tr>
<td>Mental disorder</td>
<td>150,000</td>
<td>55,000</td>
</tr>
<tr>
<td>Mobility impairment</td>
<td>130,000</td>
<td>260,000</td>
</tr>
<tr>
<td>Visual impairment</td>
<td>25,000</td>
<td>80,000</td>
</tr>
<tr>
<td>Hearing impairment</td>
<td>435,000</td>
<td>380,000</td>
</tr>
<tr>
<td>People with a severe reduction of ability to work</td>
<td>425,000</td>
<td>270,000</td>
</tr>
<tr>
<td>Help dependent people</td>
<td>45,000</td>
<td>110,000</td>
</tr>
</tbody>
</table>

Source: SCB

According to figures from the Swedish Handicap Institute\textsuperscript{132} at least 1.35 million Swedes (19\%) have some kind of reduction in functionality and 560,000 (6\%) have some kind of mobility impairment. About 165,000 people have a severely reduced vision. Four to eight percent of the population is dys-

\textsuperscript{131} SCB, Statistiska Centralbyrån
\textsuperscript{132} S.Helin, Swedish Handicap Institute, avdelningen för analys och verksamhetsutveckling, May 2003
lexic or has serious reading or writing difficulties; even more have milder problems. About 150,000 people aged 16 or more are hearing impaired or are deaf and about 270,000 wear hearing aids. The Swedish Association for the Hard of Hearing is convinced that many more should make us of hearing devices. About 37,000 people are registered as having a significant intellectual disability.

Prudence is called for when analysing statistics figures on disability because different definitions of ‘disability’ and ‘functional impairment’ produce very different results. Is a person wearing glasses disabled? Where do you draw the line? How do you take into account people with more than one impediment? How do you make the diagnosis? These questions and more need to be borne in mind when analysing the figures above. Compared with the general belief that about 10% of Europeans have some kind of disability the Swedish figures are rather high. Nevertheless we should not conclude that there is more disability in Sweden than in the rest of Europe. A potential reason for these high figures could be the wide acceptance of disability in society.

4.8.3. Supply side

The Swedish Association of Suppliers of Medical Devices, SLF133, is the business organization of medical technology industry in Sweden. SLF has about 140 members with sales figures (for medical devices in general) of about SEK6.5 billion in Sweden and at least as much for export. The members are both small and large enterprises, manufacturers and importers, subsidiaries of international companies, private and public companies, agencies, research and logistics companies.

Since 2002, the Swedish Handicap Institute has had a special procurement department. (the former SUB). Its task is the procurement on a national basis of good, safe and value-for-money Assistive Technology, for principals in the health care sector. These principals spend about SEK2 billion annually on assistive devices. The procurement department establishes call-off contracts in which all prices and terms are fixed for the duration of the call-off contract, including accessories and spare parts. This makes it easier for county councils to buy assistive devices: they do not have to bargain every time they want to buy Assistive Technology.

133 Sjukvårdens LeverantörsFörening
Ten largest contract areas in 2001

| Manual wheelchairs       | 280.6 |
| Hearing aids             | 277.0 |
| Electric wheelchairs     | 207.0 |
| Beds etc                 | 116.1 |
| Walking aids             | 105.0 |
| Person lifts             | 101.0 |
| Hygiene devices          | 70.8  |
| Cushions, mattresses     | 64.8  |
| Respiratory devices      | 53.0  |
| Chairs                   | 42.0  |
| **Total**                | **1317.3** |

Source: SUB

These ten contract areas, with a total value of SEK1317.3 million constitute about 90% of the total purchases through the former SUB.

Four out of ten items in this list are in the group of aids for personal mobility (code 12 in ISO9999): manual and electric wheelchairs, walking aids and personal lifts. Wheelchairs are the biggest group of purchases. Manual and electric wheelchairs, together with accessories, spare parts, sittings and backs, accounted for SEK527 million of purchases in Sweden in 2001. This is about 37% of the costs for all assistive devices purchased by municipalities and counties through these call-off contracts. Scooters now take 36% of the market of electric wheelchairs. According to the suppliers, 84% of the wheelchairs are Swedish products. In the eighties this was only 30%.

The aids for communication, information and signalling (code 21 in ISO9999) are represented in this list by the hearing aids. About 76,000 hearing aids were sold in 2001. This figure is 15% higher than in the previous period, reflecting a trend to order hearing devices for both ears.

4.9. United Kingdom

4.9.1. Classification of Assistive Technology products

The Disability Living Foundation (DLF) manages a comprehensive database of existing Assistive Technology products that can be made available in the United Kingdom via a British distributor. This database is only used as an index as such and is not readily useable for the wider public. The database however is used by most DLCs in order to identify products of interest for them.

4.9.2. Demand side

Various national organisations deliver statistics on the disabilities population in the UK. They include the Department of Health, the Department of Trade and Industry, the Office of Statistics, and the Disability Rights Commission via the DRC Disability Briefings. However a complete picture is difficult to obtain due to the fact that these statistics focus on categories of the population (e.g. only the labour force).

Some facts and figures about disability in the UK in 2003 are given below based on statistics from the ONS, NCSR, RADAR and the Employers’ Forum on Disability (EFD) and provided by the EFD:

− there are approximately 8.6 million disabled people in the UK covered by the Disability Discrimination Act. This represents around 15 percent of the population;
− most disabled people acquire their disability during their working life or later;
− over 5.5 million disabled people are of working age. This represents 16 percent of the working population;
− only 50 percent of disabled people of working age are in employment compared to 87 percent of non-disabled people of working age;
− disabled people are nearly five times as likely as non-disabled people to be out of work and claiming benefits. Of the 2.8 million disabled people on state benefits and not in work nearly 1 million would like to work;
− fewer than 8 percent of disabled people use wheelchairs;
− by the year 2010, 40 percent of the UK population will be over 45 - the age at which the incidence of disability begins to increase significantly;
− at least one in four customers either has a disability or is close to someone who is;
− the estimated annual purchasing power of people with disabilities is £40-£50 billion.

4.9.3. Supply side

The market for supply of Assistive Technology in the United Kingdom is generally qualified as being in a poor state. Profitability is low, therefore expenditures in research and development are almost negligible, leading to very little innovation.

The National Health Service’s forceful cost reduction strategy NHS is often mentioned as the underlying cause. Hence, choice for people with disabilities is almost inexistent, and they are supplied essentially with basic and standardised equipment.
There is a large trading organisation, the BHTA (British Health Trade Association) which maintains a code of practice for conducting business in the UK for its members.

The market actually depends on the kind of Assistive Technology product. For wheelchairs, British manufacturers can hardly compete with countries with lower labour costs. Therefore, some organisations go as far as to say that this market is “dead” as far as they are concerned.

For hearing aids, the NHS has launched a huge initiative to replace older analogue devices with digital devices. This has led to increased activity in the sector. The market for communication devices is very active due to the realisation by the authorities of the increasing and strategic importance of communication aids in supporting independent living.

It is very hard to obtain consolidated national figures on dissemination of Assistive Technology products, due to the mix of central and local funding.

The only organisation that has a mandate for obtaining details from all local authorities is the Audit Commission. The table below comes from its report “Fully Equipped – The provision of equipment to older or disabled people by the NHS and social services in England and Wales”.

<table>
<thead>
<tr>
<th>Type of equipment</th>
<th>Annual expenditures (£ mn)</th>
<th>Annual number of new users</th>
<th>Estimated total number of users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheelchair</td>
<td>92.5</td>
<td>-</td>
<td>640,000</td>
</tr>
<tr>
<td>Community equipment</td>
<td>110m - 120</td>
<td>-</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Audiology</td>
<td>55</td>
<td>220,000</td>
<td>2,000,000</td>
</tr>
</tbody>
</table>

Source: Audit Commission 2002

The Audit Commission also provides figures on the actual penetration of hearing aids within the relevant population. Hearing loss being associated with advancing age. More than 90% of the over 80’s experience hearing loss; 80% would benefit from a hearing aid, but only approximately 25% actually have one. These ratios between the potential population and actual use more or less hold true when looking at figures for other age groups.
5. The Assistive Technology delivery system

5.1. Introduction

The Assistive Technology delivery system can be seen as a dual system, with end-users acquiring products on the one hand, and suppliers supplying the market with their products on the other.

This section considers issues that impact on the equilibrium between demand and supply, bearing in mind from the outset that the environment for both demand and supply remains highly regulated. This prevents free competition leading to equilibrium in the way theoretical market models suggest they should.

5.2. End-user’s perspective

What is meant by the national delivery system is the actual process in a given country that starts when the expression or recognition of a need is identified for a person with a disability and goes up to the time when the adequate technical aid is fully operational and useable by the same person.

The different steps in the overall process are depicted in the figure below and are directly imported from the previous HEART study published in 1993. These steps make it possible to characterise in a sufficient detail level the various phases that make up the delivery system.

The various steps are:

- initiative: initiation of the overall service delivery process;
- assessment: recognition of the need for a technical aid (e.g. by a general practitioner with a prescription);
- typology: recommendation for a type of technical aid (e.g. one particular model of wheelchair);
- selection: final choice of the technical aid among the different types available;
- financing: organisation of the payment for the technical aid (either through official or personal funding channels);
- delivery: physical delivery of the technical aid to the disabled person, including training and setup if required;
- follow-up: maintenance and, for the longer term, continuous monitoring that the technical aid is still the appropriate one for the individual requirements of the disabled person;
A number of points are identified in relation to each step and will constitute the criteria for comparison in the final trans-national comparative analysis. The proposed criteria are:

**Comparative analysis of national delivery systems**

<table>
<thead>
<tr>
<th>Step</th>
<th>Example of questions/criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Initiative</td>
<td>Who takes the initiative for starting a procedure?</td>
</tr>
<tr>
<td></td>
<td>How much support/advice is provided to the requestor when starting a procedure?</td>
</tr>
<tr>
<td>2. Assessment</td>
<td>Who performs the assessment?</td>
</tr>
<tr>
<td></td>
<td>How “AT-aware” is the assessor? Is the prescription sufficiently detailed?</td>
</tr>
<tr>
<td></td>
<td>How long does it take for the assessment to be completed?</td>
</tr>
<tr>
<td></td>
<td>What is the degree of uniformity for the assessment procedure?</td>
</tr>
<tr>
<td></td>
<td>How far are special/individual needs taken into account during the assessment?</td>
</tr>
<tr>
<td>3. Typology</td>
<td>How many independent centres provide information about technical aids?</td>
</tr>
<tr>
<td></td>
<td>How many of these centres have exhibition halls where the technical aids can be tested?</td>
</tr>
<tr>
<td></td>
<td>How are these centres geographically distributed?</td>
</tr>
<tr>
<td></td>
<td>Is there a central database of technical aids that can be accessed by all centres?</td>
</tr>
<tr>
<td></td>
<td>To what extent is the end-user involved in the typology process?</td>
</tr>
<tr>
<td>4. Selection</td>
<td>What are the criteria most often used for finally selecting the technical aid?</td>
</tr>
<tr>
<td></td>
<td>Who has the power over the final decision?</td>
</tr>
<tr>
<td></td>
<td>Can the user try the equipment? Or get it for a trial period?</td>
</tr>
<tr>
<td>5. Financing</td>
<td>What is the part covered by official funding?</td>
</tr>
<tr>
<td></td>
<td>If official funding is not possible, are there alternatives? How efficient are they?</td>
</tr>
<tr>
<td></td>
<td>To what extent is financing a barrier for the acquisition of a technical aid?</td>
</tr>
<tr>
<td>6. Delivery</td>
<td>Who actually delivers the technical aid?</td>
</tr>
<tr>
<td></td>
<td>Are training and setup systematically included in the actual delivery?</td>
</tr>
<tr>
<td></td>
<td>Is documentation available in the local language?</td>
</tr>
<tr>
<td>7. Follow-Up</td>
<td>What is the frequency of the re-assessment of the solution provided?</td>
</tr>
<tr>
<td></td>
<td>How is repair/maintenance performed? <strong>Who pays for it?</strong></td>
</tr>
<tr>
<td>Overall Process</td>
<td>What is the duration of the overall process? Where are the bottlenecks?</td>
</tr>
<tr>
<td></td>
<td>What is the proportion of people with disabilities who actually benefit from the system?</td>
</tr>
<tr>
<td></td>
<td>What is the satisfaction level of the users?</td>
</tr>
<tr>
<td></td>
<td>What is the percentage of the costs actually borne by official funding?</td>
</tr>
</tbody>
</table>

Obviously, not all questions could be answered for each country, thus making a real comparison very difficult. Nevertheless, these questions and their answers contribute interesting elements that help understand the intrinsic characteristics of each system.
5.2.1. Denmark

INITIATIVE

The procedure for getting Assistive Technology could start anywhere. The initiative can come from the person with the disability, the general practitioner, a social worker, a parent or a guardian. The local council can give advice in this or could refer to one of the fourteen regional centres for technical aids for more specialised information. Most regional centres can be contacted by phone and are open one day a week to the public.

ASSESSMENT

In some cases it is the general practitioner who does the assessment, in others it is the occupational therapist. The county council could ask for both to be involved to get a better assessment. The time to complete the assessment varies depending on the kind of device needed and there might be differences between the different local councils. There is no central regulation on this. People are, however, given an estimation of how long it will take approximately to get the device needed. Since the assessment has to be based on the needs of the individual, individual requirements are fully taken into account.

TYPOLOGY

The Danish Centre for Technical Aids for Rehabilitation and Education, founded in 1980, is the Danish national information and resource centre. Its aim is to contribute to the creation of equal opportunities for disabled persons - within the areas of rehabilitation, Assistive Technology, special education, and ICT (information- and communication technology) accessibility. This centre operates both on a national and an international level, in co-operation with disability organisations, government authorities, institutions, research centres and clearing houses, local contacts in the field of rehabilitation and education, as well as manufacturers and suppliers. Moreover, there are fourteen regional centres, one for every county. They all have exhibition halls where the technical aids can be tested.

Everyone can access a database of assistive devices (Hjælpemiddelbasen) over the Internet. This database gives purchasers and users an overview of the assistive devices available on the Danish market. Product information is provided, with pictures and technical data. There is information on where to buy these products via addresses and web links.

Users are involved whenever necessary in this process. For some particular aids they can even choose their own supplier after the assessment.

SELECTION

No one single criterion predominates in the eventual selection of the product. Price, quality and suitability are all important in the final decision. It is the local authority which has the final say in the selection. Users can try the devices when necessary.
FINANCING

Normally, the users do not have to pay and the local or regional authority completely finances the assistive devices. When the device is a consumer item that can be found in almost every normal household (like PC’s and washing machines), the user has to make a 50% co-payment, though there are exceptions for goods that are only used as an aid.

DELIVERY

Most often it is the regional or local centres which deliver the devices. They have specialists to adapt the aids to the needs of the users. Alternatively, a supplier, doctor or occupational therapist may deliver the device. Training and set-up are included in the delivery when needed. Documentation is available in Danish.

FOLLOW UP

Re-assessment is done when necessary. This is done at local or regional level. Repair and maintenance is free for the user.

OVERALL PROCESS

The duration of the process is difficult to estimate. It depends on the type of product and its price. There is no kind of register on the amount of people benefiting from this system or their satisfaction level. Local or regional authorities finance the Assistive Technology provided.

5.2.2. France

INITIATIVE

For all products that are considered by the social security for reimbursement, the initiative is taken in most cases in close collaboration with the general practitioner who will issue a prescription. For other products, there is no single procedure. Basically the disabled person, or the person’s family, representatives, friends, colleagues, etc. will take the initiative in searching for an adequate product.

Information and advice for users are largely handled information and advice centres on technical aids, known as CICATs (Centre d’Information et de Conseil sur les Aides Techniques), by large end-user associations like the association for those with neuromuscular diseases, AFM (Association Française contre les Myopathies) or the association for the paralysed APF (Association des Paralysés de France) and by some suppliers directly. Within municipalities, the local social services can also provide information. The Internet is also becoming a significant channel for information, and it is allowing those with disabilities in a growing number of cases to access suppliers directly, without having to go via intermediates. However, experience shows that professional and human contact always proves more efficient in addressing the problem in its entirety.

In some very well-equipped CICATs (not all of them), there is an exhibition hall where it is possible for end-users to visualise and test the product directly, and even to make comparisons between alternative products where there are any. Some suppliers also spend time and energy in advising customers. In some cases, they may even deliver a device to the home of the customer for a free trial period.
Finally, there are a number of trade events (exhibitions) organised throughout the year where suppliers present their products.

There is discussion as to whether the figure of 700 Assistive Technology devices which can be obtained with (at least partial) official funding in France is enough. In practice, however, virtually all the estimated 35,000 Assistive Technology devices that exist in Europe can be made accessible in France.

**ASSESSMENT**

The assessment of the person’s needs is often carried out in the health system (e.g. in hospital or a rehabilitation centre) or within a local social service centre (CCAS - Centre Communal d'Action Sociale).

In some cases, assessment can also be performed by individual professionals, such as social workers, health professionals, or by multidisciplinary teams which are more or less structured (including, for example, general practitioners, occupational therapists, and social workers).

**TYPOLOGY AND SELECTION**

In most cases, the person with a disability obtains a prescription from a general practitioner. Then the final selection of the product will generally be made by the general practitioner but with assistance from others such as retailers and pharmacists. This is because most general practitioners lack adequate education and up-to-date knowledge of the Assistive Technology market.

If the person with a disability has had preliminary contact with a structured team (such as an SVA – Site pour la Vie Autonome), then it is the occupational therapist who will be in the best position to evaluate the person’s needs in their own her environment and to propose an adequate solution. Occupational therapists have a national diploma after three years of para-medical studies and are therefore especially trained for bridging the gap between technical products and medical constraints. Even if it is the occupational therapist that performs the analysis and comes up with a final proposal, it is still the doctor which must prescribe. The doctor is normally part of the same structured team as the occupational therapist.

As end-users can have to put up some of the money, they are involved in the final selection. As a consequence, the selection criteria are in most cases primarily based on the price rather on the functional adequacy of the product. For simple and inexpensive devices, the selection will be made directly by the end-user or the person’s relatives in collaboration with the retailer. For expensive devices, the end-user might be assisted by an occupational therapist in order to select the appropriate product.

Obviously, the amount of official and other legal financing the end-user will be able to obtain will be a critical criterion for the final selection.

**FINANCING**

If the product selected is listed in the LPPR (which has replaced the TIPS), then there is a fixed reimbursement amount and the difference between this amount and the price has to be financed by other means.

For products that do not figure in the LPPR, or for complementary financing, the first point of call is the mandatory health insurer (e.g. CPAM - Caisse Primaire d’Assurance Maladie). There, each re-
quest is examined on a case-by-case basis and financing will depend on current availability of funds. These funds also have contingency funds, but there are strict conditions to be met by the applicant.

Besides the sickness insurance funds, there are a number of organisations which can provide financial help. There is no procedure on who to contact at what time and where. This is up to the end-users and their relatives. For an expensive product, it is not uncommon to have more than 20 different organisations in addition to the social security each contributing part of the purchase price. As examples, the following organisations can help:

- CAF (Caisse d’Allocations Familiales)
- Regional Council (« Conseil Général »)
- CCAS (Centres Communaux d’Action Sociale)
- CDES (Commission Départementale de l’Education Spécialisée)
- AGEFIPH (Association Nationale de Gestion du Fonds pour l’Insertion Professionnelle des Handicapés)
- COTOREP (Commission Technique d’Orientation et de Reclassement Professionnel)
- Pension funds
- Private insurers («Mutuelles »)
- Municipalities
- End-user associations (e.g. AFM, APF)
- Charities.

Most of the complexity of the system resides in the preparation of the financial solution to acquiring the technical aid selected. Structured teams such as the SVA aim to play a central role in this in the future. Until now, this was left to people with disabilities and their relatives. Often, suppliers also act as advisors or facilitators in this process, as it is in their interest that the transaction can ultimately take place.

DELIVERY AND FOLLOW-UP

Physical product delivery, training and maintenance are usually handled by the supplier. If installation or configuration is necessary, then this will be dealt with directly by the supplier. The associated costs are normally included in the overall agreed price. When maintenance and repair for the product are provided for in the LPPR, then the associated costs are known in advance. The situation is often more complex when dealing with foreign suppliers due to distance, lack of spare parts and rapid product evolution.

Some suppliers demonstrate flexibility by making products available to be tested by the end-user in real-life situations. However these facilities are restricted to larger scale suppliers who can take underlying risks (e.g. immobilisation between manufacturer, distributor, and end-user).

The time for the physical delivery of the product ranges between one and a few days. In very rare cases where the device is not readily available in France, then it can be ordered in less than one month at most. The delivery time is negligible when compared with the time needed to ensure the financing.

For some products, the LPPR stipulates what the duration of the guarantee must be and when a new product can be delivered to replace the previous one. However, nothing is stipulated for most products, including hearing devices and wheelchairs.
5.2.3. Germany

INITIATIVE AND ASSESSMENT

Social Law Code V\textsuperscript{134} sets out specifically what the delivery system must encompass. The basic principle\textsuperscript{135} is that all people insured by a sickness fund have the right to receive the technical aids they need (visual aids, hearing aids, prostheses, orthopaedics and other technical aids) in order to alleviate a situation of disability. This is valid as long as the medical preconditions are met and providing there are no legal limitations on the kind of technical aid that is requested (e.g. a number of devices that provide general domestic help not only for people with disabilities, such as electric can-openers, are explicitly excluded by SGB V). The law establishes principles for the performance of the overall delivery system. The service must be sufficient, to the point, and economically sound. The service must not go beyond what is necessary.

A person with a disability must first obtain a prescription from the general practitioner. Technical aids can be prescribed by the GPs without their care budget being impacted (unlike other prescribed products).

Information on technical aids for people with disabilities can be obtained from various sources. On the medical side, the general practitioner, an occupational therapist or even a pharmacist might all provide useful information on which kind of device can prove useful for a particular case. The sickness funds are the only source of information on financing. Other information can also be obtained from producers and retailers during large rehabilitation exhibitions, or from end-user associations (self-help organisations depending on the types of disability). Advice can also come from organisations like the coordination services “Rund ums Alter” (Roundabout Age) which has set up information desks throughout Germany, which may be staffed, for example, by the German Red Cross and the Sozialverband Vdk. There is an electronic version of the comprehensive directory of the available technical aids on the freely available REHADAT CD-Rom.

TYPOLOGY, SELECTION AND FINANCING

Then either the disabled person or the corresponding sickness fund will send the prescription to the provider (“Leistungserbringer”) who will make a proposal for an adequate product, including the financial dimension. In some cases, the selection is made jointly with the disabled person. However this is not done systematically as it is practically impossible to take all wishes into consideration when selecting a product. Some sickness funds have contracts with providers, thus limiting the choice of selected products. Others have a pool of products were returned from previous users. Hence, they may have a tendency to propose these second-hand products for cost reasons.

Provided the technical aid is present in the sickness fund’s listing, then the sickness fund will take on the costs, up to the indicated amount. The same process occurs for individual customisations or for repairs. If the disabled person chooses another, more expensive product, then that individual has to finance the additional costs, after negotiation with the sickness fund. In every case, the technical aids remain the property of the sickness fund so that it can maintain or repair the technical aid as if it had been acquired the standard way. When the need for a technical aid is only temporary, it may be possi-

\textsuperscript{134} SGB – Sozialgesetzbuch V
\textsuperscript{135} § 33 Abs. 1 SGB V - Hilfsmittel
ble to borrow the equipment for the required duration. Some technical aids can be lent by the sickness funds, by social departments or retailers.

**DELIVERY AND FOLLOW-UP**

The providers of the Assistive Technology solution identified during the assessment are responsible for actually delivering and, if necessary, adapting the product to the situation of the disabled person.

Basic training on how to use the product can be provided at the same time. This is often limited and it is not uncommon for a disabled person to experience problems in using the product in an optimal way.

There is no structured follow-up after delivery. It is up to the disabled person to contact either the sickness fund or the provider of the product in case repair or maintenance is required. If a re-assessment of the needs is required, then the overall procedure must be started again.

**5.2.4. Italy**

**INITIATIVE**

The initiative is generally the process whereby the patient, the patient’s family member, or others refer to a general practitioner. This doctor then clinically evaluates the patient and provides a prescription authorising a visit to a medical specialist (employed by an ASL) and attached to a public occupational therapy and rehabilitation centre, hospital, or research clinic.

There are also many sources of information which may aid disabled people in gaining information on assistive devices. Associations for disabled people at national, regional, and local levels offer information, rehabilitation, educational and social services on assistive devices. SIVA\(^{136}\) (Assistive Technology Research and Information Centre) is the main Italian point of reference for information and counselling on technical aids. SIVA has information points distributed in nine of Italy’s regions, organises seminars on varying topics and also offers the ability rehabilitation professionals to subscribe to a database on the information services offered all over the country.

**ASSESSMENT**

The assessment of the user is carried out by a medical specialist of the public occupational therapy and rehabilitation centre, hospital, or research centre. The specialist defines the appropriate assistive device, the individual needs of the patient, and takes into consideration technical developments and associated costs together with the user. A standard form is compiled for each user either during the initial consultation period or beforehand by the user’s GP. The form is a means of obtaining information pertaining to the needs of the user and enables the centres to gain an understanding beforehand of the devices that may be suitable. The contents of the form (which is based on criteria relating to the user’s invalidity, family status and capacity for movement), may vary according to the ASL to which the centre is attached. The assessment may also involve the aid of a technical engineer in cases where the device may have to be personalised for the user.

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\(^{136}\) Servizio Informazioni e Valutazione Ausili
According to Art. 14 of the National Register (Law no. 332 of 1999), the initial assessment should include:

- a complete clinical and instrumental evaluation of the user;
- an indication of the assistive device prescribed, complete with the identification code found in the National Register, and an indication of any modifications that may needed to be made to the device;
- a therapeutic programme on the use of the device, the limits and the duration of the device, and possible side effects;
- information for the user or person assisting, on the functional and therapeutic characteristics and on how to use the device.

The duration of the assessment process varies according to the type of device being prescribed. The prescription is accompanied by a rehabilitation programme which teaches the patient the features, functional and therapeutic characteristics, and use of the device. The rehabilitation program is used to allow the patient to gain an understanding of the use of the device as well as the limits to its use, and the performance of the device.

Throughout the assessment period users are allowed the possibility of interacting with the consultant, trying devices in the centre and voicing an opinion on the selection of devices available on display or illustrated. The opinion of the user is taken into consideration by the consultant but it is the consultant who has the jurisdiction to choose the device which best seems suitable for the user. For example, a consultant may prescribe a manual wheelchair for someone who is deemed not to need an electric wheelchair even if they would prefer one.

Consultants working within the centres are occasionally educated on new devices on the market or new to the National Register. This is commonly done through briefings and training seminars which are held internally as well as externally (e.g. seminars may be held for school teachers to educate them on what devices they may offer to disabled students).

**Typology**

There are public occupational therapy and rehabilitation centres, hospitals, and research centres throughout Italy’s Regions. The centres, which are generally located close to the main cities, provide information and consultation services free of charge for disabled persons needing assistive devices.

The centres also supply information on rehabilitation professionals and therapists in hospitals as well as nursing homes whilst maintaining an up-to-date source of information on a database. This is a means of providing patients who are based at home with access to devices, information and assistance through hospitals.

**Selection**

Once the specialist has defined the needs and the requirements of the user, the specialist with the aid of the user chooses the device deemed suitable. The prescription for the device is then forwarded to the centre for prosthetic assistance of the user’s ASL whose responsibility it is to authorise the purchase of the device.
A person visiting an ASL not commonly theirs may be assisted in choosing an assistive device, but the prescription for the device will be forwarded to their ASL of residence, whose responsibility it is to supply the device.

The authorisation process for the supply of the device includes:

− verifying if the person has the right to the assistive device;
− verifying the medical prescription against the devices codified in the National Register.

If the prescription is accepted, then the decision is communicated to the user within twenty days. A failure on behalf of the ASL to communicate with the user within 20 days of the decision is deemed to be recognised as meaning that silence means consent.

The specialist and the user also decide whether the device should be within the characteristics and price limit of those itemised on the National Register. Assistive devices listed in the National Register may only be supplied to the following people:

− people with a degree of disability equal to or greater than 33%;
− those affected by a disability who have the right to an accompanying person;\(^{137}\)
− persons under the age of 18 years who have a permanent disability;
− persons in a public or private health institution who urgently need orthoses, prostheses or other technical devices;
− disabled war victims.

Anyone disabled as the result of a workplace accident are supplied with the necessary services for the procurement of assistive devices directly by the state work accident insurer, INAIL (Istituto Nazionale per l’Assicurazione contro Infortuni sul Lavoro). The expenses associated with the supply of the assistive devices are entirely met by INAIL according to rules established by the institute itself. The employer in this situation is required to inform the user’s local INAIL branch of the accident. INAIL does not define who is eligible for the supply of assistive devices but provides assistance to all those affected by accidents in the workplace, regardless of their level of invalidity.

FINANCING

The standard way to obtain partial or full funding for assistive devices in Italy is the Service Delivery procedure of the SSN, based upon the National Register issued by the Ministry of Health (last issued 27/08/1999).

All devices included in the National Register are offered to users free of charge by the SSN. There is no expense to the user from the supply of these devices.

Should a user choose a type or model of device not included on the National Register but deemed to have the same functional characteristics as that prescribed by the specialist, authority may be given to supply the device on condition that the recognised cost of the device be that of the corresponding device found on the National Register.

If the device selected costs more than the corresponding device found on the National Register, then the user must pay the extra. Unlike the cost associated with the corresponding device found in the

\(^{137}\) Art.1 of Law no.18 of 11/02/1980
National Register, the surplus is not reimbursable. Art.1 comma 6 of Law n.332 of 1999, states that ASLs may authorise, only once, the supply of device not included in the National Register for users affected by severe disabilities. The supply of such devices only comes after the Ministry of Health, the Regions and the Provinces decide that the user is in need of such a device. This is sometimes utilised by users as a means of avoiding paying the extra. The ownership of a device acquired in such a manner is left to the discretion of the ASL and user, as there is currently no law which defines the correct ownership.

Assistive devices that are not listed on the National Register (e.g. touchtone phones, Internet accessories, mobile phones etc.) cannot be provided through the SSN and have to be paid for directly by the patient. Part of this expenditure is borne by the SSN. Art.1 of Law 263/1989, comma 3, provides for a reduced rate of Value Added Tax (IVA) to 4 percent (instead of 20%) for the purchase of assistive devices and prostheses for people with permanent disabilities. These devices can be acquired by providing a copy of the certificate of invalidity, and a medical prescription from a specialist attached to the ASL responsible for the disabled person. In this case it is not necessary that the supplier have a convention with the ASL as a recognised supplier. There are a number of exceptions to these rules:

- home alterations, where some funding is provided through Private Housing Architectural Barriers;
- aids for the blind for integration in school, where funding is provided through the Provinces.

It is also possible to take a deduction from income tax of 19 percent of the cost of purchasing assistive devices\(^{138}\). The following are some of those devices which may be claimed:

- wheelchairs for the disabled;
- devices for the containment of fractures and for the correction of injuries sustained to the spinal cord;
- the acquisition of artificial limbs to be utilised to aid walking; devices utilised for lifting (e.g. electric platforms, electric stair lifts).

**DELIVERY**

The process of delivering the assistive devices to the patients is undertaken by the authorised resellers. Devices in attachment no.1 of the National Register (primarily orthoses and prostheses) are supplied by resellers registered with the Ministry of Health. The resellers can register with the Ministry of Health by compiling a form provided by the Ministry which identifies information pertaining to the supplier as well as devices they nominate to supply. The list of registered resellers in Italy is provided by the Ministry of Health’s website. Devices in attachments no.2 and no.3 are supplied by resellers stipulated in contracts made with each ASL through a public tender process.

It is the responsibility of the reseller to ensure that the user receives the device as prescribed by the medical specialist as well as detailed instructions on its maintenance. Devices which have to be personalised must be delivered and installed by a specialised technician.

Upon delivery the user signs a declaration stating that the device has been received. This is then provided to the ASL. It is the responsibility of the reseller to contact the ASL within three working days to communicate that the prescribed device has been supplied to the user.

\(^{138}\) Decree no. 633/72, decree no. 91/86, Law no. 263/89
Within 15 days of the date on which it was contacted by the reseller, the ASL must contact the patient, inviting them for a trial to ensure that the device corresponds to the prescription. If the user is not satisfied with the device after delivery or if the specialist discovers that the characteristics of the device do not correspond to the medical prescription, the “acceptance” will not be signed and the reseller will remain liable for the supply or modification of new devices.

If the trial was successful then the ASL has to pay within 90 days. If the trial is not done within 20 days then the device is automatically recognised as being accepted and the payment procedures commence.

The maximum delivery times for all devices are set out in the National Register. They can be found in the second part of the National Register. They may vary according to the type of device being prescribed (varying from 5 to 60 working days).

The Assistive Technology delivery system does not have a standard completion time. The completion time may vary according to numerous criteria, some of which are briefly described as follows:

- consultation period: a device such as software for a computer may only require a single consultation period which will thus greatly shorten the process compared to a device such as a prosthesis which will involve a number of consultation sessions, lengthening the process;
- differing ASLs: the allocation of services is managed by each ASL. Thus the time taken to complete the process will vary according to each ASL and the personnel it has available to dedicate to the process;
- resellers: the delivery time taken to supply the user with a device may vary according to reseller. Different resellers may supply devices in different time periods, usually within the maximum time period stipulated;
- type of assistive device: different assistive devices listed on the National Register have different maximum delivery times.

**FOLLOW-UP**

Users are not required to return to the consultation and rehabilitation centres for periodical “re-assessments”. It is generally noted that a patient will seek assistance if they become dissatisfied with the performance of the device.

The following are follow-up activities which guarantee the lifecycle of assistive devices after the delivery process.

- **Guarantees**

Annex no. 2 of the National Register, defines the minimum duration of guarantees for each type of device. Those devices which are personalised for patients may be subject to slightly lengthier guarantee periods. Guarantees for ready-made devices are fixed in the public purchasing process. The duration of the guarantee in this process may not be less than that stipulated in Annex no.2 of the National Register\(^\text{139}\).

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\(^{139}\) Law no.332 of August 27\(^{th}\), 1999
• **Renewal time**

The minimum renewal waiting time is the time that the patient has to wait before being supplied with the same assistive device. Should a device not function properly, the ASL may authorise the supply of a new device before the expired time has elapsed, but only once. When the minimum expiry date is reached, the device may only be deemed to have to be replaced or repaired after it has been analysed by a medical specialist. The renewal of a device may be refused if deemed by the medical specialist to be in perfect working order after assessment.

• **Ownership**

*Law no.332 of August 27th, 1999 (art.4, comma 13)*, defines the ownership of the devices found in the National Register. Those devices requiring personalisation and ready-made devices are the property of the patient. It is the obligation of the ASLs to ensure that the device is in perfect working order as well as safe. Suppliers are held liable for guarantees of these devices even when they are no longer the property of the ASLs.

Assistive Technology devices included in attachment no. 3 of the National Register (respirators, ventilators etc.) remain the property of the ASL and are granted for the use of the disabled person. Given the nature of the device, contracts with suppliers must stipulate the maintenance and timely repair for the total period in which the device is assigned to the user.

• **Reserve devices**

*Law no.332 of the August 27th, 1999*, states that reserve devices may be supplied to patients who have amputations if the general use of such a device requires a long period of training. The law states that the ASLs are responsible for ensuring the timely substitution of the devices deemed to be temporarily unusable (e.g. reserve wheelchairs cannot be supplied, but the ASL will have to replace them in a timely manner should they break).

5.2.5. **The Netherlands**

**INITIATIVE**

In most cases, the initiative to procure an assistive device is taken by the disabled person or someone close (relatives, friends, social workers, care providers.) The first step is mostly a visit to a general practitioner who will examine the person and often directly prescribe the device needed. Depending on the actual problem and the device needed the disabled person will visit a medical specialist or a rehabilitation centre. The initial initiative in obtaining a prescription is taken by the client in about 60% of the cases and by the general practitioner in 40% of the cases.

In general for every assistive device financed by the social or health system prescription by a medical doctor is necessary.

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140 *Law no.332 of August 27th, 1999*
ASSESSMENT

The assessment of the person’s need for assistive devices is often carried out within a health structure (general practitioner’s, specialist’s, hospital, rehabilitation centres, audiological centres). Since a prescription is needed, medical doctors take a central place in the assessment.

A special regulation applies for those entering the system of (re) integration in the working environment (and the educational environment). At first a person has to be recognised as being occupationally disabled. This assessment is carried out by medical doctors in the enterprise or within the insurance company.

For assistive devices procured by the municipalities under the social welfare system, most municipalities have an assessment centre or have an agreement with such a centre to evaluate the disabled person. Depending on what the disabled person is asking for, assessment may be mandatory.

Prescribers generally seem to lack knowledge and information. This results in insufficient information for the user and prescription of devices which are not suitable. Deregulation of the provision of Assistive Technology is under way and this is giving more responsibility to the health insurers who can impose conditions on prescribing, such as obtaining their prior consent or upfront provision of information on previous treatment.

About 10% to 14% of the users are not (completely) satisfied with the procedure.

There is a wide range of organisations which provide information and advice to consumers.

The different organisations for the disabled play an important role in procuring information. Many of them have databases on assistive devices, specific and general publications for their members, publicly accessible websites, information centres etc. The information mostly covers advice on the disability itself, on treatment and on assistive devices. Much information is disseminated through the Internet and discussion platforms. The different health insurance companies also make efforts to inform their members about assistive devices. The care insurers have recently developed a database on assistive devices that is meant to increase information for the prescribers on their effectiveness.

Recently an independent information centre on assistive devices has been set up: HIC. It aims to improve access to objective information on assistive devices and products for all interested parties and is supported by the Ministry of Health. HIC gives information to users, producers, distributors and assessors of assistive devices. It has a database on products with information on the devices.

Other organisations include KBOH, ImZ and iRV. Their goal is to improve user participation and to give information on assistive devices. KBOH and iRV are intending to merge in the near fu-

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141 Law on reintegration of the occupationally disabled. (Wet op de (re)integratie arbeidsgehandicapten - Wet REA)
142 WgV (Wet voorzieningen Gehandicapten) and AbW (Bijzondere bijstand)
143 study done by IRv, Hoensbroek, June 2002
144 Tevredenheid hulpmiddelengebruikers;verstrekkingen 2001, iRv, 2002 (in opdracht Ministerie VWS)
145 Hulpmiddelencompas - CVZ
146 Hulpmiddelen Informatiecentrum
147 Stichting Kwaliteits- en bruikbaarheidsonderzoek van Hulpmiddelen voor gehandicapten en ouderen
ture. There are also regional information centres for specific devices. KBOH also has its own quality label (GQ label). The products that have this label have been tested for safety, durability and usability. The products bearing this label are put in a catalogue issued by the KBOH.

IRv disseminates information and transfer of knowledge and does research on disability issues. It has an information system on assistive devices that is available in the Netherlands on CD-Rom.

There are information systems available for specific types of products. For example, a system has been developed to help the visual impaired choose the most appropriate computer device.150

**TYPOLOGY AND SELECTION**

As mentioned above, in most cases the disabled persons will get a prescription from a medical doctor. Depending on the specific situation this will be a general practitioner or a specialist. For example, and ear-nose-and-throat specialist will normally be consulted for hearing devices and will make out the prescription for the device which is required. A prescription can be open, meaning that it doesn’t mention a specific device but the type of device needed, or it can be closed. In that case the prescribed product is mentioned.

For medical devices the disabled person can, with the prescription, go to a specialised centre or shop to choose the product. A price offer will be made and this price offer has to be submitted to the Care Insurer to decide on. The prescribed device must be on the list of types of products which is drawn up by the Ministry of Health.151 This list is reviewed and adapted every year after receipt of advice from the Care Insurers Organisation.152 The list mentions the types of product but is changing into a list containing functional descriptions rather than product descriptions.

The care insurers’ role in and influence over procurement of assistive devices is increasing. They negotiate themselves with producers or distributors and make contracts on the basis of public tenders. The aim of this procedure is to get the most appropriate products (quality/price) at the lowest cost.

They can decide the disabled person has to take the product they propose. However the care insurer has to procure an “at all times adequate functioning assistive device product”153

The decision is taken by the care insurer’s medical advisor. If the disabled person does not agree with the decision, an appeal is possible. Practice shows that many appeals are lodged and even go to court. More than 40% of the appeals on care provision in the health care system relate to assistive devices.

For wheelchairs (manual, electrical, sport-wheelchairs) and some other transport devices (car adaptations, scooters) the request has to be made to the municipality of residence. These devices are not con-

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148 Stichting Innoveren met Zorg
149 iRv - Kenniscentrum voor revalidatie en handicap
151 Regeling Hulpmiddelen 1996-Vws
152 College Zorgverzekeraars
153 Besluit verstrekking hulpmiddelen
sidered as medical devices and fall under the terms of the Law on provisions for the disabled.\textsuperscript{154} The municipality can decide a medical assessment is needed.\textsuperscript{155} In this case a medical doctor appointed by the municipality will assess the disabled person and decide on the type of device and the adaptations needed. Basic wheelchairs are mostly provided by the municipality itself on a loan basis. However, for some time now it has been possible for them to become personal property. Repairs, adaptations and maintenance are included in the service delivery. The municipalities make contracts with suppliers through public tendering. For more sophisticated types of wheelchair not provided by the municipality, the disabled person — mostly with the help of an occupational therapist or revalidation centre, look for the appropriate wheelchair and submit a price for the municipality to decide on. That decision can be appealed.

FINANCING

Financing depends on the device and the system under which it falls.

In principle wheelchairs are totally free of charge to the disabled person. A co-payment may be sought where there are special requirements without a medical grounding.

The list of devices mentions the amount that will be financed by the care insurer. This depends on the type of device concerned and sometimes on the renewal period.

For hearing devices, for example, there is a ceiling of €462.50 for the first device (€644 for children under 16 years). For a renewal after 5 years the ceiling is the same, after 6 years it is €553 and after 7 years €644. These amounts only allow purchase of a basic hearing aid. For more advanced (digital) types the user will have to pay the difference.

Other devices are paid for in full but always with the proviso that the type of device is on the list of products and that the care insurer agrees. As mentioned previously, there are a number of appeal procedures.

Personal Computers for the visually impaired, for example, are not as such financed given that nowadays everyone has a PC. Special input or output devices and specific software or screen adaptors are financed. For the deaf-blind the PC itself is financed under the assistive device regulation. An experiment with personal budgets is under way for computer devices for visually impaired people. The disabled person is given a sum of money to spend on what seems the best product.

Care insurers also have a limited budget they can use for special cases not regulated by the list of devices which are paid for.\textsuperscript{156}

Disabled people who have financial problems in getting the necessary assistive device can always apply for financial help under the Law on Special assistance.\textsuperscript{157} Experience shows that if the care insurer turns down the requested device, then generally no additional financing is granted under this regulation.

\textsuperscript{154} Wet voorzieningen Gehandicapten - WvG

\textsuperscript{155} The organisation, the procedures and the financing of wheelchairs by the Municipalities is based on a regulation at municipal level.

\textsuperscript{156} Flexiregeling

\textsuperscript{157} Algemene wet bijzondere bijstand - ABW
Some organisations for disabled persons grant additional financing for specific assistive devices.

As mentioned previously, work-related devices or alterations to the workplace are financed by the UWV on an individual basis. Sometimes personal assistive devices can be obtained under the health care system but are better financed if obtained through the REA for the occupationally disabled. A disabled person needing a hearing device could try to get a more technically advanced device financed under the REA system if it can be proven that it is needed in order to be able to do a job properly, e.g. because it will make it easier to participate in meetings when it is important to eliminate background noise.

There is a tendency for requests to be treated differently depending on how assertive the disabled person, that person’s representative or the care insurer is.

**DElIVERY AND FOLLOW-UP**

Physical product delivery and maintenance are usually handled by the supplier. For some devices (e.g. hearing devices), there is a trial period. Some devices can be delivered with special training on how to use them (e.g. computer-assisted devices). In that case, the training can also be financed.

If there are installation or configuration requirements, the supplier will handle this. The associated costs are normally included in the overall agreed price. For certain devices maintenance and repairs are financed under different systems. In case of repairs of long duration, a temporary device can be procured if the disabled person has a proven need.

The quality of service delivery differs between suppliers. In general, disabled people are pretty satisfied with the overall process of procurement of assistive devices. A study carried out by iRv shows satisfaction is quite high.158

**5.2.6. Spain**

In Spain some assistive devices come under health care system and others under the social services.

As mentioned previously, the Autonomous Regions have most of the jurisdiction. They are responsible for the procurement of assistive devices and, where appropriate, finance them, even though most of the financial resources come from transfers from the National Budget.

**INITIATIVE**

The initiative for obtaining an assistive device mostly comes from the disabled or their relatives. In some cases, the initiative is supported by social services or an occupational therapist. In many cases the first professional contacted is the medical doctor, mostly a general practitioner.

In Spain, basic medical assistance is organised through ‘basis centres’ in every municipality. Normally, a person is assigned to a medical doctor, so there is no guarantee of freedom of choice. Often the initiative will also be taken during hospitalisation. In that case, specialist medical doctors, rehabilitation specialists, paramedics and social workers initiate the process.

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158 Tevredenheid hulpmiddeleengebruikers;verstrekkingen 2001, iRv,2002
ASSESSMENT

The health care system applies to all Spanish people. To benefit from assistive devices under the health care system, no recognition of disability is required. An assistive device must be prescribed by a specialised Medical Doctor who has to follow the regulation on the devices covered by the health system. There are supplementary authorisation and evaluation procedures for some devices.

For example, hearing devices usually need a prescription by a specialist medical doctor, in this case an ear-nose-and-throat specialist and an assessment in which the hearing capacity is tested. These tests can also be done at audiological centres, which select and adjust the necessary hearing aid. There are many audiological centres, sometimes at every corner of the street in shopping areas. They have to be recognised and have a minimum range of equipment but the quality appears to vary greatly.159

For devices within the social service system application must be made to the regional social service in order to get an assistive device. Under this system access to Assistive Technology, as is the case of access to other financial allowances and fiscal benefits, depends on being recognised as being a disabled person. The law applicable (article 7 of the LISMI) states that any person with diminished ability for education, occupational or social integration due to a physical, mental or sensory deficiency is considered a disabled person.

The procedure for recognition and measurement of the degree of disability are regulated in a Royal Decree 160. Teams are set up for the evaluation consisting out of at least a medical doctor, a psychologist and a social worker. They operate under the authority of the Autonomous Regions. The degree of the disability is important since it affects financial subsidies and tax benefits (including the amount). To be covered by the provisions of the social services system provisions, the degree of the disability must be at least 33%. In total there are 5 different degrees and 5 classes of disability which are determined by physical and social factors.

The social services have assessment centres where the disabled person will be evaluated in order to procure the most appropriate device. Those centres are not always very well equipped or accessible for the disabled person.

The decision on the device requested will depend on the assessment and on the financial situation of the individual. It is important to note that in theory all Assistive Technology products are available, but provision is discretionary. The disabled person has no objective right as such.

TYPOLOGY AND SELECTION

Medical devices financed through the Social Security System are covered by the Law on Social Security.161

Reimbursement of or payment for medical devices is possible under the health care system only for those product types are incorporated in the Royal Decree on Health procedures under the National

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159 Centro de audición Bioacustica, Valencia
160 Real Decreto 1971/1999 de 22 de diciembre de procedimiento, declaración y calificación del grado de minusvalía
161 Ley General de Seguridad Social -Texto refundido .D. 2065 /1974 de 30 Mayo
Health system.\textsuperscript{162} As indicated previously, medical devices are complementary services for which a co-payment can be sought.

The Royal decree covers orthoprothesis devices:

The Assistive Technology devices under this regulation are:

− External temporary or permanent prosthesis
− Wheelchairs
− Ortheses.

The different products are enumerated in annexes II, III and IV of the Order on orthoprothesis services.\textsuperscript{163} This amounts to a type of catalogue mentioning all types of product covered and mentioning the amount that must be paid by the person considered.

There are a few major restrictions. Not covered are:

− products for use in sports;
− external protheses in titanium, carbon fibre or containing a microprocessor;
− wheelchairs in aluminium or carbon fibre;
− electrical wheelchairs unless they are for disabled people who are permanently unable to walk and who cannot propel a manual wheelchair with their arms;
− carbon fibre ortheses of carbon fibre;
− hearing devices for the over 16’s.

The Autonomous Communities implement this regulation. Transfer of jurisdiction to the Autonomous Communities was progressive but completed in 2002.

The Autonomous Community is as a result free to expand the catalogue (list of specific devices) recognised by the National Health System.

In fact, since the transfer of jurisdiction for health and social affairs to the Autonomous Communities beginning in 1981 (with transfer to the Autonomous Region of Catalonia) and took till 2002 to complete, the last Autonomous Regions to acquire these powers have not yet altered the pre-existing National Catalogue issued by the former National INSALUD.

In reality, however, there are separate catalogues for every Autonomous Region and variations across the 17 catalogues can sometimes be significant. In most Autonomous Regions the user has to pre-finance the acquisition of devices and will be reimbursed if the application is accepted by the system, reimbursement. In some Regions however, the bill is directly paid by the Health authorities.

The catalogues in fact limit the practical availability of products and in some cases result in differences depending which Autonomous Region is concerned.

\textsuperscript{162} Real Decreto 63/1995, de 20 de enero, sobre ordenación de prestaciones sanitarias del Sistema Nacional de Salud

\textsuperscript{163} Orden de 18 de enero de 1996 de desarrollo del Real Decreto 63/95 de 20 de enero, para la regulación de la prestación ortoprotésica
For example some Autonomous Regions will agree to aluminium wheelchairs and carbon fibre products, others keep to the original exclusion. The reality seems also to be that sometimes a product is described (on the invoice) as corresponding to the regulation when in fact it is not.\textsuperscript{164}

Only a limited number of products are on this list. Most of those products are at low prices and some of them are technically obsolete. This system is judged to be rigid and too much based on the cost of a product rather than on its quality of it.\textsuperscript{165}

A very important issue relating to availability is the fact that products financed through the health system have a fixed price on the list (maximum price) of which in some cases the user has to pay a part (but wheelchairs and most protheses are procured at no cost to the disabled person). If a product exceeds this price, it will not be financed through the health system.

A committee has been set up to adapt (modernise) the list of products (Comité Asesor de Prestaciones Ortoprotesistas). This committee can alter the prescription process, change the user’s financial input and introduce technical evaluation of the products to be incorporated in the list of products to be finances. This process is not binding for the Autonomous Regions as such, but in practice they do seem to be agreeing with it.

Together with the Autonomous Communities\textsuperscript{166}, this Committee has drawn up guidelines for accepting wheelchairs\textsuperscript{167}, a descriptive guide on orthoprotheses\textsuperscript{168} and an information system on acts concerning orthoprothesis\textsuperscript{169}.

The need of co-ordination at national level is great. At this moment a new catalogue of products is being developed. A National Ministerial order is expected for the end of 2003. This order will incorporate new assistive devices into the catalogue. It will also introduce a common classification of products for all the Autonomous Regions.

The non medical Assistive Technology products (classified as such) come into the system of the Social Services. In this the Autonomous Regions are also competent. For assistive devices that reside under the social system

Normally the applicant must submit three price proposals from the distributors of the product he wants to acquire, though in some cases one is enough. In reality every enterprise selling devices will automatically make the required offer on simple request.

Information on products

At national level there is a specific service centre CEAPAT\textsuperscript{170} operating within the National Ministry of Social Affairs.\textsuperscript{171} CEAPAT gives information and advice on universal accessibility and design for

\begin{itemize}
  \item This fact was affirmed in various interviews with disabled persons
  \item Libro Verde, o.c.
  \item Comunidades Autonomas
  \item Guia de Practica Clinica para la indicación de Sillas de Ruedas
  \item Guia Descriptiva de Ortoprotesis
  \item Sistema de información sobre Prestaciones Ortoprotesica – SIPO
  \item Centro Estatal de Autonomía Personal y Ayudas Technicas
  \item Ministerio de Trabajo y Asuntos Sociales - IMSERSO
\end{itemize}
all. It also gives information and advice on technical aids and evaluates people with disabilities so that they can procure the most suitable assistive device.

CEAPAT takes part in several national and international programmes on Assistive Technology. An important activity is the preparation and maintenance of its catalogue of technical aids. This catalogue is accessible through Internet, made available on CD-Rom and in hard copy on request. The Internet site had more than 58,000 visits over the last year.

The catalogue contains 9 classes of assistive devices and is built up by product group. Within these product groups, individual products are described, with their characteristics, the name of the product, model, type, material and in most cases an indication on price. A picture and information on the producer and/or distributor are included.

All CE-marked products can be included in this catalogue at the request of the producer or distributor. The products are not tested before inclusion in the catalogue but CEAPAT has an agreement on testing with the Instituto Biomecánica de Valencia (IBV). CEAPAT however does not cover protheses.

CEAPAT also has a permanent exhibition of products and a specialized library for Assistive Technology users, producers and researchers. In fact CEAPAT is an evaluation, co-ordination and information centre with branch offices in four other locations in the rest of Spain. (Albacete, Cadiz, Salamanca and La Rioja).

CEAPAT coordinates a chain of more than 80 assessment and information centres (CAI 172 - public and private centres) all through the country.

Some of these also have permanent exhibitions where devices can be seen and tested.

For people with visual impairment ONCE is the most important advice centre. This organisation is very powerful and has great influence over the procurement of devices. It is technically very well equipped and produces some devices itself.

The REAL PATRONATO SOBRE DISCAPACIDAD (an autonomous public organisation under the Ministry of Labour and Social Affairs) is also a very important information and documentation centre for disability matters. It has a specialised information and documentation centre 173 which is very advanced.

A specialised institution is the Instituto de Biomecánica de Valencia. As a centre of excellence in research into disability, especially Assistive Technology, this centre gives information and recommendations on assistive devices. It also tests assistive devices and assesses disability. It interfaces with manufacturers and users and collaborates with various other organisations and Public authorities on Assistive Technology issues.

In a survey done by CEAPAT 70 % of the end-users declared that they get their information on assistive devices through professionals. Other sources of information like catalogues, publications and producer or distributor advertising are rarely used.

About 16 % of the end-users said they decide themselves on which product they finally purchase.

172 Centros de Asesoramiento e Información sobre ayudas técnicas.
173 Centro Español de documentación sobre discapacidad
Most users are not aware of the products they need, nor do they have a good knowledge of public and private assistance for acquiring Assistive Technology. There are not enough information centres and professionals do not seem to know enough about existing Assistive Technology. The lack of knowledge of prescribers, intermediaries and even orthopaedic specialist about the products available was mentioned in several interviews with disabled persons or representative organisations.

Spain is in a very privileged situation in respect of Assistive Technology products for the visually impaired. Spain has a specific, very advanced and powerful official organisation for the visually impaired people, ONCE, which means the range of products available is maximised.

ONCE has a research centre for specific devices, the CIDAT. This centre has a catalogue of devices and itself produces many specialised products of high technological quality.

As a result of this, availability of those products is very high. Practical availability for people with visual impairment is less because ONCE only finances products for its members. Membership is free but limited to visually impaired people with less than 1/10 assisted vision. Other visually impaired are not covered by ONCE and come under the regular system of Social Services.

Another practical but important limitation resides in the fact that ONCE only (fully) finances devices for educational or occupational purposes. Education is, however, broadly interpreted and also includes individual education, such as a language or Internet course. Moreover, ONCE can fund the cost or part of the cost of a device for other activities on an individual basis. In some cases, it grants a reimbursable loan.

FINANCING

The social services system and the health care system cover only a fraction of the assistive devices that are procured in Spain.

A study shows that most of the assistive devices are procured without any financial support. Nearly 60 to 80% of all interviewed users declared they did not get any financial compensation for assistive devices. Only 21.2% of those with multiple disabilities declare received financial support in getting their assistive aids.

In 75.5% of cases, the financial support came from the public sector (national and regional authorities), in 20.8% of cases from private organisations, in 5.7 % from ONCE and 1.9% from the Red Cross (Cruz Roja Española).

Of the users with multiple disabilities getting financial support for their Assistive Technology, nearly one-third said they received more than 50% of the cost of the device.

Taking into account that only 21.2% of them get financial support, this would mean that only 14.13% of all disabled people get more than half their costs reimbursed and 7.06% get less than 50% reimbursement.

Of elderly people only 9% says they have received financial support. Of these 87% get this from the social security system.

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174 Centro de Investigaciones, Desarrollo y Aplicación Tiflotécnica
175 Sector de la Rehabilitación, J.Vidal Garcia y Tomás Herrera, Madrid, Fundación COTEC.
Fraction reimbursed:\n\begin{itemize}
  \item more than 70\% of the cost reimbursed: 54.7\%
  \item between 70 and 50\%: 7.5\%
  \item between 50 and 30\%: 5.7\%
  \item between 30 and 10\%: 9.4\%
  \item less than 10\% of the cost: 17\%
\end{itemize}

In theory, any Assistive Technology product with the CE mark is available for Spanish disabled persons, but the fact is that medical devices within the so-called catalogues of the health care system are mostly low-price and of basic quality, so that significant personal financial resources are likely to be needed for anyone wanting to get a modern and most appropriate device.

Social services take the user’s personal income into account in taking a decision on whether a device is financed through the social system or not. The maximum income allowed can differ from one Autonomous Community to another. For example, in Madrid this maximum is reached at around €595 a month.

The situation of the visually impaired is rather good, if they meet ONCE criteria. Otherwise, they can only apply to the Social Services, whose criteria are judged to be too tough.

The health care system only meets part of the cost of hearing devices. The amount can differ depending where a person lives. The maximum subsidy is about €1,080. Mostly, depending on personal income and the nature of the disability, this amount is reduced to 50\%. A basic hearing device can be bought for this amount but a digital device will require personal financing (as it will cost about €3,000).\(^{177}\) For children below the age of 14, the device is normally fully paid for (within the limits of the catalogue).

**DELIVERY AND FOLLOW-UP**

The Ministry of Labour and Social Affairs looked at delivery and follow-up in drawing up its Green Paper (*Libro Verde*)\(^{178}\) together with various disability organisations.

Practice shows that the waiting time for uncommon products is too long. Given that most products are imported, trial of specific products is not always possible and in some cases leads to procurement of unsuitable devices. Also in the case of repairs, the person can have to wait a long time before getting the device back. For rare devices there is mostly no replacement in the meantime.

Training and learning how to use complicated devices is also sometimes a problem. User’s manuals are often written in English without translation into Spanish.

For hearing devices, the procedure to get the device financed can take from 6 months to sometimes over one year, depending on the Region of residence. A trial period of one month is usual.

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\(^{176}\) *Libro Verde*, o.c. p.57;

\(^{177}\) *bioACUSTICA Española* A.M.S.L.

\(^{178}\) op.cit.
5.2.7. Sweden

INITIATIVE

The person in need of Assistive Technology or one of the relatives can take the first initiative. Most of them know the system and turn to a care professional for advice. These people will tell them whom to visit for an assessment. Often initiatives are taken in connection with rehabilitation.

An extensive system for the provision of Assistive Technology, including Assistive Technology centres, low vision centres, hearing centres and orthopaedic workshops and hospital clinics has been built up across Sweden to help people in the choice of Assistive Technology products.

ASSESSMENT

Assistive Technology must be prescribed. Generally speaking, staff employed by the county council or municipality are responsible for the prescription. These are mainly doctors, occupational therapists and district nurses. Responsibility varies depending on the kind of assistive device.

For the mobility-impaired, the professionals at the primary health care centres and the community rehabilitation unit can give the right advice on who should perform the assessment in a certain municipality or county. People with a hearing impairment first go to their doctor in the primary health centre, who can refer them to a hearing centre. Visually impaired people can be referred to the county’s low vision centre. The speech-impaired people go to a speech therapist.

It is clear that the education of prescribers in Assistive Technology plays a vital role in the system. During their education health care professionals learn about the different products, how to try Assistive Technology and about all relevant laws and regulations.

The prescription should always be made out in close co-operation with the disabled person and should be based on that person’s specific needs. Assistive technology should complement other rehabilitation measures. The professional who prescribes Assistive Technology often consults other relevant staff in the centre’s team. The time taken for assessment is highly variable. It is important to note that the assessment for Assistive Technology is seen as part of a wider process of rehabilitation.

All prescribers have to follow the same rules as the HSL Act applies to all counties and municipalities. The rules for the process of prescription are the same. However, every county may have their own local supplementary framework. Differences in the knowledge of a single prescriber can result in different solutions being proposed.

TYPOLOGY

There are about 30 Assistive Technology centres spread across Sweden and grouped by county. They are responsible for more complicated assistive devices, provide information about the range of products available and new devices. They are also responsible for purchasing and storage of devices, repair and individual adaptations. Some of them have exhibition halls. Disability organisations are highly in favour of these exhibition halls since they make it possible to have everything together in one place and to give future users the possibility of looking at the AT themselves. These organisations would like to have more of these exhibition halls if possible, but financial resources are limited. We note that these Assistive Technology centres primarily deal with assistive devices for those with mo-
bility impairments and do not serve persons with other disabilities such as visual or hearing impairment.

HIDA\textsuperscript{179} is a product database that contains information compiled by the Swedish Handicap Institute about assistive devices for people with disabilities. Web HIDA has information on over 18,000 products, listed by ISO9999 code, and some 500 suppliers. There are answers to questions such as which companies supply wheelchairs and what types of hearing devices are available on the Swedish market from this database, which can be found at: www.hi.se/hida.

\textbf{SELECTION}

For the final selection of the device, the basic principle remains the need of the user. In addition, the quality of the product and the price will play a role. In some cases, the decision is not easy. The benefits of digital hearing devices must be weighed against the much higher cost.

The final decision is made by the prescriber. This decision is based on the individual assessment, which is in many cases based on team work. The prescriber has to make sure that the user can make good and safe use of the device. If the effect of the equipment turns out different from what was expected, it can be exchanged for another. If during training, it is found that something does not work for the user, then this automatically results in another selection or re-assessment.

\textbf{FINANCING}

In principle assistive devices are free for the user. Visits to health care professionals for the assessment have to be paid for, though the visits for trial, adaptation, training, instruction and follow-up are always free. Consequently, there are no financial barriers for most people.

There can be a small co-payment for some assistive devices, such as orthopaedic shoes, more expensive hearing devices, glasses and contact lenses. This goes against the general rule and will be discussed in the public government inquiry currently under way.

For some newer Assistive Technology, the users have to pay everything themselves. This is the case with Assistive Technology for people with a mental disability, the dyslexic and people suffering from dementia. New possibilities based on new knowledge do not immediately find their way through the system, but this is generally just a matter of time.

\textbf{DELIVERY}

Normally the prescriber delivers the Assistive Technology to the user. Users seldom encounter the supplier. Primary health care centre can deliver some devices from their stock. Training and setup are included in the actual delivery and documentation is available in Swedish.

\textbf{FOLLOW UP}

If there is a problem with the assistive device provided, people will say so right away. Reassessment of the needs comes as part of the goals defined in the personal rehabilitation plan. If a certain device no longer meets the needs, it will be replaced. Repair and maintenance depend on the assistive device

\textsuperscript{179} acronym for ‘Hjälpmedel I Databas’ which means ‘Assistive Technology in a Database’
concerned and can differ regionally. In many cases a broken device can be changed for a similar one in stock.

OVERALL PROCESS

It is very difficult to estimate the duration of the overall process. As mentioned previously, the delivery of assistive devices is only a link in the wider rehabilitation process.

Users are pretty satisfied with this delivery system and the knowledge provided. It can happen that it sometimes takes quite a long time to get the Assistive Technology or that the device a person wants is just not accessible. The disability movement complains about the differences in rules, the differences in the number of places to which people have to turn for obtaining certain types of Assistive Technology and possible fees. These can vary a lot throughout the country as a result of decentralisation. They also complain about the fact that it is not possible to appeal a decision.

5.2.8. United Kingdom

INITIATIVE

The basic principle is that all persons with disabilities have the right to ask their social services department for an assessment of their care needs. As stated in the NHS Patient’s Charter, everybody has an entitlement to receive NHS care on the basis of need, not on the ability to pay, lifestyle, or any other factor. A social worker, care manager or occupational therapist will be available for discussing both needs and wishes.

ASSESSMENT AND TYPOLOGY

Equipment that can make it easier to manage at home is usually provided by social services departments following an assessment by an occupational therapist. The type of equipment or minor adaptation provided will depend on the situation of the person. Councils have powers to ask disabled people to contribute to the cost of certain community equipment services but local authorities' discretionary charging power will be removed in June 2003 by the Community Care (Delayed Discharges, etc.) Act.

Occupational therapists play an important role in the provision of home equipment. If homecare equipment is required following a stay in hospital, they are involved in hospital in planning to meet those needs and the equipment is provided from the appropriate equipment service.

For equipment provided solely by the NHS, an appointment with an NHS consultant is required initially. This occurs generally via the general practitioner. An assessment of the needs is then made by an occupational therapist, district nurse, health visitor or specialist. Provided the user meets the eligibility criteria, the appropriate product will be supplied free of charge. There is no national uniformity in where the criteria threshold for assessing needs is set and these are dependent on local policy and health authority budgets.

Hearing aids are also available from the NHS free of charge, on prescription, through a referral to an ear-nose-and-throat consultant via the GP who can refer the person to the local audiologist department or, for those who already have an NHS aid, by self-referral.
Wheelchairs and related equipment such as specialist seating are provided through a number of different channels depending upon their primary purpose, especially whether they are for permanent or temporary use. After self-referring or being referred by their GP with a prescription, most users attend one of the 151 local wheelchair/rehabilitation service centres that are attached to NHS Trusts. Criteria for provision of wheelchairs are subject to local decision, resulting in differences in the range of wheelchairs provided from one service to another. The Department of Health is working with the NHS Purchasing and Supply Agency (PASA) and interested groups to develop service templates and standards, and with the NHS Modernisation Agency and services across the country to improve the service provided and spread best practice. There is no cost to the user for temporary or permanent loan of a wheelchair for daily use. Most NHS Trusts have now introduced a voucher scheme which provides a voucher up to the value of an NHS-issue wheelchair and it is then possible for the user to add private money to the cost of purchasing a wheelchair of choice.

For products not provided by the NHS or social service departments, virtually any Assistive Technology product is available in the UK for self-purchase. Obviously this means that no financing will be provided by the NHS and that the disabled person will either have personally to acquire the device, or to try and obtain assistance from other sources (charities, associations of disabled people, …).

Information on Assistive Technology products can be obtained from various sources such as the Disabled Living Foundation (DLF), local Disability Living Centres (DLCs), the various professional journals or trade events, or directly from the suppliers.

The DLF aims to make the life of disabled people easier by giving impartial advice about equipment for overcoming problems in daily living. It offers a national helpline that is staffed by a team of information officers who provide advice on equipment, wheelchairs, clothing, footwear, and further sources of information. It manages a comprehensive database of existing Assistive Technology products. There are 23 sections in this database, with only those products listed that can be provided via a UK distributor. This database is only used as an index and is not directly accessible by the public.

There are about 50 Disabled Living Centres (DLCs) nationwide that aim to increase opportunities for independent living. They offer disabled people the chance to see and try out a wide range of products to find those that suit their needs. They offer free and independent advice about what is available, how much it costs and where to get it. Many centres also arrange training on a variety of topics of interest to disabled people, carers and professionals, for which there is generally a fee. DLCs are led by a national organisation called the Disabled Living Centres Council (DLCC).

FINANCING

There is no cost to the user for temporary or permanent loan of Assistive Technology products delivered through the NHS for daily use provided the disabled person meets all eligibility criteria during the assessment.

If the social services department decides that a person is not entitled to receive an aid, there are very few alternatives apart from self-funding or purchase by a charity. However experience shows that disabled people generally do not like to contact charities and in most cases give up trying to get the equipment. To obtain funding from charities or grant-giving trusts, people with disabilities must approach them with an appropriate letter of support from a professional worker (general practitioner, occupational therapist, etc.). There are a number of local sources, some of which are national organisations that have local branches (e.g. Rotary Club, Round Table, Lions Clubs), factories or companies (which may run a welfare scheme for former employees) and religious charities.
DELIVERY AND FOLLOW-UP

Actual delivery of the Assistive Technology product is normally performed within the structure that was responsible for the assessment. When the Assistive Technology product is delivered through the NHS, then adaptations is carried out by specialised technicians during delivery. Maintenance and repair will similarly be provided at no cost to the disabled person.

5.3. Comparative analysis of the end-user perspective

This comparative analysis section aims to take each individual country contribution and to extract the main characteristics relating to the identified dimensions of interest. Then by looking at each dimension, it will be possible to draw EU-wide conclusions (at least based on the Member States reviewed). The dimensions considered for the comparative analysis are:

- access to information
- assessment
- typology and selection
- financing
- delivery and follow-up

Pan-European data on each dimension is further summed up in the subsequent sections.

ACCESS TO INFORMATION

Access to exhaustive and up-to-date information is identified in all countries as a critical factor for efficient and effective delivery systems. Although the final information objectives seem to be similar in the Member States under review, there are significant discrepancies when looking at the availability (or otherwise) of information.

Most advanced countries like Sweden and Denmark have a central and national resource centre (the Swedish Handicap Institute and the Danish Centre for Technical Aids for Rehabilitation and Education respectively). These centres play a vital role especially for the delivery of information on Assistive Technology products and in the field of education on these matters. The objectives of these centres are to contribute to the creation of equal opportunities for disabled persons – within areas of rehabilitation, Assistive Technology, special education, and accessibility. They operate both on a national and an international level, in co-operation with disability organisations, government authorities, institutions, research centres. The Swedish Handicap Institute also performs tests on certain categories of products. Here research plays an important role. They can give independent information to the users and have experienced specialised staff.

Although not centrally organised like in Sweden and Denmark, there are also independent information centres in many Member States. For example in France some 50 CICATs (Centre d’information et de Conseil pour les Aides Techniques) are part of a national federation where efforts are being made to provide a more coherent and uniform service to visitors. However, there are still huge discrepancies from one CICAT to the other with regards to number and expertise of staff, presence or otherwise of an exhibition hall, and the number of Assistive Technology products available. In the United Kingdom there are now 49 centres in the DLCC (Disabled Living Centres Council) network dealing with more than 250,000 enquiries per year. In Spain, the CEAPAT (Centro Estatal de Autonomía Personal
y Ayudas Técnicas) is also an evaluation, co-ordination and information centre with branch offices in four locations in Spain. Throughout the country, the CEAPAT co-ordinates a chain of more than 80 information and assessment centres (CAI).

There are catalogues or databases listing what Assistive Technology products are available, however they are not all directly usable by people with disabilities. Originally they targeted professional rehabilitation players, but there is a tendency now to make these tools more accessible for a larger audience (including the end-users themselves). Such tools are, for example, the REHADAT in Germany, the DLF (Disability Living Foundation) database in the United Kingdom, the CEAPAT catalogue accessible via Internet in Spain, SIVA in Italy, the HIDA database in Sweden, Hjælpemiddelbasen in Denmark, the new HIC and Virtuele Wegwijzer Werkaanpassingen in the Netherlands.

In some Member States there is no real structure for the delivery of information. Therefore interested parties need to try and find the most suitable place to get information. This often leads to partial information as it is extremely difficult to obtain comprehensive and reliable information on Assistive Technology products due to the breadth of the scope. Such places are:

- **General Practitioners**: they are an often mentioned source of information. However, it is debatable whether they are reliable sources of information and the results vary to a large extent depending on the general practitioner’s qualification and experience in this the field. There is so far no specialised education in Assistive Technology for this professional class.

- **Occupational therapists**: although most occupational therapists work within health care organisations or are employed within social services to perform assessments, they are a very worthwhile source of information due to the specialised and focused training they receive on disability issues. Their role is currently more on the assessment side than on the information side.

- **Associations for people with disabilities**: these associations exist in all countries and are a very valuable source of information provided the right association is contacted as there are normally different associations depending on the type of disability (e.g. the AFM and the APF in France).

- **Expert centres**: there are also organisations which play a transversal role like the iRv, KBOH and TNO in the Netherlands, the Swedish Handicap Institute, the SIVA in Italy and IBV in Spain. All these provide high-quality information in addition to other value-added services.

- **Hospitals or rehabilitation centres**: especially for people who have suffered injuries from an accident, hospitals and rehabilitation centres are very convenient places for obtaining information. Again, there is a lack of consistency in the information delivered depending on the centres.

- **Suppliers or manufacturers of Assistive Technology products**: in many cases, bypassing intermediaries leads to direct contact with product suppliers or manufacturers. Obviously the main issue with this information channel lies in the objectivity of the advice delivered.

- **Professional events (e.g. trade fairs, exhibitions)**: in Germany for example, there are large national events like the annual REHACare in Düsseldorf. In Denmark there are two trade fairs yearly. Such events attract all major suppliers and distributors, and also numerous people with disabilities who are eager to find out about the latest product developments.

- **Intermediary organisations**: such organisations like the sickness funds in Germany or the care insurers in the Netherlands also play an information role especially given that ultimately they will have to bear most of the costs of the selected solution.

- **Regional or local authorities**: for proximity reasons, local authorities are often a privileged source of information. Social services in France, the Netherlands, Spain or in the United Kingdom are often asked by disabled persons for preliminary information. This is delivered mainly by social workers.
Specialised literature, Internet: this information channel is growing in importance, although its main disadvantage lays in the fact that it in most cases fails to address individual issues. Nevertheless the Internet brings the highest value when searching for special and or high-tech products not directly available through classical channels.

ASSESSMENT

Once information is made available, then the actual assessment of the needs of the disabled person becomes the central part of the overall procedure. The quality of the assessment will ultimately determine the efficiency and the effectiveness of the solution.

There are not only differences between the Member States under review on how the assessment phase is handled, but there can also be differences within a single country based on the geographical location where the assessment takes place. There is no single procedure for carrying out assessment or one how results should be formalised in order to be able to claim that the disabled person was treated in a fair way. For example, in Germany, a disabled person not happy with the results of the assessment can simply go to another general practitioner or a rehabilitation centre until satisfied with the results. Many disabled persons describe this as a “continuous fight”. In the Netherlands, if a request is denied, there are appeal procedures.

In all countries, the assessment of the disabled person needs is often carried out in the health structure (e.g. a hospital or rehabilitation centre). Since a prescription is generally needed, medical doctors continue to play a central role during the assessment phase. This dominant role is under debate in many countries (e.g. France) as there are other health care professionals who are specifically specialised in disabilities and Assistive Technology (e.g. occupational therapists).

Assessment outside health structures is generally still performed in most cases by a general practitioner alone (without other help than experience augmented by a few supplier catalogues). This often causes subsequent difficulties if the general practitioner is not sufficiently familiar with existing Assistive Technology products, which is often the case in reality.

Social services within regional or local authorities play a central role in the assessment phase. Especially in the United Kingdom or in the Netherlands, local social services either have an assessment team or they have an agreement with such a centre in order to carry out an assessment of the needs of people with disabilities.

More elaborate assessment take place within teams comprising a doctor, an occupational therapist, a social worker and a technical expert. This allows the assessment to be based on the actual needs of the disabled person in real life situations, thus avoiding many difficulties due to lack of knowledge of one dimension of the problem. Such teams can normally be found in structured centres such as the SVA (Sites pour la Vie Autonome) in France, within the primary health care centres in Sweden, in specialised rehabilitation or research centres, such as iRV in the Netherlands or IBV in Spain. Such integrated centres are described by many players as the only viable solution for a proper assessment of disabilities.

It is extremely difficult to give an estimate of the time between the launch of the process and the time when the assessment actually takes place. This very much depends on local criteria like the capacity of the assessment team (number of staff), the priorities of local authorities and the demographics of the disabled population as some geographical areas have a much higher concentration of people with disabilities than others. When asked about their experience, people with disabilities often mention waits of between 2 and 6 months.
The extent to which individual needs are taken into account during the formal assessment phase is also criticised by many people with disabilities. A recurrent answer heard when asked about their feeling during their assessment is that they were looked on as just one of many. Some people also expressed their doubts about the real capacity and expertise of the person in charge of the assessment.

**TYPOLOGY AND SELECTION**

Depending on the cases, the choice of a suitable Assistive Technology product following the assessment can be based on:

- **The experience or the personal contacts of the person in charge of the assessment**: this typically occurs when a general practitioner or a health consultant is in charge of the assessment through to the final selection. Obviously this seriously limits the products considered.

- **The existence of databases or catalogues listing available products**: corresponding tools have already been mentioned previously in the section about information. Most of these tools will also mention financing issues such as the amount for reimbursement. The major drawbacks with these tools are that they are incomplete (e.g. the former TIPS in France still does not include new technology products) and inert (e.g. failure to deal with changes in the market, especially product products). The CEAPAT catalogue for example does not include protheses.

- **The current availability of products**: in Germany, sickness funds often manage a stock of Assistive Technology products which they have purchased for their members. Therefore there is a tendency to select products which are immediately available rather than having to acquire new ones.

- **Local considerations**: even within a single country, geographical location still plays a major role when deciding on which Assistive Technology to deliver. In Spain, for example, there are a number of autonomous regions which admit more advanced products than do other regions. This limits practical availability of products.

- **The price of the product**: in countries like France, for example, where the disabled person has to make a co-payment towards obtaining an Assistive Technology product, price is clearly a serious issue. Similarly, in Germany co-payment may be required from the disabled person if the preferred product is not the one proposed by the sickness fund.

When a sickness fund or a care insurer is an intermediary as in Germany or in the Netherlands respectively, the disabled person must visit a supplier with the prescription in order to get a price offer that will be returned to the intermediary for approval. For some assistive devices this also applies to Spain. This practice is tending to disappear due to the high pressure sickness funds are putting on costs. They are trying to gain economies of scale by signing contracts with a limited number of suppliers, therefore restricting the possible range of Assistive Technology products a disabled person can have access to.

When asked, people with disabilities often complain that they generally do not have the opportunity to have the Assistive Technology product for a one- or two-week trial period within their real-life situations. This is certainly a problem for specific devices directly imported from other countries. Real-life testing is considered as extremely important, and should be made a general rule. This would make it possible to avoid classical pitfalls (for example wheelchairs size too wide for the entrance door of the house).
FINANCING

It has already been mentioned that price is a crucial parameter for the ultimate selection of an Assistive Technology product. There are no detailed studies or reports which measure the exact impact finances play when individuals decide whether or not to acquire Assistive Technology products. In Spain, a study done by CEAPAT showed that most of the Assistive Technology products are acquired without any financial support from the official delivery system. Nearly 60-80% of all users interviewed said that they have not been financially compensated for their Assistive Technology product. Similarly, in the United Kingdom, there is allegedly a significant proportion of people with disabilities who simply give up trying to get an Assistive Technology product because they do not have the money or do not have external help. (There are no statistics on this phenomenon, so it is very difficult to assess how severe it is.)

In Sweden and Denmark, delivery is normally performed in kind. There may be a co-payment for certain types of Assistive Technology product (e.g. for personal computer equipment or expensive hearing devices). This charging structure is currently being reviewed by the government.

In Italy, all Assistive Technology products listed in the National Register are offered to users free of charge by the National Health Service. More sophisticated products not listed in the National Register have to be acquired privately. Similarly in the United Kingdom, social services deliver Assistive Technology products in kind. However, this does not generally encompass the newest products available on the market (although there are huge differences from one local authority to the other).

In France, the system actually indirectly requires disabled people to contribute sometimes to a significant extent to the acquisition of their compensatory aids. The tariffs in the official LPPR listing have failed to keep up with price trends in recent last decades, so the amounts reimbursed amounts are insufficient to cover actual product prices. Moreover, it is still often the case, the financial or product solution will be different for two people with the same degree of impairment.

In Germany, disabled people have the right to be compensated for their disability. Therefore sickness funds have to provide their members with the necessary equipment free of charge, subject to limited exceptions set out in the list of aids). In practice, disabled people sometimes experience a degree of pressure to accept the product as proposed by the sickness fund rather than the one they would have preferred to receive. On this latter point, sickness funds claim they have the expertise they need in order to deliver the right material and that user’s choices are often strongly biased.

In the Netherlands, most Assistive Technology products are totally financed but always on condition first that the type of product is listed on the list of products and second that the care insurer agrees to finance it. Care insurers also have a limited budget they can use for special cases not regulated by the list of products. In Spain AT product types are listed in the catalogues but only products which are within price limits can be procured free of cost.

Financing of Assistive Technology lies at the heart of the overall issue of delivery systems, both for government and for individuals. All the systems remain extremely complex and it is not uncommon to hear incredible stories about the financing obtained (or not) in individual cases. In France, as many as 20 different organisations can be involved in financing a single case can come from reach up to 20 different organisations. This makes overall coordination a real challenge (not to mention delays and inefficiencies).

The amount of financing granted still depends too much on the cause of the disability (when it can be established), the geographical location (since some regional or local authorities are definitely more...
aware than others of problems linked to disabilities), and other more personal characteristics (information and assertiveness of the disabled person or the person responsible for assessment.)

In countries where legal financing is a constraint, there are other sources of financing. However they are described as insufficient or not well suited to the situation of people with disabilities.

Although VAT policy was not directly addressed in this study, it is obvious that nationally applied rates have an important impact on costs for end-users acquiring Assistive Technology products. There are indeed differences in VAT rates between the Member States. Some countries apply a reduced rate for Assistive Technology products, whereas some others do not. A number of players in this field expressed their desire to see either harmonization throughout the European Union, or even a zero rate of VAT.

**DELIVERY AND FOLLOW-UP**

In Sweden and Denmark, actual delivery of Assistive Technology products is normally performed by the person who delivered the prescription within a specialised centre. Disabled persons seldom directly encounter the supplier or the manufacturer of the product. A general practitioner or an occupational therapist may deliver the device depending on the type of product. When adaptations or configurations are required before the product can be actually used, then this is performed immediately by a specialised person during physical delivery. If required, training is also provided. In case repair or maintenance is required, this is performed at no cost for the disabled person. If the disability evolves, then a re-assessment of the needs is always possible.

In Germany and in the Netherlands, actual delivery is normally performed normally directly by the (who needs to be registered in order to be authorised to deliver products). Adaptations are also performed immediately, and training is organised if required so that the disabled person can use the product efficiently. Both repair and maintenance need to be performed at no cost by the supplier (and these costs are normally part of the overall agreed price with either the sickness fund or the care insurer).

In the United Kingdom there are special services that deal with delivery of Assistive Technology products (for example the Wheelchair Service).

It appears that when training on the Assistive Technology product is delivered, this is in practice often restricted to the minimum and that disabled people often encounter difficulties when using their new product. In the worst case, they are even totally unable to use it. Adequate training is a key factor for the effectiveness of the delivery.

An often heard complaint especially in France and in Spain is that when the Assistive Technology needs either maintenance or repair, the disabled generally do not have access to a replacement solution in the meantime. This is especially a problem when the disabled person is employed and is highly dependent on the Assistive Technology product (e.g. an electronic wheelchair or an adapted car). In those cases, the only alternative too often is to take holidays for the time the product is unavailable. This is particularly unfair.

The duration between the start of the procedure and the time when the disabled person can actually use the Assistive Technology product varies enormously according to the country, the type of product, its availability or not, etc. When asked, people in Germany claim they have to wait 2 to 4 months, which they consider as acceptable. In France, people sometimes have had to wait more than 1 year, mostly due to the complexity of obtaining the necessary financial resources. In Italy, the National
Register established maximum delivery times (ranging from 5 to 60 working days depending on the type of product). A study in the Netherlands showed that disabled people were in general satisfied with the overall process of delivery.

For the longer-term follow-up, there is normally no structured re-assessment. Instead disabled people contact health professionals again either when the performance of the Assistive Technology product declines or when their needs have evolved to a point which justifies a re-assessment for medical reasons.

5.4. Supplier’s perspective

Suppliers of Assistive Technology products are also faced with a process when they wish to distribute their products on national markets. The complexity of the process might range from quite low if products are not considered by the statutory national systems (e.g. for financing or reimbursement) to high if products need to be formally accepted by national statutory systems before being authorised for distribution.

As for the end-user process in the previous section, the overall process is depicted in the figure below:

The various steps are further described below:

- information/Awareness: the first step before accessing a market, whether national or foreign, is to have up-to-date information for taking the right decisions.
- market access: what is meant here is barriers to market access which may prevent distribution of products on the market (but not financing or reimbursement, which are not considered at this step). Free movement of goods within the EU normally guarantees that the market is open.
- product acceptance: having the products available on the market does not mean that end-users will have access to them. The national statutory systems for delivery of Assistive Technology must in most cases formally accept the product before any financing or reimbursement can take place.
- financing: once the product is accepted, then in some cases the maximum amount for either financing or reimbursing will have to be determined.
In the following table, a number of typical questions or criteria are listed to help with comparing answers between the Member States.

### Comparative analysis of the national delivery systems

<table>
<thead>
<tr>
<th>Step</th>
<th>Example of questions/criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Information</td>
<td>Where is information to be found for foreign suppliers to access national market?</td>
</tr>
<tr>
<td>2. Market Access</td>
<td>Who performs the assessment for getting access to market (CE marking only)?</td>
</tr>
<tr>
<td></td>
<td>What is the degree of uniformity in the assessment procedure throughout the country?</td>
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<tr>
<td>3. Product Acceptance</td>
<td>How many independent centres provide information about technical aids?</td>
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<td></td>
<td>Who is responsible for letting products enter the statutory delivery system?</td>
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<tr>
<td></td>
<td>What is the procedure (e.g. testing) for entering the statutory delivery system?</td>
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<tr>
<td></td>
<td>Is it mandatory to have a legal presence in the country? Or is it possible just to contact a distributor?</td>
</tr>
<tr>
<td></td>
<td>Are there differences in treatment for national as opposed to foreign manufacturers?</td>
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<tr>
<td></td>
<td>What is the output of the acceptance, e.g. listing in a catalogue?</td>
</tr>
<tr>
<td>4. Financing</td>
<td>To what extent does the statutory system finance the product?</td>
</tr>
</tbody>
</table>

### 5.4.1. Denmark

No kind of approval is needed before entering the Danish Assistive Technology market however CE marking is mandatory. All products can be delivered as Assistive Technology. Participation in the annual fairs confer a significant advantage when trying to enter the market. There are two of them each year: the ‘Rehab-messen’ in May and the ‘Hit-messen’ in September. At these fairs, producers can meet professionals, purchasers and users.

Suppliers can obtain another advantage for suppliers by marketing products in one of the Danish Centre’s two magazines: ‘Hit’ or ‘hjælpemidlet’. Having their products in the database of Assistive Technology Hjælpemiddelbasen is also a significant advantage for suppliers. To put information in this database, suppliers simply need to send the product description to the Danish Centre and it will be published for free. There is a fee for placing a picture and links.

There is no official quality check. It is up to the people buying the assistive product to see whether the quality fulfils their requirements.

### 5.4.2. France

In order to be authorised to sell Assistive Technology products that confer the right to statutory reimbursement on the French market, manufacturers must issue a request to the CEPS\(^\text{180}\) for their products

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\(^\text{180}\) Commission d'évaluation des produits de santé
to be accredited. For foreign manufacturers, there is in addition an obligation to have either a branch in France (for which accreditation will be required), or to use a local intermediary to distribute the products. There are no special rules (other than CE marking) for products not eligible for statutory reimbursement.

The CEPS registration is lengthy. The procedure is new, and the complex terminology causes problems even for French suppliers (e.g. the CEPS asks the supplier to evaluate the service that is rendered by the product). This requires a significant mindset change on the part of the manufacturers. Moreover, all documentation has to be made available in French, though this is a reasonable minimal requirement due to the fact that the users will ultimately be French-speaking.

Where there is eligibility for reimbursement, then the exact specifications of the product are made available to the manufacturer who will have to have the product recognised. This applies to wheelchairs, for example. The recognition is handled by the CERAH\textsuperscript{181}. This tests the compliance of the product and delivers an identifier when the requirements are met. In addition, in order to be authorized to sell such products in France, resellers or distributors must be accredited by the regional sickness insurance fund\textsuperscript{182}. Until recently, they also had to attend two days of mandatory training at the CERAH.

There are no formal obstacles, other than natural barriers, for foreign companies wanting to enter the French market. Natural barriers arise when expensive products coming from Nordic countries cannot be acquired by people with disabilities due to absence or lack of sufficient reimbursement, whether statutory or not.

When there is statutory reimbursement, meaning the product is listed in the LPPR, the suppliers must carry out the maintenance of the products. Some suppliers include this service in the price of their products so that people with disabilities do not have to search for additional sources of finance for maintenance purposes. This value added service is sometimes badly perceived by the public when price comparisons are made with foreign products where this service is not included. This is especially true in frontier areas.

### 5.4.3. Germany

A description of the process for having products accepted within the German delivery system is currently being developed by the entity responsible which is the IKK sickness fund\textsuperscript{183}. This description will be applicable both to German and foreign suppliers of Assistive Technology products.

There are no special requirements for foreign suppliers or manufacturers of Assistive Technology products wanting to enter the German market. CE marking is mandatory and sufficient. However the acceptance in the aids listing can be a complex and lengthy process, depending on the nature of the product.

If the product is to be considered by the sickness funds for full or partial payment, then the device needs to be registered in the aids listing (“Hilfsmittelverzeichnis”). This is however not a mandatory condition as there may be devices which are not (yet) listed in the aid listing but which will obtain

\textsuperscript{181} Centre d’Etudes et de Recherche sur l’Appareillage des Handicapés
\textsuperscript{182} Caisse Régionale d’Assurance Maladie
\textsuperscript{183} Bundesverband der Innungskrankenkassen.
payment, where for example there is no directly suitable alternative product available in the aid listing.

The manufacturers have to make a request to the sickness fund responsible (i.e. the IKK). The procedure and required time for registration of the product depend on whether the group category already exists in the listing or not. A check of the therapeutic use, of the suitability, and of the quality of the technical aid will be performed by the Medical Advisory Board\textsuperscript{184} which is a joint institution of all sickness funds. The MDS acts jointly with the German standardisation offices. When the check is completed, the national association of sickness funds will decide whether to register the product or not.

There is an accelerated procedure which can be used when a decision on acceptance of a product needs to be taken fast. One of the statutorily underpinned objectives of the overall system is that it has to work efficiently.

Not only is the quality of the technical aids important for their therapeutic use, but also the actual delivery channel. The Social Law Code V (SGB V) also states that whenever technical aids are delivered on behalf of sickness funds, then this delivery may only be performed by authorised service providers. Therefore the supplier must be authorised by the regional association of sickness funds\textsuperscript{185}. The national association of sickness funds has drawn up centralised recommendations for all sickness funds so that there can be a uniform procedure for the delivery of these authorisations to suppliers. In addition to this legally-enforced authorisation, there is a growing tendency on the part of sickness funds to establish contracts with providers. These contracts specify for example guaranteed prices for products and delivery conditions (e.g. maintenance included).

5.4.4. Italy

Each Italian Region has responsibility for issuing specific regulations governing the distribution of medical equipment, assistive devices, and services by hospitals to all citizens. Producers are able to gain access into the National Health Service through public tenders, which are open both to domestic and foreign companies. The bidding process generally commences with a detailed request being made by the head of the ASL. The bid needs to provide sustainable evidence of the benefit which will be derived from the acquisition of the device or service. The bid is then evaluated by a board of directors. There are three commonly used forms of tendering:

- Public tender\textsuperscript{186}, when the amount in question is more than €200,000, is the most commonly used method for bidding and is open to all providers meeting the requirements set out in the bid specifications;
- Private treaty\textsuperscript{187} is a bidding process only for selected providers who have been previously screened, according to specifications set out in the tender;
- Competitive turn-key contract\textsuperscript{188}, utilised when specific contracts have been draw up whose criteria only apply to certain providers.

\textsuperscript{184} MDS – Medizinischer Dienst der Spitzenverbände der Krankenkassen
\textsuperscript{185} § 126 SGB V
\textsuperscript{186} Asta pubblica
\textsuperscript{187} Licitazione privata
\textsuperscript{188} Appalto concorso
The bidding process commonly involves including a detailed description of the devices’ safety standards, testing procedures, operating manuals and quality assurance. The law does not impose any rules on the allocation of points. This is left to the discretion of the ASL.

In order to qualify, the bidder must provide adequate evidence of business experience and professional expertise. This includes providing financial statements, bank credit reports, lists of customers, organisational qualifications and other documents.

Though the tenders are open to both Italian and foreign companies, it is quite uncommon for a foreign company not operating within the country to bid successfully because of the difficulties of coping with the bureaucratic procedures of public procurement. Large international companies wishing to penetrate the national market should look at doing so through an already well established Italian distributor who can provide after-sales services, such as repairs and maintenance.

Law no.332 of 27/08/1999 sets out how suppliers of assistive devices are to be selected. This varies according to type of device being requested or distributed.

Devices that require personalisation may only be supplied by suppliers (manufacturers or distributors) enrolled on a register held by the Ministry of Health.

Devices that are ready-made in nature are supplied by those businesses which comply with the rules and have the capability to guarantee the delivery times for authorised and prescribed devices. It is possible to consult the Regional list of previous suppliers of National Register items.

The price and conditions of supply of devices to be acquired directly by the ASL are set out in the public tendering procedures. In this case, regions also define the requirements to be included in the bid.

All assistive devices distributed in Italy must carry the CE mark.

It is the responsibility of the Ministry of Health, as governing authority, to exercise supervision over medical devices as national Notified Body and as the intermediary with the authorities in the other European states.

The organisations which have been designated to certify compliance with certification standards recognised by the Ministry of Health are:

- BIOLAB
- Cermet Soc. Cons.r.l. No.
- ITALCERTZ
- Certiquality
- Istituto Italiano del Marchio di Qualità – I.M.Q.
- C.M.P. Istituto Ricerche Prove e Analisi
- Istituto Superiore di Sanità
- Istituto di Ricerche e Collaudi.

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189 Art.15 of the Legislative decree n.46 of 24/02/1997
Information on the Italian market for foreign producers wishing to enter the market may be garnered from various associations such as SIVA, which publishes and provides information on assistive devices.

5.4.5. Netherlands

The CE mark is needed for a product to be placed on the Dutch market. There are many imported assistive devices on the Dutch market. In fact the market is very open and accessible for foreign producers. There are no significant differences between rules for local or international producers or distributors.

Procedures for admittance to the market depend on the risk class in which the device is classified. In the Netherlands there are two Notified Bodies (KEMA and TNO) that can deliver the CE mark for devices which fall under classes II and III (moderate and a high risk categories).

The Health Care Inspectorate monitors these Notified Bodies. For class I products (low risk), the producer self-certifies, but has to hold a technical dossier on the product to enable the Health Care Inspectorate to run checks.

After an assistive (medical) device is put on the market, producers must systematically follow a procedure which tracks all information on the use of the device. Severe incidents involving the impact or use of the device must be reported to the Health Care Inspectorate.

To be financed under the health care system a product has to comply with the specifications that are included in the regulation on assistive devices. Apart from the general procedures on medical devices, there is no formal procedure for checking if an assistive device complies with the regulation on assistive devices. In reality it will be the care insurer who will decide whether to allow a certain product or not. The list of assistive devices is updated every year by the Ministry of Health. This is done after obtaining the advice of the College of Care Insurers.

As mentioned previously, the influence of the care insurers on the selection of the devices that are distributed through the health care system is increasing. They organise public tenders for conclusion of contracts with suppliers for the purchase of assistive devices. These procedures are open to everyone. The selection criteria are price and quality.

For products are made available outside the health system, the municipalities, the care insurers and the sickness funds make up their own lists of products. In this case too, selection is often based on tendering procedures.

The Netherlands has an unofficial quality label for assistive devices. The KBOH grants the (Guaranteed Quality) GQ-mark to products that have been successfully tested. The costs of these testing procedures are met by the producer or distributor. The GQ-mark is additional to the CE mark. It guar-

190 Assistive Technology Research and Information Centre
191 de Inspectie voor de Gezondheidszorg (IZG)
192 Regeling Hulpmiddelen 1996
193 Signaleringsrapport Hulpmiddelen
194 Stichting voor Kwaliteits- en Bruikbaarheidsonderzoek van Hulpmiddelen voor gehandicapten en ouderen
antees that a product meets appropriate standards of safety, durability and usefulness, as seen from a user perspective. There is no legal obligation to get this GQ quality mark but experience shows that municipalities only purchase assistive devices (which mean mostly wheelchairs and mobility devices) which carry a quality label. This can be the GQ-mark or a similar mark provided outside the Netherlands.

Together with TNO, KBOH has developed a new website called www.gezondleven.nl which was launched in June 2003. All interested stakeholders can check on this website whether a certain product meets European standards.

Just like many other European countries, the Netherlands are paying more and more attention to the concept of Design For All. There is also a trend to take the needs and desires of the customers more and more into account. Information on the product, a good product description and user information are playing an increasing role in marketing Assistive Technology products.

5.4.6. Spain

Medical devices are regulated by different laws. Within the health system a product must carry a CE Mark

All medical devices must be registered or type-approved before entering the market. The regulation, authorisation and registration or approval is regulated by the Royal Decree on health products. This regulation transposes the European Medical Devices Directive 93/42. A large number of Assistive Technology devices are covered by this Royal Decree, which sets out criteria for technical quality for producing these products and placing them on the market. The fact that medical devices have to comply with the CE mark system means that they must be safe, meet minimum standards, be identified as such and have proper instructions for their use. However, not all Assistive Technology device sub-sectors are affected by this regulation as not all are considered medical devices. (Wheelchairs and crutches are covered under the health care system)

The type-approval and registration of medical devices on the list of products financed under the health system is the responsibility of the National Health Service. To be reimbursed by the health system, a medical device has to be put on the list of products eligible for financing.

The request for inclusion in the list of products is made to the Ministry of Health. This can be done by an Autonomous Community or by the producer. Users or user organisations can also take the initiative. A committee on which the Autonomous Communities are represented reviews the request and decides whether the product is to be included in the list. If this committee decides the introduced new product does comply with the description of products already included in the list, the new product will be accepted and financed. Once accepted this new product will be entered in the catalogues of the Autonomous Communities.

If the type of the newly proposed product is not included in the list, the committee can decide to adapt the list and incorporate the type of the new product. A decision to include a new type of product has to be confirmed by a Ministerial Order. This was the case for example for some new types of hearing devices that were added in the list in 2000. The Committee may decide a product is previously to be

195 Real Decreto 414/96 de 1 de marzo por el que se regula los productos sanitarios
196 Comité Asesor para la Prestación Ortoprotésica
tested by experts or by the evaluation agencies the Ministry of Health cooperates with. In such a case the decision of the Committee will be based on this evaluation. Within the Ministry of Health efforts are made to draw up (till now non-binding) technical criteria for products.\textsuperscript{197} For the elaboration of the technical criteria nine Technical Committees have been created.

There is a national guide to technical standards for rehabilitation technology.\textsuperscript{198}

Customized medical devices have to comply with the Royal Decree 437/2002.\textsuperscript{199} This regulation introduced criteria producers have to meet to get a license. Those criteria related to the producer’s internal organisation in order to guarantee the quality of the products, to the technical qualifications of the producer’s staff, the archives in which technical documentation on the products is kept and a register of all products utilised within Spain. Every producer must have a technically qualified person in charge.

A producer who applies these rules can put a product on the market. In practice, the Spanish market is pretty open to foreign products. Of course, it is advisable to have local distributors.

5.4.7. Sweden

The first condition for suppliers of Assistive Technology products that want to enter the Swedish market is to have a base in Sweden. Most producers who want to export to Sweden at first contact the Swedish Handicap Institute. A second condition is that the products to be placed on the market must have the CE mark. A third condition is for user manuals to be written in Swedish.

On the one hand, there is no real assessment procedure for Assistive Technology products being placed on the market. If a product fulfils the conditions mentioned above, then there is no direct barrier to launching sales. On the other hand, a look at the demand side of the market tells us that the real customers and decision-makers are counties and municipalities. These authorities use the knowledge of the Swedish Handicap Institute of ‘good Assistive Technology’ as a basis for their decisions and participate in central procurement in the form of call-off contracts. Therefore, to market products in Sweden, it is crucial to be listed in the Swedish Handicap Institute’s List of Useful Assistive Technology. The products in this list are recommended as useful and safe.

Testing to get products in this list is performed in the Swedish Handicap Institute. The Swedish Institute performs also other forms of acceptance testing. If a product has already been tested in another country, this can make it easier and faster to go through Swedish testing. There is significant Nordic cooperation: organisations in Nordic countries use each other’s test results. However, not all kinds of products are tested and put on the list. Exceptions are mainly devices sold in large quantities, like wheelchairs. For products like adapted cutlery, pens, clocks and IT devices, the regional centres make their own choice and lists.

Since the municipalities decide for themselves on the Assistive Technology they procure, suppliers must reach them all. Sweden is a large, elongated country and this can make it worthwhile having

\textsuperscript{197} Comités Técnicos de Normalización ; Libro verde p. 66
\textsuperscript{198} Normas de ANEOR – Asociación Española de Normalización
\textsuperscript{199} Real Decreto 437/2002 de 10 de mayo, por el que se establecen los criterios para la concesión de licencias de funcionamiento a los fabricantes de productos sanitarios a medida
several offices, though this of course adds to the cost. Small Swedish companies which were large enough in their own region are tending merge with others in order to enlarge their market reach.

The Swedish market is quite open. With a single organisation, the Swedish Handicap Institute, providing suppliers with all the information they needed, it is definitely easier to enter this market than some other European Union markets.

5.4.8. United Kingdom

There is no central organisation for the acceptance of Assistive Technology products in the UK. Basically equipment only has to be compliant with the CE mark. The MDA (Medical Devices Agency) has a programme for testing equipment, especially for hospitals which acquire large quantities of products. They are not an official accreditation organisation. They issue recommendations on the quality of tested equipment. They regard it is impractical (and too costly) to test all available products.

The National Health Service (NHS) acts as the main deliverer of Assistive Technology products to people with disabilities in the United Kingdom. Due to the very high volumes of Assistive Technology products purchased every year, the NHS publishes specifications and requirements Therefore, the United Kingdom market is basically open for every provider who should want to submit a tender. In order to perform this purchasing role, an executive agency was established within the Department of Health on April 1\textsuperscript{st}, 2000. This is the NHS Purchasing and Supply Agency.

The role of this new agency is to act as a centre of expertise, knowledge and excellence in purchasing and supply for the health service. As an integral part of the Department of Health, the NHS Purchasing and Supply Agency is in a key position to advise on policy and on the strategic direction of procurement, and its impact on developing health care, across the NHS.

Intended to function not just as an advisory and coordinating body, but also as an active participant in the ongoing modernisation of purchasing and supply in the health service, the agency contracts on a national basis for products and services which are strategically critical to the NHS. It also acts in cases where aggregated purchasing power will yield greater economic savings than those achieved by contracting on a local or regional basis.

The agency works with around 400 NHS trusts and health authorities and manages 3,000 national purchasing contracts, influencing around half the £7 billion spent in the NHS on purchasing goods and services in the health service. There is no information on how much of this is part dedicated to Assistive Technology products.

Public tenders are processed by the agency following a strict procedure. When the supplier is selected for a given type of Assistive Technology product, then a framework contract is negotiated for three to five years duration. The framework contract defines such conditions as price (including repair and maintenance) and delivery parameters (time to actual delivery). There are however no commitments as to volumes. The agency diversifies risks by contracting several framework contracts with different suppliers for the same kind of product.

The tenderer does not have to meet any requirements on nationality or location of the manufacturing site. However, one of the conditions is to provide after-sales services, therefore this “indirectly” almost obliges the provider either to have a branch in the United Kingdom or to use a local distributor for proximity reasons.
Information on the internal functioning of the NHS Purchasing and Supply Agency can be found on their well documented Internet site. Detailed information on the procedures are also provided so that British or foreign suppliers can see how to enter the United Kingdom market. There is also a special section dedicated to small and medium enterprises which do not necessarily have sufficient resources (typically legal and financial) to consider entering the United Kingdom market.

Producers or distributors wanting to enter the United Kingdom market can make use of the BHTA (British Health Trade Association) which maintains a code of practice for conducting business in the UK for its members. However, there is no obligation for a supplier to become member of the BHTA.

5.5. Comparative analysis of the supplier perspective

As in the case of the end-user process, the comparative analysis for the supplier side of the Assistive Technology delivery process can be best illustrated by looking at the different steps of the process. For each step, relevant differences and similarities between the countries under review are emphasised.

INFORMATION/AWARENESS

Interestingly there are huge differences in some countries between the answers of suppliers and those of the authorities when asked about the level of information available in order to enter the market with Assistive Technology products.

On the one hand, the authorities claim that information is widely available, either on a website, or on request (for example the NHS Purchasing and Supply Agency in the United Kingdom or the IKK in Germany). On the other hand, both national and foreign suppliers mention the lack of transparency and visibility of the process for entering the market (for example French firms wishing to distribute their environment control devices in the United Kingdom).

These differences depend primarily on the type of Assistive Technology product and whether or not it is admitted for official funding. In the easiest case, where the product is not eligible for any financial aid, the manufacturer or the supplier only needs access to the foreign market. This procedure is well-known throughout the industry and merely consists of obtaining and displaying the CE mark. When an acceptance phase of the product is required, then the procedure is more complex and there is a greater need for information.

In Sweden and Denmark, there are central information centres (the Swedish Handicap Institute and the Danish Centre respectively) which play a major information role for suppliers, whether national or foreign, wishing to distribute their products on these markets. These institutes maintain lists of accepted products which are used during the assessment of disabled people. The main difference between Sweden and Denmark is that only Sweden tests the equipment. The Danish Centre basically no performs no tests.

In Germany and the Netherlands, information on how to have products accepted is provided essentially by the sickness funds or the care insurers. In Spain the central or regional authorities can provide information. The Netherlands has a quality label (the GQ-mark) delivered by the KBOH.
The National Health Service plays an important role in both the United Kingdom and Italy as it is in charge of purchasing high volumes of Assistive Technology products via official public tenders. Therefore these systems are the primary source of information for interested national or foreign suppliers.

Finally, in France and Spain, access to information comes under the umbrella of the Ministry in charge which is responsible for the overall acceptance process of both the product and the supplier.

MARKET ACCESS

Since 1 January 1993, the completion of the internal market has allowed free movement of goods throughout the territory of the European Union. The European Medical Devices Directives (93/42/EU) focus on the responsibility of the device manufacturers. Therefore there can be no CE mark without technical documentation, including risk analysis and reference to the essential requirements of the directive, as well as the declaration of conformity with the directive issued by the manufacturer.

As a consequence, the CE mark is a sufficient condition for suppliers to get access for their products to the territory of the European Union territory. There are identified Notified Bodies responsible for the application of EU Directive 93/42 in each country.

PRODUCT ACCEPTANCE

With the exception of two Nordic countries, Sweden and Denmark, the acceptance of products within the statutory delivery system is normally a much more complex and often time-consuming process than is CE mark certification.

In both Sweden and Denmark, it is sufficient to contact the central organisations already mentioned in the previous section and then the products will be incorporated into their product lists. For the most common products (those widely distributed), tests are performed in Sweden by the Swedish Handicap Institute.

Within those countries it is relatively easy to get products accepted. The difficult task then for suppliers is to convince the buyers (municipalities or counties) that they have to purchase their products rather than those of their competitors.

In the United Kingdom, in Italy and to a certain extent in the Netherlands, Assistive Technology products are purchased mainly through official public tenders. The product specifications are clearly stated in the call for tender. Winning the tender means de facto acceptance. Framework contracts are then awarded for certain duration. Such contracts normally impose certain quality criteria for support (after-sales). There is therefore an implicit condition that the suppliers have an established base in the country for obvious reasons of proximity with the end-users.

Sickness funds and care insurers have the power in Germany and the Netherlands respectively to decide on which products can be accepted in the statutory delivery systems. These organisations publish a procedure for suppliers, whether national or foreign, who wish to see their products accepted. The rule is basically that there can be no delivery of a product under the statutory delivery system if this product is not part of the list. Exceptions can be made when the product is absolutely needed by the disabled person and the product’s acceptance is only a matter of time. Obviously these products can always be acquired on a private basis. In Germany, the legislation states how the list must be man-
aged, including periodic reviews of its contents. Similarly in the Netherlands, the College of Care Insurers is required to update the contents of the list of accepted Assistive Technology products on a yearly basis.

In Germany, not only does the product need to be accepted, but the actual distributor must also be registered with the national association of sickness funds.

In France, there is a list of accepted Assistive Technology products (the LPPR or former TIPS). This list is quite old and has been subject to numerous criticisms for a number of years due to its inherent limitations and its unsuitability for dealing with the problem. The insertion of products in this list is extremely time-consuming and is only possible for “classical” Assistive Technology products. New high-tech products are simply not considered at present. There is no acceptance procedure for these as they are simply not considered by the statutory delivery system.

Finally in Spain, there is a list of products that can be considered for financing by the national delivery system. Suppliers need to contact the Ministry of Health and if the product complies with the requirement, then it is inserted in the list.
6. Assistive technology in the workplace

6.1. Introduction

First a general framework is described to introduce both our understanding and methodology for selecting and describing the best practices, and then each selected case study is presented in a separate chapter.

As much as possible best practices were considered in different Member States. The criteria for final selection were based on the selected framework that is provided in the next section. Therefore, selected best practices are:

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<th>Selection of best practices</th>
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6.1.1. The framework for Best Practices description

In order to deliver a common approach on how to structure these best practices over the different countries, we attempted to provide a general framework for the process of delivering Assistive technology in the workplace. Therefore we propose a two-dimensional matrix with on the one hand a four-step process and on the other hand three levels for implementation.

Each of the steps and levels are briefly described in the figure hereafter and in the subsequent item points.
1. **Awareness & Information:** Obviously, Assistive Technology can only be delivered at the workplace provided a request has been made, either from the employer or from the employee. The underlying assumption is that parties are aware of the possibilities that exist (whether technical or financial). Our findings tend to show that the perception of people with disabilities from employers remains very reductive whereas real capacities of disabled employees. Creating awareness, pro active action towards possible employers seems to be the first step towards integration.

2. **Assessment of needs:** Once a request towards the proper organisation is deposited or a possibility for engaging a person with disability in an enterprise is detected, then the actual process of assessment can start. Assessment has two dimensions. It consists of assessing the workplace and assessing the candidate for employment. From this match the delivering the Assistive Technology (or more broadly the adaptation of the workplace) can start. Ideally this should be done in an integrated way, including technical specialists, occupational therapists, and responsible for the financing part.

3. **Adaptation & Financing:** When needs have been identified, and a corresponding technical solution has been proposed, then the actual delivery has to be performed, including the financial aspects that are of high interest for all parties.

4. **Follow-Up:** As integration is the ultimate goal, follow-up in the early stage of starting the engagement is important. Adaptations have to be evaluated. A disability and the work environment are likely to evolve as time passes. Similarly, technology makes progress. Therefore, the assessment performed at a given time is likely to become invalid or obsolete after a period of time. A reassessment of the situation should ideally be performed in a continuous way.

For the vertical dimension, we foresee following levels for the implementation:

1. **Enterprise-wide framework:** It might be useful to have a general framework at enterprise level to deal with people with disabilities. This would allow for example to be not only reactive, but also preventive (e.g. in the case when the working environment has pernicious long-term effects on the employees, leading to disabilities).
2. **Adaptation of process/procedure:** Without having necessarily to use Assistive Technology products, workplaces might be adapted by changes in either the process or the procedures surrounding the work activities.

3. **Individual solution:** At the very end of the chain, individual problems can be solved by using Assistive Technology products that palliate a functional deficiency of the employee.

It must be remembered however that ultimately this will always result in an individual case, due to the fact that there are rarely many identical cases when dealing with an employee’s disabilities, and that each of them needs to be addressed separately for an optimal and viable solution.

6.1.2. **Practical guidelines before visiting a “Best Practice”**

The following picture gives a schematic representation of the considered parameters and issues before considering a “Best Practice” case. All stakeholders are represented with typical questions of interest.

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**Best Practices for Assistive Technology at the workplace**

**Employee**
- How was information made available?
- Who started the procedure?
- Reasons that allowed you to benefit from workplace adaptation?
- Were your needs properly addressed regarding your job?
- Is the solution the optimal one for your needs? Would there have been alternatives?
- Did you have to contribute financially?
- How long and complex was the entire procedure?
- What are the limitations of the solution you obtained?
- Would you advise other people in similar conditions to do the same?

**Employer**
- How was information made available?
- Who started the procedure?
- Why did you benefit from aids?
- Is the solution the optimal one for your needs? Would there have been alternatives?
- Did you have to contribute financially?
- How long and complex was the entire procedure?
- Is there a review planned for the solution?
- What are the limitations of the solution you obtained?
- Is this a single case in your company, or are there more?
- Would you advice other employers to go through the same experience?

**Intermediates**
- INFORMATION & AWARENESS
  - How is information disseminated to interested people and potential employers?
  - Are there records of previous experiences, a knowledge base?
- FINANCING
  - What is the decision process like for granting aids or not? How structured is the process?
- COORDINATION & FOLLOW-UP
  - Who plays the coordination role during the overall process of workplace adaptation?

**Other Stakeholders**
- Colleagues:
- Family of employee:
  - ...
6.2. SCAPH 38 in Grenoble, France

6.2.1. Introduction

SCAPH 38 stays for “Service Conseil Autonomie pour Personnes Handicapées” in the Isère, French department number 38, with St Martin d’Hères (close to Grenoble) and Villefontaine as main locations. The SCAPH 38 is one of the 33 CICATs (“Centre d’Information et de Conseil sur les Aides Techniques”) in France whose roles and responsibilities are mainly the delivery of information and advice about Assistive Technology products and solutions, without any commercial interest. The SCAPH 38 is widely recognised in France for being advanced regarding Assistive technology in the workplace.

This best practice will describe the general context in which the SCAPH 38 operates, with its own people, its methodology, its experience, its external partners, etc. In order to make the description as complete and concrete as possible, the individual case of Mr Couturier will be used to illustrate both principles and implementations of a solution. Obviously there are many such individual cases that could have been selected, however Mr Couturier’s case appeared interesting in many aspects after discussion with the team in charge at the SCAPH 38.

The structure of this best practice description will be as follows. First there will be a general introduction on the individual case, Mr Couturier. Then a more in-depth description of what the SCAPH 38 is exactly and how it is structured will be introduced. Following this, the different steps of the methodology the SCAPH 38 applies for interventions in the professional environment will be described, with whenever possible and relevant concrete examples as provided by Mr Couturier. Finally, a discussion will be provided as conclusion on what the strengths and weaknesses of the system are and on how it could be improved.

6.2.2. The case of Mr Couturier

Mr Couturier is living and working at La Côte St André, a very small and charming city between Grenoble and Lyon. In 1985 he was employed in a small taxi and ambulance company as a driver, when he suffered a serious car accident. When he could leave Grenoble’s hospital a few weeks later, this was as a paraplegic on a wheelchair (luxation of 2 vertebrae, C7 and D1). The inferior part of his body, starting from chest, simply no longer responded.

Thanks to his experience within the firm and the close relationships with its management, Mr Couturier knew from the beginning that his position was not going to be threatened after his accident. In the contrary, he knew that everything was going to be undertaken for him to continue working within this company.

After the accident, a four-month re-education work took place during which he learnt how to live and use the freely provided manual wheelchair. Then he stayed for a few months at home and when he came back to work, after organisation within the company and the work environment had been re-organised to take the new situation into account. Basically the space within the small reception was optimised in order to allow a wheelchair user to move, the office furniture was newly customised, the step at the entrance door was softened and the restroom was adapted for being used by Mr Couturier. Due to the fact that the cause of the accident was professional, Mr Couturier was granted “almost straightforward” state aids in order to cover all adaptation costs.
Until 2002, Mr Couturier has been working hard at the reception of the company, receiving customers, taking orders for transport and performing most of the administrative work (after a training on how to use computers). No significant changes to the workplace of Mr Couturier occurred during these about 15 years. The company even expanded as new employees were hired (about 12 full-time employees now) and new vehicles were acquired (7).

In 2002, Mr Couturier complained on the one hand from pains in the back and on the other that he had difficulties helping customers filling administrative documents due to the height difference between his wheelchair and the reception desk where customers were standing. The doctor in charge of the workplace (“Médecine du travail”) suggested that the workplace should be reviewed and therefore contacted the SCAPH 38. Basically, the selected solution was to use a wheelchair with an embedded elevator that allows Mr Couturier to stand up at the height of customers, relieving by the same occasion the pains in the back thanks to these repeated up and down movements.

This 2002 adaptation will be extensively described later in this chapter as it consists in the core part of the best practice.

6.2.3. The SCAPH 38 and its environment

The SCAPH 38 operates in the Isère department which counts about 1,2 millions inhabitants. Interestingly the Isère counts a population of people with disabilities higher than the average due to the fact that Grenoble was the first city in France to be accessible for people with disabilities. Therefore it attracted a population from the neighbouring departments and even from the whole country.

The original activities of the SCAPH 38 consisted in helping people with disabilities for their daily living activities and to support them for staying at home. Financial support was granted by the “Conseil Général de l’Isère”. Very fast, the SCAPH 38 became victim of its success with a growing number of requests from people with disabilities looking for independent advice from field specialists such as occupational therapists and social workers. Moreover, the SCAPH 38 noticed that the so far disjoint approaches for delivery of Assistive Technology for both professional and private uses were inappropriate and ineffective in the majority of cases.

In France, the AGEFIPH (« Association nationale de Gestion du Fonds pour l’Insertion Professionnelle des Handicapés ») has been established by the Law of 10th July 1987 for professional insertion of people with disabilities. This law imposes a quota of 6% for the employment of disabled workers in private companies with more than 20 employees. If the quota is not reached, companies have to finance a national fund for professional insertion that is used for financing individual workplaces, under responsibility of the AGEFIPH.

In the Isère, there are between 10 and 15 employment offices that are called “Cap Emploi”. They are primarily responsible for first finding jobs for unemployed people and second for helping those who already have a job to maintain it. The “Cap Emploi” structures do not only deal with people with disabilities and they again only work within the private sector.

In the late 90’s, the SCAPH 38 was selected at national level as one of the four pilot centres for the newly conceived SVA (“Sites pour la vie autonome”). Without entering detail, these sites aim at grouping all services for people with disabilities under a single access point, therefore considerably facilitating the procedure for disabled persons when they are looking for solutions to their problems. This can lead to teams certified by the state (“équipe labellisée”) composed of an occupational thera-
pist, a social worker and a rehabilitation doctor. The objective for the near future is to have one SVA in each French department.

In 2002, the SCAPH 38 obtained additional funding by the AGEFIPH for setting up activities in the delivery of Assistive Technology products in the professional environment (“Pôle professionnel”). These activities are being carried out by multidisciplinary teams involving occupational therapists, ergonomists, social workers and doctors.

6.2.4. The workplace adaptation process

The different steps of the adaptation process are further described in the following subsections. Whenever relevant, the individual case of Mr Couturier will be emphasised.

INFORMATION

Due to the high number of potential actors for dealing with employment of people with disabilities, a current major problem is to make sure that the services of each organisation are properly known and understood so that the overall system can be optimised.

In that context, the SCAPH 38 has recently started promotion activities that address following targets:

- Municipalities: This is the primary location when people with disabilities look for information and advice about their situation or for a personal project. It is important that the personnel within municipalities are aware of the existence of the SCAPH 38.
- The “Cap Emploi” structures and their network of partners: When dealing with employment issues, the “Cap Emploi” play a very important role in the Isère. Therefore the SCAPH 38 needs to be known not only within these 10 – 15 structures, but also within the network of partners of each “Cap Emploi”. A campaigning effort is currently ongoing with presentations and dissemination of SCAPH 38 overview leaflets.
- The employers: This privileged target is the most difficult to reach, due to its large size and extreme diversity. However, the SCAPH 38 attempts to be present during presentations or seminars in order to increase awareness of the employers.

At the time being, it is still true that the awareness, even among the professionals, in the Isère is still insufficient, and that this needs to be addressed further.

In 1985, after the accident of Mr Couturier, the SCAPH 38 did not yet exist. Therefore he had to support most of the effort himself. Fortunately, he could also rely on his employer.

ASSESSMENT

From the very first visit on the place, there are two persons from the SCAPH 38 to proceed with the assessment of both the disabled person and the workplace. The team is made out of an occupational therapist and a social worker.

The occupational therapist plays a vital role as a workplace adaptation also has a strong medical dimension. An ergonomist or directly a supplier of Assistive Technology might propose solutions that can prove disastrous for the disabled employee from the medical point of view.
For example, Mr Couturier had been sitting in his wheelchair for about 15 years before the new adaptation process started. Such a prolonged sitting position might have had a very serious impact on his bones (calcification) leading to severe or lethal injuries in case attempts were performed to elevate Mr Couturier.

The occupational therapist will have to look at the complete medical file of the disabled person, contact the medical network around her or him (general practitioners, specialists, …) to make sure there are no contraindications for the various potential solutions.

Instead of lifting Mr Couturier at the height of the desk, another solution could have been to automatically bring the reception desk lower. However this was considered as a too complex solution to implement.

The social worker will have also a key role during this phase for assessing the expected financing that could be obtained for a special case. His or her role is to establish a reasonable budget for an adaptation, taking into account the situations of the employee and the employer, and of all possible intermediates that could be involved for financing part of the solution.

CONTACT WITH THE EMPLOYER

When both the occupational therapist and the social worker come with one or several proposition, these are presented to the employer, as she or he will have to take the ultimate decision for proceeding or not with the adaptation of the workplace. At this point it is extremely important not only to present different solutions, but also to stress the impacts it will have, both on financial and organisational points of view (not to be forgotten that at this point there is still no guarantee of financing by third-parties).

The SCAPH 38 has viewed numerous examples where proposed solutions can have a serious financial impact on the employer’s firm, threatening up to its existence for the future.

In the case of Mr Couturier, this was not the case as the employer was committed to adapt the workplace. Moreover there was confidence that third-parties would cover the majority of the involved costs.

SELECTION

Once the employer agrees to proceed with the procedure, the final solution has to be selected. This involves mainly the occupational therapist who has to:

– Contact suppliers of equipment: In some cases, material has to be provided for trial in situ, or a customisation of the product needs to be performed.

For Mr Couturier, there was an important customisation work required as the chassis of the wheelchair had to be adapted to his morphology slightly outside standard norms. This customisation represents a risk for the supplier as there is still no guarantee the product will be purchased at the end. Therefore only large suppliers are willing to proceed with such a customisation.

The firm INVACARE agreed to customise its wheelchair and it took a few months until the product was ready to be tested in real-life situations. Smaller suppliers or distributor would have not considered performing this, however INVACARE uses this flexibility as a differentiation criterion. Moreover, the SCAPH 38 has
a good record of acceptance by third-parties financers which also mitigates the risk taken by INVACARE.

− Train the disabled employee on her or his new work environment

Including the time required by the supplier to customise the wheelchair, it took about 8 months to complete all tests with Mr Couturier. More than 10 visits were performed by the occupational therapist in charge of Mr Couturier.

The wheelchair was left for a 15-days trial period for Mr Couturier to try and use it. During that period the occupational therapist had frequent contacts with him in order to finalise the customisation of the wheelchair.

− Further educated the employer and the surrounding staff

During the real-life tests, it was also important to keep both employer and staff informed about the progress of the solution.

FINANCING

Thanks to the unique file (“dossier unique”) as made possible within the SVA structures, the financing is performed much faster now than it was before. In the Isère, this takes between 2 weeks and 2 months at maximum, which is quite acceptable.

The overall price for the adaptation for Mr Couturier amounted to about 10,000 Euros.

The financing was obtained through legal system of “prestations” (tariffs set up in the former TIPS), through extra-legal financing by the sickness funds (CPAM), by the private complementary insurance (mutuelle) of Mr Couturier, and finally by the AGFIPH. Neither Mr Couturier nor his employer had to finance anything.

The selection and training phase for Mr Couturier took more than 8 months, whereas the financing was closed in about one month.

In case obtained financing is not sufficient, then there is the possibility to apply for a second time, which in most cases allows then to obtain a full financing. The experience at SCAPH 38 is that if the file is well prepared, then the AGFIPH will in the majority of cases prefer to finance the remaining part of the solution, rather than to live with an additional unemployed person. In many cases it is possible to show with figures what the cost is for having an unemployed person versus for financing a workplace adaptation.

DELIVERY

In all cases the occupational therapist is in charge for delivering and configuring the material in front of the disabled person. Before delivery actually takes place, the occupational therapist also regularly checks that everything works fine, especially when financing issues take a longer time and suppliers start getting anxious.

FOLLOW-UP

Depending on the case, either a phone call or a visit on site is performed by the occupational therapist 3 months after the delivery. The objective of this contact is to check is the solution is properly func-
tioning, and if it is actually used by the disabled person. After this contact, the file is closed, and remains so normally until the disabled person signals any change in his or her condition.

Normally the solution should not be changed during the next 5 years, unless significant changes occur in the condition of the disabled person.

After a few years, the occupational therapist noted that Mr Couturier had a tendency to adopt a bad sitting position (head coming towards the knees). In order to combat this, it is foreseen to heighten his office so that a straight sitting position can be adopted again.

6.2.5. Final discussion

Cases like Mr Couturier necessitate a significant investment of time. In the majority of the cases treated by the SCAPH 38, the required time is much lower. Typically, this is a short information mission to increase awareness and to facilitate communication between the employer and his or her disabled employee(s).

The problem of transport from home to workplace was not an issue for Mr Couturier as he already benefited from an adapted car. If this had not been the case already, this would have been considered as part of an integrated solution by the SCAPH 38.

6.3. The "Integrationsamt des Landschaftsverbandes Westfalen-Lippe" in Münster, Germany

6.3.1. Introduction

The new social code book IX (SGB IX) entered in force on July 1st, 2001. The Law for people with severe disabilities was included as the second part of the SGB IX and contains special measures for participation of people with severe disabilities. The strong link with the first part of SGB IX on rehabilitation gave a new dimension to the “Integrationsämter” for their active co-operation with classical rehabilitation payers.

Basically the Law for people with severe disabilities extends services for medical and professional rehabilitation of severely disabled persons (degree of disability superior to 50%, GdB) and for (re)insertion in the employment market.

This occurs among others via advice and personal support by the “Integrationsämter” towards employers, and by the legal obligation for organisations with more than 20 employees to hire at least 5% of severely disabled persons. In case the quota is not met, then the “Integrationsämter” are in charge of collecting financial sanctions.
6.3.2. The „Integrationsamt des Landschaftsverbandes Westfalen-Lippe“

There are about 837,300 people with a severe disability level registered in the region Westfalen-Lippe. (These represent approximately 9.9% of the overall population). From these, 252,000 are in the age slice 15-60, meaning they are candidates for the job market. In 2001, 70,826 severely disabled persons were employed and at the end of 2002, 21,550 were registered as jobless.

In 2002, the „Integrationsamt des Landschaftsverbandes Westfalen-Lippe“ has on the one hand collected 61.4 millions Euros from organisations which did not respect the 5% employment quota of people with severe disabilities. On the other hand, it has spent 33.5 millions Euros for individual professional integrations of severely disabled persons.

Still in 2002, more than 480 workplaces were either created or adapted for severely disabled people and more than 2,850 workplaces were equipped with the required technical infrastructure. Human aids were also granted in 1,750 cases.

The different services (“Fachdienste”) of the „Integrationsamt des Landschaftsverbandes Westfalen-Lippe (LWL)“ are as follows:

− Psychological, social and pedagogical accompanying service for people with disabilities.
− Engineering services for dedicated adaptation of workplaces for people with disabilities.
− Services dedicated to hearing impaired people.
− Services dedicated to visually impaired people.
− Services for prevention of diseases in organisations.

It is well recognised that a successful insertion of severely disabled people in a professional environment depends not only on technical issues, but also on organisational ones. Therefore the engineering services within the „Integrationsamt des Landschaftsverbandes Westfalen-Lippe“ are made out of 5 engineers who cumulate following competencies:

− Work psychology
− Workplace ergonomics
− Work organisation
− Security at the workplace

6.3.3. Methodology

There is no really strong methodology applied whenever the engineering services look at a new case. Moreover this is strengthened by their wide experience that there are never two identical cases. The number of parameters and variables differ so significantly from one case to the other that any attempt to generalise fails to deliver expected gains.

Based on the experience and on the frequent contacts with the other “Integrationsämter” in Germany, there are a series of good practices and thumb rules that can be applied. However, fine details and final decisions are always taken on an individual basis.
The following sections will illustrate three fully different situations that each demonstrate different aspects taken into account by the „Integrationsamt des Landschaftsverbandes Westfalen-Lippe“ when looking for solutions.

− First, two office workplace adaptations for blind and visually impaired people will be described. This puts forwards the difficulties in integrating different technologies together and in keeping pace with technological advances.
− Second, a traditional heavy steel industry of the Ruhr will be considered. More than 12% of employees there suffer severe disabilities as direct consequences to work conditions. Focus is more on helping employer to provide better working conditions, without loss of competitiveness.
− Finally, adaptations of a wholesales warehouse for a wheelchair user will be discussed. Focus here lies in a win-win long-term relation between the employer and the employee.

In all three cases, all names are fictive for confidentiality reasons.

6.3.4. Hard- and Software equipment for visually impaired people

Office workplace adaptations for blind employees on the one hand and for visually impaired people on the other hand typically require following characteristics:

− Add-in of an additional Braille line close to the keyboard
− Add-in of a speech synthesizer
− Larger displayed font on the screen, larger screens, and use of zoom-in software that allow to zoom a selected part of the screen
− Increase of the contrast between displayed characters and screen’s background
− A scanner to digitalise input documents

FIRST ADAPTATION FOR A BLIND PERSON

Mrs Schmidt\textsuperscript{200} has been employed for more than 10 years within the Social, Care and Rehabilitation department of the “Landschaftsverbandes Westfalen-Lippe”. In 1997 she benefited from the adaptation that is described in this section.

From above picture, following hardware devices can be observed:

− A standard PC that gives access to all software required for the administrative work of Mrs Schmidt. Besides minor software specific tools, this PC is basically the same as those of Mrs Schmidt’s colleagues.
− A monitor that interestingly is oriented towards the desk of a colleague of Mrs Schmidt. This monitor is used by a human assistant that helps Mrs Schmidt whenever necessary and on a continuous basis.
− A Braille line reader of 80 characters that is for Mrs Schmidt the most important device to access contents of the screen.
− A speech synthesiser that can read contents of the screen.
− Reading system. The scanner digitalises any printed document (no handwritten possible so far) and allows it to be read by either the Braille line reader or the speech synthesiser.

\textsuperscript{200} Fictive name
Being a master in Braille reading, Mrs Schmidt by far prefers to work mainly with the Braille line reader and only use the speech synthesiser as a complementary tool. However, for other blind people who do not sufficiently master Braille, the access to the speech synthesiser is obviously much easier. Productivity seems also to be higher due to the written support of Braille when dealing with numerical identifiers or with monetary amounts (it is not easy to listen to up to 9 position figures and to transcribe them in one form or the other).

On the software side, following is available:

- OS/2 Warp Version 3 for the operating system
- The proprietary software for administrative work SAMOS (as used by all Mrs Schmidt’s colleagues).
- The word processor WordPerfect 6.1
- Browser Netscape 3
- E-mail-Client: Web Access
- The blind software Vision

The DOS software Vision is a very important tool for Mrs Schmidt as it allows her to properly work on her files. When snail post arrives, it is read by her colleague and Mrs Schmidt can input all necessary information and remarks into Vision that will then be freely retrievable when the real administrative work will be performed in SAMOS.

In the future it is planned to evolve to a Microsoft Windows environment that will provide more integration and more support for people with disabilities in general. This will be especially the case for office tools such as e-mail and Intranet access, which is currently not possible because of the OS/2 operating system (Internet is not available for all employees for internal policy reasons).

The new administrative software is already used in another region and therefore could already be tested by Mrs Schmidt (thanks the help of another blind user). Only minor adaptations were required on the new software to make it fully usable by Mrs Schmidt (e.g. pop-up windows that were not properly signalled, …), these were carried out directly by the software firm that delivered the system.

Finally, intensive training will need to be performed by Mrs Schmidt in order to use the new system as efficiently as she is currently using the older one.

The assessment, adaptation, financing and follow-up for this workplace has been carried out by the “Integrationsamt”.

SECOND ADAPTATION FOR A VISUALLY IMPAIRED PERSON

The second case of Mrs Müller\textsuperscript{201} required an adaptation less complex than the previous one that was also entirely carried out by the “Integrationsamt”.

Mrs Müller is visually impaired (12.5% and 20% on each eye) and is working in the same department as Mrs Schmidt. She performs basically the same kind of administrative work under the same software environment.

\textsuperscript{201} Fictive name
Her main difficulty when facing her computer lies in the fact that she has to continuously adapt her position in front of the screen in order to reach the optimal distance between her eyes and the displayed fonts. The design and weight of standard large size screens makes it hardly possible to finely play with its position, therefore it is Mrs Müller who had to move with her chair. This is obviously difficult because both her body and her hands need to be properly aligned with the keyboard, not to mention the physical constraint of the desk.

The solution implemented by the “Integrationsamt” is twofold:

- First a flat screen is installed instead of a classical screen. This provides a better contrast between displayed fonts and the background and avoids the slight curve effect at the edges of the screen.
- Then, a flexible arm is used so that Mrs Müller can fine tune the position and the orientation of the screen to perfectly suit her sitting position at her desk.

6.3.5. Productivity versus better working conditions

In a visited steel plant near Dortmund, the “Integrationsamt” partially financed an automated machine which allows to significantly improve the productivity of workers, and therefore of the plant whose existence is more and more threatened by low labour cost countries.

Such a financing (“Ausgleichsabgabe”) might seem odd for the least. However, the financed solution first allowed providing much better working conditions to employees who suffer severe disabilities after years under heavy work conditions. There are about 12% of the employees who are recognised as severely disabled (more than 50% of disability degree, “GDB”) and fall therefore under SGB IX legislation.

The old and new working situations are shortly described in the coming subsections, finally, some high-level financing details are provided with regards to the overall cost of the solution.

THE OLD WORKING ENVIRONMENT

After leaving the oven, pieces are further processed and refined before being considered as finished goods. Straight after the oven, pieces might still stick together and therefore need to be separated. This traditionally used to occur via workers who hit them with hammers until pieces were properly separated. This especially hard work, not to mention heat and dust, was very demanding for the physiology of the workers who were performing this all day long and therefore led to various physical disturbances among which severe disabilities.

THE NEW WORKING ENVIRONMENT

The employer decided to simultaneously improve work conditions and materials throughput by using machines. First a single-hand driven automate allows to rightly position pieces at the exit of the oven (see picture) and then hydraulic machines are used to separate pieces that are still stuck together.

The automate can be mastered by experienced employees, provided they have good visual capabilities and fine motricity of either the linked or the right hand. Therefore it is well suited even for severely disabled employees who used to work previously under the old environment described earlier.
The complete solution amounted to approximately 400,000 DM, including the automate, the hydraulic machines to separate pieces and various adaptations of the working environment. Obviously due to the increase of throughput and therefore productivity, the “Integrationsamt” could not finance the full amount. A calculation led to financing 280,000 DM out of the 400,000 DM (a participation of 70%).

6.3.6. Discussion

Based on the considered cases and on discussions with the persons in charge at the “Integrationsamt”, it appears that there can hardly be identical cases. The “Integrationsamt” deals with a large variety of situations, whether human or professional. Therefore a unique approach cannot deliver satisfactory results. Moreover, the “Integrationsamt” always attempts to consider each situation in a systemic way, therefore including not only the adaptation of the workplace, but also the means for the person to access his or her workplace.

6.4. Roberto de Cesare, Teleworking, Italy

6.4.1. Introduction

Roberto de Cesare, 33 years of age, has a serious degree of tetra spasticity which among other things impedes him from speaking in a comprehensible manner. Attracted by the characteristics of Computer Science, Roberto was restricted in enrolling into courses for Computer Science offered by the University of Bari because of his movement difficulties. Enrolling in such course would of have meant relocating to Bari. Roberto is currently employed by Telecom Italia as a programmer under the teleworking scheme, where he is able to work from home whilst maintaining constant contact with his employer and work colleagues.

Telecom Italia is a major enterprise operating on fixed-line and mobile telecommunications, Internet and Media Information Technology markets. The Telecom Italia Group serves over 50 million individuals and 3 million businesses, drawing upon over a century of business experience and is made up of the most commonly known brands such as Telecom Italia, Tim, Finsiel, Seat Pagine Gialle, and Telecom Italia Lab.

6.4.2. Awareness and Information

In 1989 Roberto became aware of a programming course offered by ASPHI (Associazione per lo Sviluppo di Progetti Informatici per gli Handicappati), held by the Don Carlo Gnocchi foundation in Milan. The course allowed Roberto the opportunity to study and gain the qualifications necessary to become a recognised programmer. A year from the initiation of the course, Roberto graduated best in class.

Roberto initially found it hard to find a place of employment mainly due to the lack of opportunities available in the city in which he resides (San Severo), and his ability to independently access these places of employment. In 1993 Roberto began an experimentation in developing the language Cobol, working from home for the company Netseil (now Telecom Italia). Contact with the company was
initially made by ASPHI which ensured the contact between Netseil and Roberto. Netseil’s principle characteristics are those to produce information technology processes, the maintenance of software systems developed by third parties, and the management of Internet systems.

The project which included Roberto into the workplace was initiated in March of 1993, and after his definitive employment in September of 1995, is currently still in progress. Technical assistance was initially supplied through a sort of electronic mail, now it is done through the normal emailing system.

6.4.3. Assessment of needs

Roberto was aided by both ASPHI, which co-ordinated the initiative and the Don Carlo Gnocchi Foundation which continuously pursued Roberto’s professional preparation. Roberto’s inclusion into the workplace needed to be assessed taking into consideration his disabilities. There are two main issues concerning Roberto’s disabilities and inclusion into the workplace, they are: 1) mobility, and 2) means of communication.

The first problem that arose was Roberto’s ability to access his employer’s offices. Due to Roberto’s difficulty in movement, the ability to access his place of employment was deemed to be a difficult task. This would of have meant being transported from San Severo where Roberto resides, to Bari where the Telecom Italia offices are located everyday or having to permanently transfer to Bari. Given the ability to work from home (teleworking) eliminated the need for Roberto to be transported as well as problems associated with wheelchair access to the Telecom Italia offices. His current workplace is situated in his family home whereby he resides with his parents.

Secondly, due to Roberto’s disability he is unable to speak in a comprehensible manner, which greatly affects his ability to communicate with others. Thus Roberto needed a channel of communication which allowed him the possibility to interact with his work colleagues from his workstation at home. Such a problem was resolved by the incorporation of a software program called WS CHAT, which allows Roberto to communicate with his colleagues through means of text on a real time basis. The incorporation of an adequate Internet system also allows Roberto to communicate via email.

6.4.4. Adaptation and Financing

Once employed by Netsiel, Roberto’s workplace had to be transformed. His old computer operating on Ms-Dos was substituted with a more potent PC which utilised Windows 95. Whilst his network connection with Netsiel was frequently interrupted, with the new system every inconvenience was eliminated. Roberto’s workstation, located in a room of the family home, is equipped with:

- PC;
- monitor;
- keyboard;
- printer;
- mouse;
- modem and Internet connection

Those are all provided at a cost to the company of approximately €2,500, taking into consideration that the equipment provided to Roberto from 1995 has been gradually updated.
Robert now operates with an email system which allows him to communicate with his colleagues as if he were on the telephone. In fact, the system that Roberto utilises (WS-CHAT) allows real time bi-directional chatting (text-based) over the Internet. That is, Roberto is able to write to his colleagues and whilst he is writing the text appears on the computer screen of his collaborator. The same applies for Roberto’s collaborator, who whilst viewing the message being written by Roberto is able to write a response. WS CHAT also makes use of event driven programming, it uses almost no processor time when not in use. This solution overcomes problems associated with distance and in an instance eliminates the disabilities associated with Roberto.

6.4.5. Follow-up

Every now and then Roberto attends courses held by Telecom Italia in Bari for his professional development, along with other employees of the company. It is also a means of getting to know his colleagues that he is in contact with everyday from home. Roberto’s performance is valued by his supervisor who visits him at home and completes a valuation card on his performance, as is done for every other employee of the company, once a year. Roberto’s work timesheets are electronically registered everyday at the start and finish of the working day, whether they been normal working hours or overtime. Working hours are exactly the same as those applied to the other employees, which foresee a half an hour break for lunch. Holidays are registered in the same manner as is done so by all the other employees, that is by forwarding a request via email.

6.5. IBV Adaprec Project, Spain

6.5.1. Introduction

The best practice concerns an initiative from the Instituto de Biomechanica de Valencia (IBV) in collaboration with the Spanish Centro Estatal de Autonomia Personal y Ayudas Tecnicas.(CEAPAT) and the Instituto de Migraciones y Servicios Sociales (IMSERSO) depending from the Ministry of labour and social affairs.

Since several years the IBV is collaborating intensively with the Spanish authorities and various associations of people with disabilities in setting up research and initiatives to promote and intensify the use of Assistive Technology in general and into the workplace more specifically.

The IBV set up a project called ADAPREC. The project aims to improve the quality and the knowledge on the adaptation of industrial workplaces to people with disabilities.

The objectives are:

– the adaptation of workplaces in industrial enterprises for persons with disabilities
– to produce formative information on the studies of adaptations in a CD-Rom
– to elaborate a database with (ergonomic) recommendations towards adult workers with disabilities following the ERGO DIS/IBV method
– to diffuse the results between professionals in Spain by organising seminars, workshops and congresses, by publicising the result in scientific magazines and by organising presentations of the project results into scientific and technical forums.
The project was carried out during 2001 and 2002 and was a second initiative after the former ADAPTOFI project which covered adaptations of office places. The project was funded by the Ministry of Labour and Social Affairs. Under the ADAPREC project 5 examples of adaptations were carried out. The IBV did a study on 5 specific workplaces that were selected out of a greater number of cases that were investigated. The 5 cases were fully assessed and documented using a specific method on workplace adaptations.

This method is called ERGO DIS/IBV. Using this method the workplace and the disabled worker are assessed. The ERGO DIS/IBV method was elaborated by the IBV in close collaboration with IM-SERSO (Instituto de Migraciones y Servicios Sociales) and the UPV (Universidad Politecnica de Valencia. This project called ERGO-WORK was co-financed through the Horizon II programme set up by the European Social Fund. The method was adapted and used for the study on the workplace adaptations.

Following the conclusions from the study, the 5 workplaces were adapted in close collaboration with the enterprises and the disabled persons concerned.

6.5.2. Awareness and Information

The Adaprec project, as the former Adaptofi project, has an important informative objective. The results of the projects as the methods used to realise the adaptations of the workplaces have been widely spread towards all interested groups. The projects proved that realistic workplace adaptations can be realised using a scientific basis in a way that makes it possible for disabled workers to carry out their tasks in enterprises.

During the projects close collaboration with the enterprises was set up to inform them of the possibilities of workplace adaptations. Those contacts with employers seem very important for the success of integration of disabled people in enterprises. Creating awareness is one of the key objectives of the project. The cases have been fully described on a CD-ROM that was issued afterwards and distributed.

At first about 300 copies of it were made, meant for professionals, public authorities (National and at Province level), employers associations and associations of people with disabilities. As was done in the former project ADAPTOFI, the intention is to make the entire information accessible through the website of the IBV. The ADAPTOFI CD-ROM was downloaded about 2,500 times till now.

As a result of both projects the IBV is at this moment performing a study for the Ceramic industry in the province of Castellon on the possibility to integrate disabled workers into this industry. A similar project is intended for the shoe industry in Valencia and in collaboration with Feopt an adaptation of 40 workplaces for metal retarded workers is performed in the Autonomous Region of Castilla y Leon. Other projects are set up in the Autonomous Region Pays Vasco.

6.5.3. Assessment of needs

For the ADAPREC project 5 workplaces were selected out of an analysis of various workplaces.

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202 Metodo Ergo, Evaluacion de riesgos laborales asociados a la carga fisica, IBV Valencia 1999
Using the ERGO DIS/IBV method a complete assessment on the workplace and the worker have been performed. The ERGO DIS/IBV method has been integrated in a software program that includes all stages of the assessment on both the workplace and the employee.

At first the workplace itself (including measuring), the different tasks to be performed by the employee (physical, sensorial, communication, psychological), the work environment, accessibility, physical and environmental risks are analysed.

In a second stage an analysis of the employee, the disabled worker, is performed. All relevant data on the person, the characteristics of his disabilities, his tolerance on environmental conditions, measurement and his personal evaluation of the workplace conditions are collected.

Starting from this information the ERGO DIS/IBV software program processes data and gives results on maladjustments and risks. The maladjustments come out of the comparison of the characteristics of the work and the person. These results are discussed with the worker to get his opinion on the outcome. By introducing a series of parameters on activities and on the workplace, the program determines the different risk levels concerning physical (posture, repeated movements, weights..) and environmental burdens (illumination, temperature, noise..). It also gives the indications and priorities on necessary changes on tasks and on the workplace.

On the basis of all this information a final decision on the case is taken considering the situation and taking into account the opinion of all interested parties. (employer and employee)

The ERGODIS/IBV method has a database of documented recommendations on adaptations that makes it possible to perform combined searches on solutions for the maladjustments and risks that come out of the assessment.

### 6.5.4. Financing

The global cost of the ADAPREC project was of 41.500 €. From this amount 23.500 € covered the costs of personnel, working costs and costs of assessment of the workplaces and the workers concerned. The actual adaptations of the workplaces had a cost of about 12.000 € or an average of 2.400 € for each adaptation. Finally the cost of producing and distributing the documentation and the CD-Rom was of about 6.000 €.

The former ADAPTOFI project had a total cost of 62.800 €. Under this project 4 adaptations of workplaces where carried out at an average cost of about 4.700 €. These costs were fully financed by the IMSERSO. Additional investments are made by IBV who is giving a full follow-up to the project.

### 6.5.5. Follow-up

The Instituto de Biomechanica de Valencia still diffuses additional information and CD-Rom’s on the workplace adaptations. It is also still giving a follow-up on the adaptations themselves. Regular contacts with the employers and employees take place and the devices used for the adaptations are still adapted and repaired when necessary by the IBV.
6.5.6. Cases

Of the five cases that were realised under the ADAPREC project 5 concern adaptations of workplaces where parts are assembled we describe two of these cases we visited. The cases are fully documented with pictures and video on the CD-Rom that was realised for distribution of information. The same goes for the office adaptations which have been realised in the ADAPTOFI project.

Case 1

The workplace is an enterprise where electronic circuits are verified and repaired. The worker is a man of 43 years old, has a professional education and suffered poliomyelitis and espina bifida. He uses a trunk corset, ortosis on both legs and orthopaedic shoes. The work requires accuracy, mobility of the upper limbs, a stable position of trunk and neck, good vision and attention.

The worker has mobility and force limitations on both legs, trunk and his left arm.

The principle problems (maladjustments and risks) are:

- difficulty in sitting down on the working chair and standing up
- wrong sitting position
- working position with high flexion of the neck and mostly unsupported arms.
- Difficulty to reach the boxes in which the parts that have to be assembled are stocked
- Difficulties in handling some working-tools
- Insufficient lighting of the workbench

Adaptations

- Electrical adjustable chair with possibility to change the height and the inclination. Brakes on wheels and possibility to block the rotation of the chair.
- Adjustable supports for cases with materials to be assembled
- Adjustable arm supports
- Additional working-tools with specific angles
- Improvement of illumination

Case 2

The workplace is an enterprise where electronic devices are assembled. (special amplifiers). The worker is a man of 38 years old, has a professional education and has limitations in mobility and force of the right leg and arm. The work requires mobility, ability to manipulate devices, accuracy and mobility of the upper limbs, stable position of trunk and neck and good vision and concentration.

The principle problems (maladjustments and risks) are:

- Difficulty in transportation of the assembled device and in loading a new frame upon the workbench
– Difficulties in handling the frame on the workbench
– Difficulties in reaching the different parts to be assembled
– Difficulties in screwing
– Usual forced working position
– Difficulties in using screw-driver and brush

**Adaptations**

– Adjustable carrier allowing transportation of the devices before and after assembling and allowing to lift the devices at the level of the workbench
– Soldering-iron with specific angle
– Electrical screw-driver and brush with specific angle
– Magnifying glass with light
– Turning table for positioning of the frame
– Additional workbench
– Adjustable supports for parts to be assembled

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**6.6. The Swedish Handicap Institute, Sweden**

**6.6.1. Introduction**

The Swedish Handicap Institute has already been mentioned before in this study as an excellent initiative to bundle all knowledge and expertise on Assistive Technology products in one place.

We consider it here from another angle, not only being a good resource on Assistive Technology in general, but also being an employer that makes it possible for all people, disabled or not, to work at the Institute.

**6.6.2. The Swedish Handicap Institute**

The Swedish Handicap Institute aims at improving the quality of life for people with disabilities. Its major task is to ensure access to high quality and well-functioning Assistive Technology and to work for an increased access to society. The Institute's work includes stimulation of research and development, analyses of needs and testing of Assistive Technology. It also gives out information and performs training to professionals regarding Assistive Technology for different categories of disabilities. The Institute is also involved in international research and co-operation project in the field of Assistive Technology and accessibility.

Not only users and producers, but also employers, companies that perform adaptations and other stakeholders can turn to this organisation to get the information needed. They are not actively working on Assistive technology in the workplace, but can nevertheless inform users on where to turn to get Assistive technology in the workplace. Their HIDA-database surely contains products that can also be used there.
6.6.3. A workplace adaptation

To be able to perform his job Mr Becker uses a combination of speech and Braille. At the institute he also has a Braille printer. He disposes of a Braille-unit connected to his computer, together with the necessary software. With this product he can easily read what is written. Reading, through the use of the Braille unit, works also very well to check while he’s writing a text himself. Speech, in this case synthetic speech, is used when dealing with larger texts and to scan through a text in a fast way.

When unemployed or having just finished school the Labour Market Authorities helps to find a job and pays for the necessary adaptations. Disabled people already having a job should turn to the Social Insurance Office. This Social Insurance Office starts a kind of negotiation with the employer to see what will be paid by whom. As a standard rule the devices that could be used by other people are paid for by the employer, but there can be differences depending on the specific case. The computer Mr Becker uses is for example owned by the Swedish Handicap Institute.

To get the assistive devices he needed, Mr Becker turned to a representative of the Social Insurance Office in the place where he lives. This person wasn’t really aware of the needs of a blind. The first thing Mr Becker did was finding a supplier for the products he needed. This supplier made an offer for the equipment needed which was send to the Social Insurance Office for approval. After approval the supplier delivered the Assistive Technology products and invoiced the Social Insurance Office directly.

The products received in this way are personal equipment, which is good. This makes that the employee is not so attached to his employer. If the equipment is not needed anymore, like on retirement, it has to be turned in at the Social Insurance Office unless it is old equipment that would be replaced anyway.

Mr Becker stresses the importance of training. In his opinion there should be much more. It’s true that it is necessary to be an expert on the equipment, since a helpdesk of the company’s computer department would not be able to help very much when a problem occurs. For new equipment the Social Insurance Office pays for the training, which is included in the offer. With an upgrade or with minor adaptations the employer can also take care of this.

Just his way of working would have been completely different 10 years ago. In earlier days he would have needed much more personal assistance. New technology has created far better opportunities for blind people; having more than just a job is also possible for them. Still about 50% of blind people are unemployed. Most of the ones working have under qualified work. Changing this has to do with attitudes. All people, this includes people with a certain functional impairment, are involved in building this society. Good examples have to pave the way for others. The portrayal of people with a disability in media certainly does play a role here.

6.7. Bewegingstechnologisch Ontwerp Bureau and the Virtual Signpost for Workplace adaptations, the Netherlands

6.7.1. Introduction

In this best practice the ‘Bewegingstechnologisch Ontwerp bureau’ is presented first to frame who they are and what they do. In a second item a closer look is taken at the workplace adaptations them-
selves. What method is used to perform them? A third item is introducing the ‘Virtuele Signpost for Workplace adaptations’\textsuperscript{203}, an Internet tool which contains a whole database of adaptations that makes it easily possible for (future) users to find a solution that fulfils their needs and wishes. Finally, a practical example of one of the cases in this tool is given. It’s about an horticulturist that has an amputated lower arm and is now back able to perform his job thanks to the adaptations provided.

6.7.2. Bewegingstechnologisch Ontwerpbureau

The ‘Bewegingstechnologisch Ontwerp Bureau’ is a small, young and dynamic firm situated in Den Haag, which offers advice, product development, information services and workplace adaptations. The name of the firm could be translated as ‘motion-technological design office’. They give advice on ergonomics at work (including consistency with the ARBO-legislation) and at home, organise prevention workshops, develop products like furniture, adapt existing products and adapt workplaces. Since they provide solutions for a wide variety of persons and places, it is clear that adaptations for people with a disability are only part of their job. At this moment they perform about twenty workplace adaptations a year, but this figure will probably become larger in the future.

All people working here studied ‘Bewegingstechnologie’ (motion-technology). Just like the name says, this study is a combination of motion studies and technology. On one hand graduates from this education know how to make motion analyses through courses like anatomy, physiology, biomechanics, motion and analysis. On the other hand there is a technological part which consists of courses like instrumentation techniques, video, mechanics, material knowledge, construction and design. This is completed with some more general courses. Motion technologists can make the bridge between people and technology.

In a way the ‘Bewegingstechnologisch Ontwerp Bureau’ goes just one step further than the average adaptation. They do not only use standard solutions, but they also create new ones. In this way users can keep the job they like or get the job they want. By adjusting the technology, problems can be solved. Sometimes people who are vocationally disabled just get a retraining and move to another job, which is a pity. In the vision of the ‘Bewegingstechnologisch Ontwerp Bureau’ it is not the employee who has limitations, but the technology is not adapted to the needs of the employee. Through good adaptations, solutions come within reach.

6.7.3. Work method

INFORMATION

A workplace adjustment is the solution to be able to perform work tasks in a better way. A small firm does not have the means to have massive marketing campaigns. Most of the time people are referred to the ‘Bewegingstechnologisch Ontwerp Bureau’ by UWV. With the development of the ‘Virtuele Wegwijzer Werkaanpassingen’, which will be described later, the firm has a good tool to present its knowledge to a wide public.

\textsuperscript{203} Virtuele Wegwijzer Werkaanpassingen (VWW)
ASSESSMENT OF NEEDS

At the ‘Bewegingstechnologisch Ontwerp Bureau’ three different steps are passed through making a good assessment of needs possible: the acceptance of the problem, the introductory interview and the analysis of the labour tasks. After a first presentation of the problem they can indicate who has the most specialised knowledge to solve it and they schedule an appointment for the introductory interview. During this interview the source of the problem is being discussed and the different labour tasks are examined. Because of the experience of former adaptations they can start right away with the analysis in most cases. By means of an adequate analysis the bottlenecks of the labour tasks are identified. This analysis consists of several parts. Video and motion analysis help to chart the problematic actions and movements. Afterwards the definition of the problem is elaborated together with a set of requirements for the solution.

ADAPTATION AND FINANCING

Starting from the set of requirements they have a look on how the problem can be solved in the most efficient way possible. This can be done with existing products, but where these don’t fulfil the requirements the product is adapted by the ‘Bewegingstechnologisch Ontwerp Bureau’. In this way an individually adapted solution is guaranteed. As mentioned in the chapter on legislation, users can rely on REA, the Law on (re)integration of Vocational Disabled people. To make it easier for the users, the company is taking care of the submission and the settlement of the subvention for a workplace adjustment. Due to their activities in several areas within the health care sector they are well known with social laws and regulations in the Netherlands. In most of the cases the complete solution can be financed.

FOLLOW-UP

The follow-up of the solution depends on how specific the adaptation is and is also taken care of.

6.7.4. Virtual Signpost for Workplace Adaptations

People with a disability have fewer chances on the labour market than others. With the right Assistive Technology products and workplace adaptations this does not have to be the case. But where to find out what technology is good for whom and in what situation? Here the ‘Virtual Signpost for Workplace adaptations’, in Dutch abbreviated as VWW, can play a role. This website informs employers and employees on the huge amount of technological possibilities. Other professionals in the business can also find useful information here. Due to a very specific structure and the use of international classification methods an extension for specialists is one of the future possibilities.

The search method of this tool is very user friendly. The user just briefly describes his or her problem and a list of possible examples is suggested. With the help of the case based reasoning technique refining is possible so that the user finds exactly what he or she needs.

At this moment there are 650 cases in the system and this will continually be expanded. Some of the examples nowadays in the database come from Germany, but they will gradually be replaced by

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204 Wet op de (re)integratie van Gehandicapten – Wet REA
205 official Dutch name: Virtuele Wegwijzer Werkaanpassingen
Dutch examples. For every case the problem, the solution, the firm responsible for the reintegration, the Assistive Technology products used, a reference to law aspects and possible subventions and the costs of the products and solutions are clearly indicated.

VWW has three major advantages. Since it is developed by TNO together with the Knowledge Centre on Revalidation and Disability\textsuperscript{206} the website provides independent information. Moreover this information can be found in one place and finally it is free.

6.7.5. **Case-study: the horticulturist**

This case is about a horticulturist who has his private enterprise and whose lower arm was amputated. He could not do much of his working tasks any more. The ‘Bewegingstechnologisch Ontwerp Bureau’ worked on a special tailor-made solution for him to improve this situation.

First a detailed assessment of the needs was performed. Some of the tasks went much slower than before, others became impossible. The problematic tasks were planting young flower, care of the flowers during growth, collecting the flowers, putting a bundle of flowers in its wrapping and tasks like cleaning the floor with a broom or handling a high pressure cleaner and driving a tractor. The different tasks were analysed in detail. They differ so much from each other that a prosthetics of one specific form does not solve the problem. Like hands can do many different tasks, like pinching, grabbing and digging a prosthetics should be able to perform these tasks also.

With the list of demands as a base a product was developed that helps removing the limitations. The prosthetics of the horticulturist can be a solid shape for elbow to wrist, but on the wrist piece he should be able to fit several interchangeable aiding pieces. After that 5 aids are developed which all are suitable to perform a special task and these aids can be put on the base piece in an easy and fast way. The ‘Bewegingstechnologisch Ontwerp Bureau’ developed the five pieces and guided the horticulturist by the use of the prosthetics during his work. This adaptation had a cost of € 4359 inclusive of VAT and was fully covered by the REA law.

6.8. **Iris Hadar, Sweden**

6.8.1. **Introduction**

In this best practice we focus on a workplace adapted for a visual impaired person by the Swedish Iris Hadar AB. In the first paragraph we give more information on the company involved. The second paragraph gives a view on SRF, the Swedish Association of Visually Impaired, where the adaptation was performed. In the last paragraph the case is described in detail.

6.8.2. **Iris Hadar AB**

Iris Hadar AB is a daughter company of SRF Iris AB, a company that combines company profit with profit for society. Iris is owned by the Swedish Foundation of Visually Impaired\textsuperscript{207}.

\textsuperscript{206} Kenniscentrum voor Revalidatie en Handicap

\textsuperscript{207} Kennisplatform voor Revalidatie en Handicap
As of July 2002, the former Enter Company had a total of approximately 100 employees in 15 offices at different locations throughout Sweden. Enter works to ensure that all people, regardless of any functional impairment, have a self-evident place in everyday life, at school and on the labour market. This raises self-esteem and is profitable for both the individual and society.

The business activities are divided into three areas: aids for the disabled, consulting services and education. They adapt workplaces and positions on training courses using modern computer technology and specialised educational techniques and also sell various kinds of Assistive Technology products. These products come from leading manufacturers throughout the world and include both advanced computer aids and traditional daily living devices. Iris Hadar offers training, foundation courses and vocational training for future occupations. Further they provide help with assessments of people and their environment, accessibility analyses and course on human relations in the context of functional impairment.

They are authorised by the National Labour Market Board (AMS) and the National Insurance Board (RFV) as a supplier of suitable training and appropriate aids for people with functional impairments. In close collaboration with Sweden’s Employability Institute (AMI) and Employment Services (job centres), Enter has completed more than 2 800 computer-based workplace adaptations for people with functional impairments.

6.8.3. SRF

SRF208, the Swedish Association of Visually Impaired is the main organisation of the blind and partially sighted in Sweden. SRF is a social, non-political organisation where its members actively participate in decision making. The aim of SRF is to achieve a society based on equality and solidarity where the visually impaired can participate on the same terms as everybody else.

SRF was established in 1889 and is a national association with about 15,000 members, 170 local branches and 24 regional affiliates. 250 officers/secretaries are employed in the organisation, about half of which are visually impaired themselves. SRF is financed partly through membership fees, partly through public funds, and partly through its business group Iris.

SRF divides its work into two main areas: safeguarding interests, and managing co-operative activities. Creating a society that is equal is the responsibility of everybody. SRF’s nationwide involvement serves to ensure that the government, municipal authorities and businesses follow official guidelines for creating a society with equal rights for all. The commitment of the people it concerns is the only guarantee of success. Only the visually impaired themselves know what is necessary to improve their situation in order to achieve full participation. In a globalising world, this also means international involvement.

6.8.4. Case study

Mrs Emanuelsson started working at SRF as a secretary in 1975. During that period she has been away for studies during three and a half years and has been working at other places during three or four years. Nowadays she works at SRF as an ombudsman and in this function she gives support and
advice to SRF’s members. Another part of the job is having influence on politicians to give visually impaired people also a voice in the political context.

Many visually impaired people know how to work with a computer before starting a job and have some knowledge on word processing and e-mail applications, which makes functioning at work a lot easier. New technology opens a whole world of new opportunities; the job of Vivi-Anne would have been much more difficult without the Assistive Technology products she is using. When starting her job, the installation of adjustments was needed. She discovered exactly what she needed while she was there. The total staff working at SRF consists of about 60 people of whom about 20 are blind or partially blind. There is also one person with a wheelchair. This very specific working environment made that significant knowledge was already in the company and that the building was not only made accessible for her. The Enter company is situated in the same building so

When you get a new job, it is the Swedish National Labour Market Administration that finances the adaptations. Afterwards the Social Insurance Office takes care of it. All equipment that is necessary for functioning in a job can be provided free of charge. An exception is made for equipment that any other employee also would need, this should be financed through the employer. Adaptations to the environment like adapted lightning are also the responsibility of the employer.

Together with Bengt Eriksson, Vivi-Anne’s contact at Enter, she went through her needs. Being blind himself, Bengt knows exactly what kind of adaptations were needed. Afterwards an application was made to the Social Insurance Office for the needed changes. This application also included training to get to know the functioning of the products and to learn how to work with them. It can take up to one year before the Social Insurance Office formulates a decision on the application, but in some cases it can also go very fast. The delivery of the products also takes quite some time and there is of course also some time needed for the training. This time is quite often underestimated, but it is possible to ask for more afterwards. For Vivi-Anne’s last adaptations the whole procedure took about half a year. She is now using a PC with Braille unit, a normal printer, a scanner and specific software. As she isn’t completely blind, she can also use a system that shows a text which is put under the lens magnified on a screen. A Braille printer was not necessary for her, since the department already had one.

She is very well able to perform her job now and likes the work she does. The intention of Enter is to provide follow-up, but this has not always been possible in the past. More and more support hours are now calculated in the price of the solution so they can be there when needed and they also take care of the warranty of the devices.

Vivi-Anne would certainly like to have other people with visual impairment move to the job they really want. Far less people with visual impairments have a job in comparison with other people in working age. One of the first obstacles to tackle is finding a job. To perform this she presents the idea of a kind of mentor that helps people to get a job. Getting a job is not always easy for a disabled person. Both the disabled person and the employer have lots of knowledge questions on how it will be and on the possibilities there are. A mentor could help in this.
7. Compatibility with EU treaty and directives

7.1. The European employment policy

The European Commission on January 14th, 2003, adopted the outline of a new, more operational European Employment Strategy to confront new challenges such as faster economic change, ageing populations and enlargement.

The Commission proposed three basic objectives for the future strategy, in line with the reform agenda agreed at the Lisbon summit in 2000:

− full employment
− the promotion of quality and productivity at work (better jobs)
− fostering cohesion and an inclusive labour market.

Specific priorities, to be supported wherever possible by quantified targets, will inter alia include getting women (back) into work, helping older workers to stay in work and making work pay. The Commission also proposes better governance of the strategy, especially through more involvement of social partners and civil society and streamlining the strategy with other EU policy coordination processes such as the broad economic policy guidelines.

This policy paper was intended to provoke a broad discussion about the future shape of the European Employment Strategy in the run-up to the EU's Spring Summit held on March 21st, 2003. The discussion was the basis for formal proposals for new employment guidelines and recommendations made by the Commission in April.

People with disabilities and the European Year are clearly mentioned in the document for the European Council: "taking into account all unemployed and inactive persons wanting to work, the EU had an unused labour supply potential of well over 23 million in 2001. Disabled persons alone represent a population of 38 million in the EU; only 46% of those reporting a moderate disability and 24% of those reporting a severe disability are in work. As the EU launches the European Year of the Disabled in 2003, it is crucial to recognise the difficulties faced by the persons concerned in accessing or remaining on the labour market and to take decisive steps to better exploit the employment potential of the disabled".

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209 Under the heading "cohesion and inclusive labour market" on page 10
7.2. Anti-discrimination in the EU

7.2.1. Member States and anti-discrimination

The Member States reviewed use different approaches in order to improve the situation of people with disabilities. These approaches can either be based on anti-discrimination or on preferential treatment.

− The anti-discrimination approach requires general non-discrimination in respect of a disability in comparison with the situation of those who are not disabled. This usually means that in all the situations/areas to be covered, the situation of those with disabilities has to be compared with that of those who are not disabled. If there is any difference which cannot be justified by special circumstances, this will be classed as discrimination.

− The preferential treatment approach involves identifying areas where disability typically leads to disadvantage for the people concerned and improving the situation by positive/active measures. The aim of this approach is to enable any person with a disability to take part in all areas of daily life by compensating for given disadvantages (e.g. use of quotas in employment).

The two approaches are not mutually exclusive. In a number of countries they are mixed or combined depending on the areas under consideration.

Some countries have written constitutions which contain an anti-discrimination rule or a preferential treatment provision that explicitly covers people with disabilities. For example, the German constitution states that “No one may be discriminated against on account of their disability”.

Some other countries have written constitutions which contain more general anti-discrimination rules or preferential treatment provisions that cover people with disabilities by implication. This is, for example, the case in France where the law on non-discrimination is based on the principle of equality, one of the oldest and most firmly established principles of French public law. The same general rules can be found in the constitutions of the Member States like Denmark, Italy, the Netherlands and Sweden.

General prohibitions on discrimination and rules on equal or preferential treatment can also be found outside written constitutions. This might be in criminal law, as, for example, in France where the notion of “inferior treatment” is an offence.210

Provisions can also be found in other fields of legislation, as for example the Disability Discrimination Act 1995 in the United Kingdom. The DDA prohibits discrimination against persons with disabilities in a range of areas, including employment, access to goods, facilities and services and the management, buying or renting of land and property.

Preferential treatment can also be found in written constitutions and laws. For example, Spain’s constitution (Art. 49) requires the public authorities to pursue a policy of prevention, care, rehabilitation and integration for those with physical or mental impairment.

Finally, measures for preferential treatment must be in line with the prohibition in all national constitutions and laws of any differentiation and with observance of fundamental on equal treatment. For example, in France, the fundamental principle of equality precludes all unjustifiable forms of differentiation. The French Constitution provides the underpinning for preferential treatment of persons

210 Art. 225-1 to Art 225-4 of the French Criminal Code
with disabilities in order to reduce de facto inequalities and compensate for natural disadvantages. As a result, the Constitution permits an active policy of support for persons with disabilities through government measures. Similarly, the anti-discrimination rule in Art. 3 §3 of the German Constitution does not preclude any preferential treatment of persons with disabilities or any measures to improve their circumstances.

7.2.2. EU Directives and Programmes

On June 29th, 2000, and on November 27th, 2000, the Council adopted three major instruments designed to prevent and combat discrimination on the grounds of racial or ethnic origin, religion or belief, age, disability and sexual orientation.

- **Directive 2000/78/EC** prohibiting discrimination in employment. This directive outlaws discrimination on the grounds of religion or belief, disability, age or sexual orientation;
- **Directive 2000/43/EC** prohibiting discrimination on the grounds of racial or ethnic origin in a wider range of areas - employment, education, the provision of goods and services and social protection;
- **A Community Action Programme** to combat discrimination (Council Decision 2000/750/EC). The Council Decision provides the legal framework for the implementation of the programme and the associated line in the Community Budget. The programme supports and supplements efforts at Community level and in the Member States to promote measures to prevent and to combat direct or indirect discrimination based on racial or ethnic origin, religion or belief, disability, age or sexual orientation, whether based on one or on multiple factors. Notably, it is designed to support and complement implementation of the directives through the exchange of information and experience and the dissemination of best practice in both legislative and non-legislative areas. In so doing, the programme also contributes to eliminating inequalities and to promoting equality between men and women.

7.2.3. Situation in the United States

The Americans with Disabilities Act (ADA) was signed on July 26th, 1990. This was the world's first comprehensive civil rights law for people with disabilities. The ADA is intended to eliminate one of the key barriers to independent living, discrimination. The ADA requires US citizens to change their thinking about people with disabilities. The ADA on the one hand places the focus on people instead of on disabilities, and on the other hand focuses on what people with disabilities can do instead of on what they cannot do.

ADA establishes participation in the mainstream of daily life as a right, regardless of race, religion, or disability. Therefore, the law is a comprehensive anti-discrimination mandate for persons with disabilities, extending to virtually all sectors of society and every aspect of daily living; work, leisure, travel and communications.

The law is broken down into four basic areas:

- **Title I** deals with equality of employment;
- **Title II** deals with equal access to government services;
- **Title III** guarantees equal access to private businesses that deal with the public;
- **Title IV** makes available telecommunications for the disabled.
ADA protects the right of the 42 millions Americans with a disability to "lead a normal daily life as a normal citizen". Having the right and having the ability are two different things. As it can be seen many people with disabilities are unable to experience everyday normal life due to the severity of their disability. However, to the extent that they can function, ADA assists them by removing physical and communication barriers.

7.3. The Medical Devices Directive (93/42/EC)


The three Directives on medical devices, adopted respectively in 1990, 1994 and 1998, constitute for the first time a coherent and complete legal framework for medical devices in the Member States. This system is based on the New Approach towards technical harmonization, and aims to set the highest levels of safety, to provide access to the Community market, and to promote innovation.

Medical devices cover a wide range of products. Figures have been advanced of over 10,000 different families or medical device types; given variations in the features of each of these device families, over 400,000 different medical devices could be now on the market.

In the Directives, medical devices are defined as: “any instrument, apparatus, appliance, material or other article, whether used alone or in combination, including the software necessary for its proper application, intended by the manufacturer to be used for human beings for the purpose of:

− Diagnosis, prevention, monitoring, treatment or alleviation of disease
− Diagnosis, monitoring, treatment, alleviation of or compensation for an injury or handicap
− Investigation, replacement or modification of the anatomy or of a physiological process
− Control of conception

And which does not achieve its principal intended action in or on the human body by pharmacological, immunological or metabolic means, but which may be assisted in its functions by such means”.

ASSISTIVE TECHNOLOGY PRODUCTS

Although Assistive Technology products seem to fall under the second item in the general definition of medical devices in the directive, this is not always so obvious when looking at the broad variety of existing Assistive Technology on the market. In some countries, some products might be considered medical devices whereas this might not be the case in another country for similar equipment. The actual border between medical devices and Assistive Technology products is far from clear for most players.

Moreover, when looking at the 4-level classification of medical devices (I. Low Risk, II A. Medium Risk, II B. Medium Risk, III. High Risk), most Assistive Technology would be ranged under class I with some exceptions being in class II A (e.g. audiprostheses).
SITUATION WITH REGARDS TO NATIONAL DELIVERY SYSTEMS

All three Directives have been implemented in all Member States.

Article 4 of Directive 93/42/EC is about free movement and states that Member States shall not create any obstacle to the placing on the market or the putting into service within their territory of devices bearing the CE mark (as provided for in Article 17) which indicates that they have been the subject of an assessment of their conformity.

Once the first CE marking hurdle is passed, the Assistive Technology product must be accepted in the corresponding Member State’s legal system. This is not regulated by the EU.

This two-step process is illustrated graphically in the figure below:

Clearly the most complicated part for Assistive Technology products wanting to reach the individual end-user consists in the second step which remains entirely the responsibility of the member state, without any possible intervention from the EU level.

7.4. The Equal Treatment Directive (2000/78/EC)

On 27 November the Council Employment and Social Affairs adopted the Framework Directive on equal treatment in employment and occupation.  

This Directive provides important protection against discrimination in the field of employment and training for 37 million disabled citizens in the European Union. The objective of this Directive is to put in place a general framework to ensure equal treatment of individuals in the European Union, regardless of their religion or belief, disability, age or sexual orientation, as regards access to employment or occupation and membership of certain organisations.

In terms of the contents of the Directive, the following areas are most relevant:

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combating discrimination is a major challenge for the European Union. The Union is founded on the principles of liberty, democracy, respect for human rights and fundamental freedoms, as well as the rule of law. Hence the EU must take all measures necessary to combat discrimination of all kinds, notably as regards employment and the labour market.

Employment and occupation are crucial to ensuring equal opportunities for all and in large measure contribute to the full participation of citizens in economic, social and culture life. However, many cases of discrimination have been identified in the field of employment and the labour market.

Article 13 of the EC Treaty, introduced by the Treaty of Amsterdam, specifically empowers the Community to combat discrimination based on sex, race or ethnic origin, religion or belief, disability, age or sexual orientation.

This Directive is part of a package of measures to combat discrimination. The package also includes a Communication from the Commission presenting the general framework of action, a proposal for a Directive implementing the principle of equal treatment regardless of race or ethnic origin, and an Action Programme to combat discrimination 2001-2006.

The Member States ban discrimination in the field of employment and occupation. However, the scope of this prohibition, its content and enforceability vary from country to country. Hence this Directive is designed to lay down a general minimum framework in this area.

The exact scope for the Directive is as follows:

- conditions of access to employed or self-employed activities, including promotion;
- vocational training;
- employment and working conditions (including pay and dismissals);
- membership of and involvement in an organisation of employers or workers or any other organisation whose members carry on a particular profession.

This applies as much to the public sector as to the private sector including public bodies as well as for paid and unpaid work.

Member States have until December 2nd, 2003, to adopt the laws, regulations and administrative provisions necessary to comply with this Directive. Member States may, if necessary, have an additional period of 3 years from December 2nd, 2003, that is to say a total of 6 years, to implement the provisions on age and disability discrimination. They need to notify the Commission if they intend to make use of this provision. A Member State which chooses to use this additional period is required to report annually to the Commission on the steps it is taking to tackle age and disability discrimination and on the progress it is making towards implementation.
8. Conclusions and recommendations

Conclusions

GENERAL FINDINGS

This study considers Assistive Technology in eight EU Member States: Denmark, France, Germany, Italy, Netherlands, Spain, Sweden and the UK. The study deals in particular with the legislative and regulatory framework, access to Assistive Technology, and the practical delivery mechanisms.

Not unexpectedly, a major conclusion is that there are major differences between the Member States. But it is also fair to say that the different players — authorities, prescribers, users’ organisations, producers, distributors and – last but not least – the end-users - face very comparable problems and issues.

We have also found that most people and organisations involved in the access and delivery processes of assistive devices are very interested in obtaining information on other countries, inside and outside the EU, and how they organise the delivery of Assistive Technology to people with disabilities. The main areas of interest are the organisation of the delivery systems, methods of financing, user satisfaction, and availability of products – all of which appear to be often very different across borders.

An interesting observation is that most people with disabilities in the non-Nordic countries believe that the provision of assistive devices is better organised outside their country, that there is a wider choice, that devices are more appropriate, and that financial support is higher. This opinion is often based on impressions that are not supported by evidence. Indeed, information on the organisation of the provision of assistive devices in other countries is rarely available – or it is fragmented, too detailed or too specific.

This brings us to another important finding. An enormous amount of information on Assistive Technology is available through channels such as literature, websites, databases and information centres. Yet often this information does not reach the end-users, those close to them or their immediate care provider. It should indeed not be taken for granted that the average person with a disability has easy access to the Internet or is able to obtain information by browsing publications and databases. It should be recalled here that the majority of those who could benefit from assistive devices are the elderly and older old people. In many cases, it is unrealistic to assume that they will be able to find the information they need. Thus, access to structured, clear, relevant and directly usable information is an issue – even in countries where significant efforts have already been made to address this.

Producers, distributors and suppliers also face problems. If they want to assess the potential of a certain market, they will need to invest significant amounts of time and effort in obtaining relevant information. The authorities make little effort in the direction of these groups, and the sharing of information between producers is poor. Producers or their representative organisations are very reluctant to make information on markets and products available.
With the exception of technologies produced in large numbers (e.g. hearing devices), most producers are small to medium-sized enterprises. Their resources and capacity to invest in product and market knowledge are restricted. Assisting in filling this gap might be a task for the public authorities. We found that some producers have tried to export their products or bring them on the intra-Community market, but simply gave up after having experienced difficulties in entering a foreign market, without analysing what the real problem had been.

The interest of public authorities and national intermediary organisations like sickness funds in these matters varies. Sometimes they show an interest in information stemming from their foreign counterparts, but often there is not a great deal of interest in such comparative analyses. Yet, we believe much could be learned from considering best practice across countries. And it should never be forgotten that a small improvement in a system can have a major impact on a person with a disability – in fact the difference between a heavily dependent and a real participative role in society.

In summary, there are significant differences between the systems of the Member States considered here and most players experience considerable difficulty in extracting the information they need from the impressive amount that is available.

In the following paragraphs we provide a synthesis of our findings on the more specific topics that have been covered in this study. These have been grouped into eight areas:

- use of Assistive Technology versus other approaches
- lack of exhaustive and sufficiently detailed information about products and solutions
- lack of coherence in and systemic approaches to assessment
- varying level of knowledge and qualifications amongst professionals, disabled persons and their representatives
- intrinsic complexity of the various national systems
- structure of the market for Assistive Technology
- provision of Assistive Technology in the workplace
- discrimination.

**THE ROLE OF ASSISTIVE TECHNOLOGY**

Over the last decade, the nature and range of Assistive Technology products has undergone several important changes, mainly in relation to their technical capabilities. This is true both for high-tech products (e.g. computer-assisted devices for communication and the latest generation of hearing aids), as well as for more traditional products like wheelchairs. Wheelchairs have evolved in many respects. Examples are the materials and components used (which have an impact on both design and weight) and the embedding of electronic controls and power.
Today, simple and low-end products still represent the largest part of the market. However they often fail to promote participation in society because they merely provide compensation for the functional disability.

Although the way in which Assistive Technology has developed technically is impressive (and sometimes even astonishing), there are so far few solutions that are based solely on Assistive Technology. They would also be impractical in many respects. In most of the cases we looked at, the presence of a human aid is essential to complement the Assistive Technology solution (e.g. an independent disabled translator might benefit from an adapted workplace with all electronic facilities for communication, but may need human help for something “as simple” as opening envelopes or sticking stamps).

The concept of “Design for All” is often mentioned as complementary to Assistive Technology. Design for All is a holistic approach to create goods, services or buildings that are accessible and understandable to everybody regardless of age, size, ability or other physical characteristics. It is not exclusively addressed to the needs of people with disabilities, but it is inclusive to their requirements. Paradoxically, Design for All is most successful when it is not apparent. At its best it should not be noticeable, as are ramps next to steps or larger toilet doors.

The general principle should be to include special needs as much as possible from the outset into the design of products and services, in other words following the approach of Design for All. The concept is promoted for two main purposes: on the one hand to meet the needs of consumers who have often experienced difficulty in using products, and on the other hand to meet needs of companies who want to expand their potential market.

INFORMATION & ADVICE

The availability and accessibility of sufficiently detailed and relevant information on assistive devices seems to be recognized universally as a serious problem. Information is lacking at all levels. Ultimately, it leads to inappropriate advice to interested parties.

End-users are not adequately informed about the technical solutions available that could improve their life. They often do not know enough about the human or financial aids to which they are legally entitled in order to encourage their participation in society. In some Member States there are independent information centres for people with disabilities, which can help in resolving this problem. Yet, even within a single country, their geographical spread, the experience of the staff of these centres and the possibilities for trying devices out differ greatly.

Decisions on dealing with disabilities are often taken at a high level, where the influence of final users is often very limited. In particular, the impact of the end-user on the final selection of assistive devices is limited. This is the decision area of care insurances, public authorities, intermediary organisations, producers and prescribers. Despite many laudable attempts at disseminating information, the average disabled person is highly uninformed. The impact of the end-users depends to a large extent on their emancipation and their ability to express their views on the proposed solutions. We note, however, that there is a trend in various countries to improve user participation. User organisations and organisations representing people with disabilities are taking action in this area in every Member State.

The information issue also applies to the professionals in charge of the assessment of needs and of the selection of appropriate Assistive Technology products. Where information on the solutions available is insufficient or inadequate, this can sometimes lead to the delivery of a product which is too limited
in scope or one that is too sophisticated. In both cases, the devices are then ineffective. In most of the
Member States considered here, some kind of central database exists with information about the prod-
ucts available and their specifications. The structure and contents of these databases varies considera-
bly across countries - and even within a country, it may not be possible for all the parties who would
benefit from such a tool to access the database directly.

The failure to complete the Handynet database well illustrates the complexity of the challenge in-
volved in creating a central repository of Assistive Technology products in Europe. Although the con-
cept was in real line with the needs expressed by professionals, implementation failed. The reasons
outside the scope of this study, but basically, the efforts to push data into Handynet were dispro-
portionally high when compared with what Handynet could deliver in return.

Most of the national product databases contain a description of the assistive devices and of series of
individual products. Some existing databases are just a compilation of information provided by pro-
ducers and distributors, without any information on quality or usability of the products. Price inform-
ration is often not available or obsolete. The added value to prescribers and assessors is often very
small. The existence of so many different databases renders information searches more complex and
might be considered a waste of effort and resources from the user’s point of view.

The information that is available to suppliers and producers is insufficient to allow them to evolve
with the market. In most countries, there are not even any reliable figures on the number of people
with a certain disability. Where studies have been carried out, it is often hard to use the data for com-
mercial purposes. Indeed, national surveys often focus on epidemiological issues which are not di-
rectly related to compensatory solutions. Suppliers also regard the complexity of the regulatory
framework in some countries as a hurdle.

**ASSESSMENT PROCEDURES**

In most of the countries considered here, there is a move towards integrated assessment of the needs
and possible solutions for disabled people. The concept of “integration” relates to an assessment per-
formed by multi-disciplinary teams comprising ideally an occupational therapist, a social worker, a
rehabilitation doctor and a technical expert. The roles of each person in such a team can be clearly
defined. The occupational therapist is often the lead person because of the combined experience of
both the disability and the technical solutions. The social worker also plays a critical role, since social
workers know which administrative and financial resources are available to translate the project into
reality. The role of the rehabilitation doctor is more a supervisory one, since the occupational therapist
should ideally also be familiar with medical issues. In most countries, the doctor is still the only one
authorised to write the prescription needed to gain access to the Assistive Technology product (even if
in practice, the doctor often simply follows the advice of the occupational therapist). Finally, the tech-
nical expert combines knowledge of the products (in areas such as standards and safety) and of the
workplace (e.g. the industry sector).

In reality, however, assessment is often undertaken by an individual who has neither a sufficiently
broad view of all the issues involved, nor adequate education or training. A technical expert may sug-
gest a specific technical solution which might work fine in one case but equally well lead to total fail-
ure (with severe consequences in the worst case) in another case which the technical expert perceived
as being “similar”.
We have also observed that assessment methodologies and results can differ greatly according to geographical location, even within a single country. Quite frequently, the cause of the disability (e.g. due to working accident) seems to play an important role. The combined effect of these two observations explains why two people with an identical or similar disability might eventually receive very different compensation and assistance.

This situation is to some extent a side-effect of the decentralisation of decision-making power and the organisation of the delivery of assistive devices to local authorities. Decentralisation as such has the advantage of bringing solutions closer to the end-user. But there is still a need for coordination and to share knowledge. Awareness of this is growing in the various Member States which have decentralised and coordination mechanisms are being put into operation.

It appears that assessment leads to better results when it takes the place where the disabled person lives or works into consideration. This can be achieved by performing at least a part of the assessment either in the home or the workplace (with the choice depending strongly on individual cases). This might sound obvious, but is not the case yet in many cases. More than once, cases were reported to us in which the approved solution could ultimately simply not be used at all (e.g. a wheelchair too wide to enter the house, or interference with a hearing device from a nearby railway or power plant).

Performing an integrated assessment also means taking all dimensions of the problem into account. If the assessment takes place in the workplace for example, then the dimensions of daily living and mobility must also be considered before an adequate solution can be designed. In too many cases the solutions delivered do not take account of the real working/living/education situation of the disabled person, thus leading to a rejection of the technical aid.

Finally, and as a corollary of the above, an assessment should lead to creation of a single file maintained at some single location. This will help with systematic follow-up and subsequent evaluations.

**EDUCATION AND QUALIFICATIONS**

All parties involved would benefit from a broader provision of basic education and continuing training in the field of Assistive Technology.

For occupational therapists, the content should focus on the medical aspects of the disability and on the technical capabilities of the appropriate Assistive Technology products, both from a theoretical and a practical perspective. The occupational therapist must be able to evaluate the impact of technical solutions on the disability. In some countries there is a state-level recognised education for occupational therapists which guarantees independence from mercantile pressures. Such independence is deemed critical.

Social workers, technical experts and general practitioners would also benefit greatly from targeted training. The rehabilitation sector is not an easy field, and sufficient expertise is necessary if optimal solutions are to be provided.

Suppliers of equipment also play an important advice and information role in most countries. Therefore dedicated training for suppliers would also help in improving awareness of Assistive Technology capabilities.
Several attempts at targeted education and training for professionals have in fact already seen the light of day. In the United States, certificates can be obtained for rehabilitation technology and for rehabilitation engineers. In Europe, TELEMATE is an existing European-wide framework for sharing multidisciplinary training and education in assistive technology. It is aimed at helping professional multidisciplinary health care teams specialising in Assistive Technology to remain up to date so that users of Assistive Technology and their carers have the best possible service and information. TELEMATE provides harmonized curricula, sample courses, and the means for maintaining an expanding network of teaching courses. In addition, Line E of the HEART study also dealt with training in the field of Assistive Technology. It concluded that it was impossible to create a single European curriculum that covers all users, professionals and levels because of the large number of professional groups involved in Assistive Technology. The HEART study recommended more networking between universities and training organisations, workshops in order to stimulate educational initiatives, and that guidelines be drawn up to stimulate multi-disciplinary work.

THE INTRINSIC COMPLEXITY OF THE DELIVERY SYSTEMS

In most EU countries the access and provision of assistive devices is organised under different systems. In most countries one part is covered under the health care system and another part under the social welfare system. All national health and social systems already have a significant history behind them and continue to evolve. Regulation has been and is being modified in small or major steps. As a result, all countries are today facing a situation from which it is hard to extricate themselves. Even health and social professionals in the countries visited admitted that the system has grown exaggeratedly complex so that very few people can still have the necessary high-level view.

The differences between the systems concerned, the range of competent authorities, the type of regulation, the financial support, the assessment procedures and the nature of the product lists make it even more difficult for a disabled person, a producer or a prescriber to have an overall view of what possibilities may exist. Sometimes the same assistive device can be obtained through different systems with different potential for choice or levels of financing. For example, delivery of an electronic wheelchair for use at the workplace and one for private use after an accident might follow entirely different paths (e.g. in assessment, financing and follow-up), even if ultimately the wheelchair is strictly identical in both cases.

The absence of common definitions of particular disabilities is also a source of complexity. What is a person’s level of disability? What facilities are reasonable to make a place accessible for people with disabilities? How can the essential character of an Assistive Technology product be measured in a given situation? The difficulty of obtaining a common reference basis within a country illustrates the complexity of the issues at stake.

THE STRUCTURE OF THE ASSISTIVE TECHNOLOGY MARKET

The market for Assistive Technology remains very diverse and unstructured even if consolidation has been occurring in some sectors such as hearing devices, wheelchairs and other mobility aids. Mobility aids are increasingly being manufactured in low wage countries (typically those of eastern Asia). The number of major players in these fields has decreased significantly in Europe over the last years. Even
among the remaining large European manufacturers, a significant part of the production is outsourced to low wage countries.

This tendency may increase risks. There may be less control over, and testing of product quality and safety. These products may be cheaper but intrinsic quality may be sacrificed.

For newer technologies, the supply side of the market still essentially consists of small or very small firms which either produce their own products or import high-end products directly from abroad (typically the United States). In both cases, these products are intended for local or national demand. When these firms export their products abroad or intend to bring them on the intra-Community market, they often face hurdles such as lack of transparency of national regulations and administrative burdens which make it difficult to make their products accessible to people with disabilities (either because users cannot afford their prices or because the health/social system does not provide adequate funding.)

For certain assistive devices, in particular those that have to be adapted or be tailor-made, globalisation of markets is unlikely. In such situations it is imperative that the distance between the end-user and producer be limited.

In general terms, it is safe to say that the intra-Community market is an open one. Placing a product on the EU market and intra-Community sales as such is not restricted. However, it is essential to have a local agent in order to distribute on a domestic market. Moreover CE marking is insufficient to open borders for Assistive Technology. The (mandatory) CE marking is only the first (easy) step. The next step is much less obvious, especially for smaller suppliers who have neither the resources nor the experience for dealing with complex legal issues. It consists in having the product(s) accepted within the national funding system. There are no two identical systems among the countries considered here. A product finally accepted in one national system will have to go through the whole procedure again in order to be accepted in another national system. The different stages of the procedure are likely to include tests, submission of documentation and proof of effectiveness.

Obviously these considerations are only relevant if a producer wants a product to be on the recognized lists so that it can be either entirely or partially financed by the procurement system. In some countries where not enough products are financed, the CE marking is sufficient to enable the supplier to distribute the product. In those cases, the barrier is the price level the end-users are ready (or able) to pay in order to benefit from the technical aid.

In many countries assistive devices are purchased through tendering. These procedures are hard to follow for foreign producers or distributors who have no local distributor. Moreover, knowledge on what procedures apply is mostly hard to obtain.

Finally, European research and innovation on Assistive Technology is unanimously characterised as poor. The main reasons are the insufficient size and the fragmented nature of the national markets. These prevent manufacturers or research institutes obtaining a sufficient return on their investment. This could appear to be a paradox given that the proportion of the European population with disabilities is growing as a result of ageing and medical progress. It is therefore to be expected that interest in research and innovation will grow in the future.
WORKPLACE ADAPTATIONS

Most countries have regulations which ensure that costs of workplace adaptations for people with disabilities can be partially, and sometimes fully financed. In general, little use is made of these possibilities. The main reasons are ignorance of what is available, the administrative burden or simply underestimation of the real capabilities of disabled people to perform jobs in regular enterprises.

Most employers and co-workers are not aware of the potential for disabled persons to work on their premises. They usually see a disabled person as someone in a wheelchair, who is unable to move properly, nor speak nor hear. Awareness of the very real possibilities for integrating them and adapting regular workplaces is very poor. Sometimes a disabled worker may be reluctant to ask for alterations from a fear that the request will have a negative influence on the final recruitment decision.

Yet, in many European countries significant efforts are being made to optimise workplace adaptations for people with disabilities. Different methods are being established and used for assessing the person and the workplace. Information campaigns are being organised, mostly at regional level. Many projects get financial support from various authorities. Specific databases on assessment of needs and possible solutions exist. But, what is not organised is sharing of information, knowledge, and experience. Databases are often not accessible for practical use. They mostly only exist in the local language.

Even a “perfect” workplace adaptation is not enough for a disabled worker to hold a normal job. Other factors also need to be taken into account, including accessibility of the workplace itself, accessibility of transportation and the way work is organised.

APPROACHES TO ANTI-DISCRIMINATION

In this study we have also considered how the different Member States legislate against discrimination. Every Member State has some kind of legal provision prohibiting discrimination against people with disabilities. In some cases this principle is enshrined in the Member State’s Constitution; in other cases, there are provisions in specific laws on health and social welfare. Sometimes there is a very specific anti-discrimination legislation.

There are different views on the best way of protecting people with disabilities from discrimination. We have come to the conclusion that a legal provision on discrimination is never a guarantee that people with disabilities will be integrated into society. A quota system on its own does not integrate disabled workers into enterprises. It is essential to create awareness of the position and potential of people with disabilities if they are really to be integrated into society. Information is crucial. Discrimination, mostly not intended, is an everyday event, not only a political issue. Throughout this study a major lesson has been that knowledge of disability issues and of disability as such is very poor.

Attitude is influenced through information. For example, a Spanish organisation for disabled people launched a campaign to create more respect for parking spaces reserved for people with disabilities. The dissemination of an amusing sketch about the difficulties encountered in parking a car and getting out of it, had more effect than any police controls could ever achieve.
Recommendations

We have identified six main areas where action needs to be taken in order to alleviate the underlying weaknesses in relation to access to and provision of Assistive Technology:

− information & advice
− education and training
− product acceptance
− complexity of national systems
− assistive technology in the workplace
− discrimination issues.

In the following paragraphs proposals are formulated for each of these areas.

Information & Advice

General recommendation: Improve, coordinate, structure, share and validate information and advice on disability issues, Assistive Technology products, assessment procedures, experience, markets and above all on practical solutions.

It is crucial to make comprehensive information available and accessible for all stakeholders within and across Member States. The different actions proposed can be classified according to the 4-step “information lifecycle” that is described below. Ultimately, accurate and well-disseminated information will lead to improved advice for interested parties.

Identification of Information Needs

“Information” is a broad concept which many people can understand differently according to their position or interest. In order to guarantee that subsequent phases of the “information lifecycle” deliver the anticipated results, the following action should be taken for all types of information considered:

− identify all stakeholders
− identify the special information needs of each stakeholder.

Collection of Data and Analysis of Information

There is a large amount of data available, but it is fragmented and poorly structured. It is desirable to gather, structure, process and make available this information. It is recommended that:

− a national research institute or a network of institutes be set up in each country responsible for collecting information at national level. Where a network is used, one centre should take a leadership role. All these centres combined could build a European network allowing data to be exchanged and further consolidated;
− common standards for data representation be adopted ideally at both national and EU level;
a database of Assistive Technology products be created at EU level that is accessible to all stakeholders. In the light of the experiences gained with Handynet, the database should be easy to maintain and target professionals. This database should be linked to Member State databases where country-specific information can be added. As suppliers would benefit most from such a tool, they should take responsibility for maintaining their product lists and should partially finance the project;

− a database of statistical information be created for analysis purposes;

− an epidemiologic database be set up at both national and EU level that can be used in order to obtain better information about people with disabilities and their expectations.

DISSEMINATION OF INFORMATION AND DELIVERY OF ADVICE

Once information has been extracted and analysed, it has to be made available to all stakeholders, whether national or foreign, in a reliable and understandable format. It is recommended that:

− an evaluation be carried out into which dissemination mechanisms are optimal for each country or even within a single country (e.g. independent information centres, CD-Roms, newsletters, conferences);

− dissemination networks be set up at EU level as privileged information channels;

− appropriate mechanisms or institutions be established to enable provision of individual and tailor-made advice. This could occur in the independent information centres, which therefore would become real one-stop-shops for people with disabilities.

When implementing such recommendations, advantage can be taken of the humanism and altruism of most professionals or individuals dealing with people with disabilities and an important leverage effect can be obtained by stimulating or encouraging local initiatives.

EVALUATION

Information needs evolve with time on a continuous basis. New legislation or regulations are adopted which have an impact on most stakeholders. It is therefore recommend that:

− regular evaluations take place of the information delivery systems, both at national and EU level;

− satisfaction surveys of the stakeholders be carried out.

Education & Training

General recommendation: Take action to improve the theoretical and practical knowledge of functional problems, and the solutions that the use of Assistive Technology can offer. Professionals, in particular prescribers and assessors, must have sufficient expertise of assessment procedures and products.

There are still too many differences between the educational or training levels of stakeholders within the Member States. Our proposed recommendations are to:
– promote the development and delivery of multiplier education and training programmes which would fulfil the requirements of the professionals involved. Such an approach might involve three main components:

  – initial (higher) education of professionals (e.g. occupational therapists)
  – specialised continuing training via modules (e.g. rehabilitation techniques for doctors)
  – dedicated training in Assistive Technology products and their capabilities (e.g. for technical experts);

– promote e-learning for training purposes (including the development of learning materials that can be used across borders);
– promote mandatory training for all health professionals and social system players dealing with disability issues in the broad sense;
– improve the knowledge of general practitioners on disability issues through the specific systems of permanent education and accreditation in the Member States;
– introduce a mandatory certificate for medical doctors and paramedics prescribing assistive technology products;
– promote recognition of education and training qualifications at EU level in order to encourage information and knowledge transfer.

**Market efficiency**

**General recommendation:** Make significant efforts to create transparency in markets, products, acceptance procedures and public tendering procedures.

A dynamic and transparent market for Assistive Technology in the EU can be obtained by implementing the following recommendations:

**Research and innovation**

– encourage networking between research centres and manufacturing firms;
– promote multidisciplinary research into disability issues, encompassing the workplace, private life and education;
– support mechanisms for co-ordinating technology transfer in order to exploit new technology developments from laboratories or research institutes.

**Product acceptance**

– provide recognition of acceptance procedures between Member States (e.g. a product accepted in Sweden should not need to be extensively tested again in Italy);
– establish standards and certification programmes at EU level for Assistive Technology products in order to guarantee quality and effectiveness of products (and to simplify product acceptance);
– promote user participation in the assessment of products;
TRANSPARENCY

- provide in each country clear information and guidelines on procedures for both national and foreign suppliers to enter national markets;
- promote publication of calls for tenders at EU level;
- promote data collection on internal markets for assistive devices based on uniform standards and make them accessible for all professionals.

Complexity of national systems

General recommendation. Ensure that assistive devices are easily accessible to all people with impairments.

Health care and social welfare systems have different origins and their own particularities. The complexity and the differences may have adverse effects on the availability of Assistive Technology. It is therefore recommend that:
- there be a single service to which the disabled person can address requests for assistive devices regardless of the system that regulates it;
- uniform assessment procedures be adopted throughout the different systems;
- the drawing up of evidence-based protocols and guidelines for prescribers of assistive devices be promoted;
- user participation be promoted in advisory boards that oversee the regulation and delivery of assistive technology (at local, regional, national and EU level).

Assistive technology in the workplace

General recommendation: Create awareness of the intrinsic potential for disabled people to perform tasks in regular enterprises

Within the EU progress is being made in integrating disabled workers in enterprises and in improving their working conditions. Creating further awareness of this potential is very important and it is therefore recommended that:
- information campaigns be launched at national and at EU level on support for integrating people with disabilities into enterprises;
- co-operation in sharing methods and information between national centres working on workplace adaptations be improved;
- activities to improve access to public transportation be promoted;
- the financial support mechanisms for workplace adaptations at national level be improved, made transparent and that the procedural burdens be reduced;
- studies be launched at both national and EU level on the economic effects of integrating disabled people into the regular working environment.
Anti-discrimination issues

General recommendation: Create awareness of the everyday problems of people with disabilities through information campaigns focused on changing attitude.

Anti-discrimination measures exist throughout the EU. Creating equality is, however, more than a legal issue. It has to do with people’s everyday attitudes. Creating awareness of the every day situation of people with disabilities is a task for public as well as private organisations. Mass media have an important impact and should be used on this item.

We recommend therefore that:

– awareness be created through information campaigns on the everyday situation of people with disabilities;
– studies be promoted on the effects of anti-discrimination provisions at EU level.
Annexes

Annex A: Organisations identified and contacted

In this annex, a detailed list of contacts in each country is provided. For organisations contacted at European level, these are mainly as follows:

− Various DG’s of the European Commission (not only DG Employment and Social Affairs, but also the DG’s which were represented within the Expert Support Group)
− The Association for the Advancement of Assistive Technology in Europe (AAATE)
− The European Disability Forum (EDF)

All above organisations were contacted during the study. Both the AAATE and the European Commission were represented on a continuous basis within the Expert Support Group.

DENMARK

<table>
<thead>
<tr>
<th>Organisation</th>
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<tbody>
<tr>
<td>The Danish Centre for Technical Aids for Rehabilitation and Education (Hjælpemiddelinstituttet)</td>
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<tr>
<td>Ministry of Social Affairs (Socialministeriet)</td>
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<td>The Danish Ministry of Health (Sundhedsministeriet)</td>
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<td>the Danish Ministry of Employment (Beskæftigelses ministeriet)</td>
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<td>Arbejdsmarkedsstyrelsen</td>
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<td>Arbejdsmarkedets Ankenævn</td>
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<td>DRG - The Danish Rehabilitation Group (Dansk Rehab Gruppe)</td>
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<td>The Equal Opportunity Centre for Disabled Persons (Center for Ligebehandling af Handicappede)</td>
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<td>DSI - The Danish Council of Organisations of Disabled People (De Samvirkende Invalideorganisationer)</td>
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<td>The Danish Association of Disabled People (Dansk Handicapforbund)</td>
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<td>AF- The Public Employment Office (Arbetsformedlingen)</td>
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<td>The Danish Ministry of Finance (Finansministeriet)</td>
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<tr>
<td>- INSEE - Institut national de</td>
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<td>la statistique et des études</td>
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<td>économiques</td>
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<td>- ANPE - Agence nationale pour</td>
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<td>l'emploi</td>
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<td>- PDITH - Programme Départemental</td>
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<tr>
<td>d'Insertion des Travailleurs</td>
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<td>Handicapés</td>
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<tr>
<td>- AGEFIPH - Association Nationale</td>
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<td>de Gestion du Fonds pour l'In-</td>
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<td>tegration Professionnelle des</td>
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<td>Personnes Handicapées</td>
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<tr>
<td>- Le Sénat</td>
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<td>- Ministère de l'emploi et de</td>
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<td>la solidarité - Secrétariat d'</td>
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<td>- COTOREP - Commission technique</td>
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<td>d'orientation et de reclasse-</td>
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<td>- CERAH - Centre d'études et de</td>
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<tr>
<td>recherche sur l'appareillage</td>
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<td>des handicapés</td>
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<td>- GLEM - Groupement des Labora-</td>
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<td>toires d'Essais des Matériels et</td>
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<td>techniques médicales</td>
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<td>- Mutuelles de France</td>
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<tr>
<td>- Observatoire régional de l'emploi des personnes handicapées (Rhône-Alpes)</td>
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<td>- CDES - Commission départementale de l'éducation spéciale</td>
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<tr>
<td>- CICAT - Centres d'information et de conseil sur les Aides Techniques</td>
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<tr>
<td>- CAF - Caisse d'allocations familiales</td>
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<td>- CCAS - Centre communal d'action sociale</td>
</tr>
<tr>
<td>- SRAI - Services régionaux d'aide et d'information</td>
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<tr>
<td>- CRPF - Le Centre de Réadaptation professionnelle et Fonctionnelle</td>
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<tr>
<td>- CEP - Centre d'Exposition Permanente à Strasbourg</td>
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<td>- SCAPH 38 – Grenoble</td>
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<td>- Proteor - Fournisseur de technolo-</td>
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<td>gies et de conseil</td>
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<tr>
<td>- SNITEM - Syndicat National de l'Industrie des Technologies Médicales</td>
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<tr>
<td>- FMH - Fédération des Malades et Handicapés</td>
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<td>- UNAPEI - Union nationale des associations de parents et amis de personnes handicapées mentales</td>
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<tr>
<td>- APF - Association des paralysés de France</td>
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<tr>
<td>- CIISP - Centre d'informations et de solutions pour personnes handicapées</td>
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<tr>
<td>- GIHP - Groupement pour l'insertion des personnes handicapées physiques</td>
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<tr>
<td>- CTNERHI - Centre Technique National d'Etudes et de Recherches sur les Handicaps et les Inadaptations</td>
</tr>
<tr>
<td>- AFM - Association française contre la myopathie</td>
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<td>- APAM - Association des personnes aveugles et malvoyantes</td>
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</table>
**GERMANY**

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<th>Organisation</th>
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<tr>
<td>• BMA - Bundesministerium für Arbeit</td>
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<td>• GKV - Die Gesetzliche Krankenversicherung</td>
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<td>• Bundesministerium für Gesundheit und Soziale Sicherung</td>
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<td>• Statistisches Bundesamt Deutschland</td>
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<tr>
<td>• The „Integrationsamt des Landschaftsverbandes Westfalen-Lippe”</td>
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<tr>
<td>• FTB - Forschungsinstitut Technologie-Behindertenhilfe</td>
</tr>
<tr>
<td>• REHADAT - Information system on the vocational rehabilitation of the disabled</td>
</tr>
<tr>
<td>• ORTIE - Orthopädie-Technik Einkaufsgenossenschaft</td>
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<tr>
<td>• Integrationsnetz</td>
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<tr>
<td>• AOK - Krankenkasse</td>
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<tr>
<td>• IKK - Krankenkasse</td>
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<tr>
<td>• MDS - Medizinische Dienst der Spitzenverbände der Krankenkassen e.V.</td>
</tr>
<tr>
<td>• WiDo - Wissenschaftliches Institut der AOK</td>
</tr>
<tr>
<td>• VDAK - Verband der Angestellten-Krankenkassen</td>
</tr>
<tr>
<td>• BKK - Bundesknappshaft Krankenkasse</td>
</tr>
<tr>
<td>• BEH - Bundesfachverband Elektronische Hilfsmittel für Behinderte e.V.</td>
</tr>
<tr>
<td>• BiV - Bundesinnungsverband für Orthopädie-Technik</td>
</tr>
<tr>
<td>• BVMed - Bundesverband Medizintechnologies e.V.</td>
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<tr>
<td>• REHAVISTA</td>
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<tr>
<td>• mobile Hilfsmittelzentrale Deininger GmbH</td>
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<td>• Pro Reha</td>
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<tr>
<td>• Reha-Center - Goll &amp; Schracke GmbH</td>
</tr>
<tr>
<td>• BAGH - Bundesarbeitsgemeinschaft Hilfe für Behinderte e.V.</td>
</tr>
<tr>
<td>• BEST - Berufs- und Studienbegleitende beratung für hörgeschädigte</td>
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<tr>
<td>• Bundesverband Selbsthilfe Körperbehinderter e.V.</td>
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<tr>
<td>• DBR - Deutscher Behindertenrat</td>
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<td>• CBF - Club Behinderten und ihrer Freunde</td>
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<td>• VDK - Sozialverband Deutschland e.V.</td>
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<td>• DZA - Deutsches Zentrum für Altersfragen</td>
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<td>• Bundesverband Poliomyelitis</td>
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<tr>
<td>• Deutscher Schwerhörigenbund e. V.</td>
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</tbody>
</table>
### Italy

**Organisation**

- AIRH (Associazione Italiana Ricerca, Cura e Prevenzione Handicap)
- ANDI (Associazione Nazionale Disabili Italia)
- ANMIC (Associazione Nazionale Mutilati ed Invalidi Civili)
- ARS (Ausili Ricerca Servizi)
- ASPHI (Associazione per lo Sviluppo di Progetti Informatici per gli Handicappati)
- ASL 4 Roma (Assistenza Sanitari Locali – Centro Ausili e Protesi)
- Audiologic
- Ausiloteca (Centro for Technical Aids)
- Beghelli
- Bocchi
- Camera di Commercio (Roma)
- CeDoCAR (Centro Documentazione Consulenza Ausili Riabilitazione)
- Centro Ausili
- Centro Informazione Ausili
- Centro Informazione Handicap
- Centro per l’Impiego
- CID (Centro Informazione Disabilità)
- CGIL Handicap (Confederazione Generale Italiana del Lavoro)
- Collocamento per i Disabili
- GLIC (Gruppo di Lavoro Interregionale Centri ausili elettronici ed informatici per disabili)
- Disabled Peoples International Italia
- Europspan
- FIOTO (Fondazione Italiana Operatori nella Tecnica Ortopedica)
- Fondazione Don Carlo Gnocchi
- Fumagali
- Helpicare
- INAIL (Istituto Nazionale per l’Assicurazione contro Linfortuni sul Lavoro)
- Istituto Nazionale per il Commercio Estero
- Istituto per la Promozione Industriale
- Italian National Research Council
- Leonardo s.r.l (ausili per informatica)
- Ministero degli Affari Esteri
- Ministero delle Attività Produttive
- Ministero dell’Economia e delle Finanze
- Ministero del Lavoro e delle Politiche Sociali
- Ministero della Salute
- Neathec
- Provincia di Roma
- Servizio per l’impiego
- SIVA (Servizio Informazione e Valutazione Ausili)
- Spazio Lavoro
- Superabile
- Tiflosystem
THE NETHERLANDS

Organisation
- College voor Zorgverzekeringen
- Revaned Nederland
- Fireva Nederland
- FME-CWM
- CG-Raad Nederland
- Zorgverzekeraars Nederland
- HIC
- TNO
- GEWA
- IrV
- Vereniging van Nederlandse Gemeenten
- Ministerie VwS
- TNO
- UVW
- Nationale Vereniging Blinden en Slechtzienden
- Nederlandse Vereniging voor Slechthorenden
- Gemeente Breda Afdeling WvG
- Centraal Bureau voor de Statistiek

SPAIN

Organisation
- Ministerio de Trabajo y Asuntos Sociales
- INEM - Instituto Nacional de Empleo
- IMSERSO - INSTITUTO DE MIGRACIONES Y SERVICIOS SOCIALES
- INE - Instituto Nacional de Estadística
- CEAPAT - Centro Estatal de Autonomía Personal y Ayudas Técnicas
- CERMI - Comité Español de Representantes de Minusvalidos
- ONCE - Organización Nacional de Ciegos de España - Cidat
- Ministerio de Sanidad y Consumo
- COCEMFO (Confederation of Disabled People Spain)
- PREDIF (Plataforma Representativa Estatal de Discapacitados Físicos)
- Real Patronato sobre Discapacidad
- Instituto de Biomecanica de Valencia
- Ministerio de Ciencia y Tecnología
- Instituto Nacional de Estadística
- Comunidades Autónomas

SWEDEN

Organisation (contact person)
- The Swedish Handicap Institute (Hjälpmedelinstitutet)
- The Swedish Disability Ombudsman (Handikappombudsmannen)
- Socialstyrelsen
• The Swedish Trade Council and the Swedish Embassy in Brussels
• Ministry of Industry
• The Swedish Disability Federation
• Low Vision International (Olle Lyndquist and Magnus Svensson)
• Permobil AB
• Arbetsförmedlingen
• SLF- The Swedish Association of suppliers of Medical Devices
• Iris Hadar AB
• SRF - Swedish Association of the Visually Impaired (Synskadades Riksförbund)

THE UNITED KINGDOM

Organisation

• Audit Commission
• Department for Work and Pensions
• Department of Health
• DRC - Disability Rights Commission
• JobCentre
• PASA - NHS Purchasing and Supply Agency
• Office for National Statistics
• The Medical Devices Agency
• RICABILITY - Research and information for consumers with disabilities
• DLCC - Disabled Living Centres Council
• DLC - Brighton & Hove Daily Living Centre
• The British Association of Prosthetists and Orthotists (BAPO)
• National Centre for Training and Education in Prosthetics and Orthotics
• BHTA – British Health Trade Association
• Synapse Adaptive
• ABHI - Association of British Health-Care Industries
• Disability Gateshead
• FAST - Foundation for Assistive Technology
• PHAB (national charity dedicated to inclusion of disabled persons)
• BCODP - British Council of Disabled People
• DLF - Disabled Living Foundation
• RADAR - The Royal Association for Disability and Rehabilitation
• RNIB - Royal National Institute of the Blind
• The Disability Information Trust
• RNID - The Royal National Institute for Deaf People
Annex B: Sources and bibliography

<table>
<thead>
<tr>
<th>DENMARK</th>
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**Denmark**

### Structure of the legislation
- Interview with the Ministry of Social Affairs
- The Danish Parliament [www.folketinget.dk](http://www.folketinget.dk)
- Bekendtgørelse af lov om social service, LBK nr. 755 of 9 September 2002
- Bekendtgørelse af lov om social pension, LBK nr. 697 of 21 August 2002
- Lov om retssikkerhed og administration på det sociale område, LBK nr. 807 of 26 September 2002
- Bekendtgørelse af lov om social service. Lovbekendtgørelse nr. 755 af 9. september 2002
- B 43, Folketingbeslutning om ligestilling og ligebehandling af handicappede med andre borgere, submitted by the Danish Minister for Social Affairs on 11 December 1992, passed at the second (last) reading on 2 April 1993

### Anti-discrimination legislation
- Interview with Ane Esbensen, the Equal Opportunities Centre for Disabled Persons
- Interview Ministry of Social Affairs
- The Danish Disability Council [www.dch.dk](http://www.dch.dk)
- Parliamentary resolution on equalisation of opportunities and equal treatment of persons with disabilities, BSF 43

### AT at the workplace
- Interview with public employment office
- Contacts with Labour Market Authority
- Lovbekendtgørelse nr.55 af 29. januar 2001 om kompensation til handicappede i erhverv

### Description of the delivery system
- Interview with Ministry of Social Affairs
- Danish Centre
- Bekendtgørelse af lov om social service, Lovbekendtgørelse nr.755 af 9. september 2002

### Future trends
- Interview with public employment office

### Classification of AT products
- Interview with Danish Centre for Technical Aids for Rehabilitation and Education
### Market demand side
- Interview with Danish Centre for Technical Aids for Rehabilitation and Education
- Statistics Danmark

### Market supply side
- Interview with Danish Centre for Technical Aids for Rehabilitation and Education
- Interview with The Danish Rehabilitation Group
- Finansministeriet (1999), Offentlige tilskud på hjælpemiddelområdet, Finansministeriet, Copenhagen

### France

#### Structure of the legislation
- Various Internet sites on French legislation for people with disabilities ([http://www.handipla.org](http://www.handipla.org), [http://www.handroit.com](http://www.handroit.com))
- Interview with AFM
- “La politique française en direction des personnes handicapées », Ministère de l’Emploi et de la Solidarité, Secrétariat d’Etat à la santé et aux handicaps, Mme Dominique Gillot

#### Anti-discrimination legislation

#### AT at the workplace
- [http://www.agefiph.asso.fr](http://www.agefiph.asso.fr) + interview AGEFIPH

#### Description of the delivery system
- Interviews with various organisations
- Various Internet sites for people with disabilities ([http://www.yanous.com](http://www.yanous.com), [http://www.agevillage.com](http://www.agevillage.com))
- Associations of people with disabilities ([http://www.apf.asso.fr](http://www.apf.asso.fr), interview with AFM,
- « Accès des personnes en situation de handicap aux solutions de compensation fonctionnelle, Evaluation de l’expérimentation », CTNERHI

#### Future trends
- Installation du comité national consultatif des personnes handicapées (CNCPH), Discours de Jean-François Mattei, Ministre de la santé, de la famille et des personnes handicapées

#### Classification of AT products
- Tarif interministériel des prestations sanitaires (TIPS) – Journal officiel de la république française
- Loi sur les produits et prestations remboursés (LPPR)

#### Market demand side
- Enquête HID, Etudes et Résultats, DREES – Direction de la recherché, des études, de l’évaluation et des statistiques
- « Les personnes handicapées en France », Pascale Roussel, CTNERHI

#### Market supply side
- Interview with SNITEM, information under [http://www.snitem.fr](http://www.snitem.fr)
- Interview with Proteor
### Germany

**Structure of the legislation**
- “Health Care Systems in Transition”, Germany, European Observatory on Health Care Systems 2000
- Bundesministerium für Gesundheit und Soziale Sicherung (http://www.bma.de)
- Der Medizinische Dienst der Spitzenverbände der Krankenkassen (http://www.mds-ev.org)
- Various practical sites for people with disabilities (http://www.couchtv.de/isar/themen/recht/index_recht.htm)

**Anti-discrimination legislation**

**AT at the workplace**
- Sozialgesetzbuch III (SGB III)
- 5 Beispielhafte Einstellungen für den Erfolg, Unternehmer setzen auf schwerbehinderte Mitarbeiterinnen und Mitarbeiter, Bundesministerium für Arbeit und Sozialordnung

**Description of the delivery system**
- Richtlinien des Bundesausschusses der Ärzte und Krankenkassen über die Verordnung von Hilfsmitteln in der vertragsärztlichen Versorgung (“Hilfsmittel-Richtlinien”)
- Bericht über die Lage der Behinderten und die Entwicklung der Rehabilitation, Bundesministerium für Gesundheit und Soziale Sicherung (http://www.bma.de)
- Der Medizinische Dienst der Spitzenverbände der Krankenkassen (http://www.mds-ev.org)
- Blick durch die Versorgung mit Hilfsmitteln und Pflegehilfsmitteln, Innungskrankenkassen, IKK-Bundesverband
- Interview with Bundesverband Poliomyelitis
- Various practical sites for people with disabilities (http://www.bsk-ev.de)

**Future trends**

**Classification of AT products**
- Gesetz über Medizinprodukte (MPG)

**Market demand side**
- Interview with firms Pro Reha, REHAVISTA and Reha-Center - Goll & Schracke GmbH, Wheel-it, BEH,
- Documents and interview with BVMed (http://www.bvmed.de)

### Italy

**Structure of the legislation**
- Handylex: “Disposizione per la formazione del bilancio annuale e pluriennale dello stato (legge finanziaria 2003)”, “le novita per le persone disabili”;
- Opportunities-box;
- DPI (Disabled Peoples Italia);
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<tr>
<td>DPI (Disabled People’s Italia): “Riflessione Italiana sulla strategia dei diritti umani”, “Le strategie dei diritti umani applicata alle persone con disabilità”, “Legislazione antidiscriminatoria”, La dudu e le persone con disabilità”, “Disabled People’s International (DPI) e la tutela dei diritti umani”, “Interventi per la tutela dei diritti umani nel campo della disabilità”</td>
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<tr>
<td>“New law requiring affirmative actino for disabled people”, Global labour and employee benefits bulletin;</td>
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<td>“Norme per il diritto ai lavora dei disabili”;</td>
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<td>CGIL: “Lavoro”, “Assistenza”, “Contratti di lavoro e come cure all’estero”;</td>
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<tr>
<td>“Pharmaceutical pricing and reimbursement”, Claudio Jommi;</td>
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<td>“I dati statistici sulla disabilità in Italia”, Prof. Luigi Biggeri. 2003;</td>
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<td>Handicap in Cifre;</td>
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<td>“Information resources and personal advice on Assistive Technology”, 1999. EUROSTAT.</td>
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<td>ISTAT: “Condizioni di salute e ricorso ai servizi sanitari”;</td>
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<tr>
<td>ISTAT: “Condizioni di salute e ricorso ai servizi sanitari”;</td>
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</tbody>
</table>
### The Netherlands

#### Structure of the legislation
- WAJONG, *Wet arbeidsongeschiktheidsvoorzieningen voor jonggehandicapten*
- WAZ *Wet arbeidsongeschiktheidsongeschiktheid zelfstandigen*
- REA *Wet reintegratie arbeidsgehandicapten*
- Branche-rapport Care 1998-2001 – Ministerie VWS
- Wet Voorzieningen gehandicapten – WVG
- Algemene wet bijzondere bijstand – ABW
- Tegemoetkoming onderhoudskosten thuiswonerende gehandicapte kinderen – TOG
- Wet verbetering Poortwachter
- De initiatiefruimte ziekenfondsverzekering, CvZ
- Regeling Hulpmiddelen 1996, VWS 5.12.2002
- LCIG, Nieuwsbrief, Driebergen

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- Wet Gelijke Behandeling voor mensen met een Handicap of Chronisch Zieken - WGBG/CZ 1 April 2003
- Equal Treatment Commission – Utrecht, The Netherlands

#### AT at the workplace
- UVW, Jaaroverzicht arbeidsgehandicapten 2000, Amsterdam, april 2002
- Lisv, Jaaroverzicht Wet REA 1999, Amsterdam, maart 2001
- Evaluatie wet Rea in kort bestek, Wevers C.W.J e.a.
- Reïntegratieinstrumenten voor arbeidsgehandicapten, TNO arbeid 2000
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#### Description of the delivery system
- Signaleringsrapport hulpmiddelen, CVZ, nov 2002, Amstelveen.
- Hulpmiddelen Informatiecentrum
- Brancherapport WVS 2001, Prismant
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- Voorjaarsbrief Zorg, Ministerie VWS
- CvZ Circulaire 03/21
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- Modelverordening voorzieningen Gehandicapten - VNG
- CVZ, De vergoeding van Hulpmiddelen
- ADE, Deregulering Hulpmiddelen, Ministerie VWS - Zorgverzekeraars Nederland.
- Nieuws van Het HIC, Stichting Het hulpmiddelen Informatie Centrum;
- Monitor Hulpmiddelen 2003, CZV Amstelveen.
### Future trends

**Classification of AT products**
- Forum
- CE Markering op medische hulpmiddelen, Ministerie VWS, 1998
- TNO Nederland
- Stichting Innoveren met zorg, Soesterberg
- Stichting Erkenningsregeling voor leveranciers medische hulpmiddelen, Bleiswijk
- GQ en CE de overeenkomsten, het verschil; KBOH, Woerden
- Quatem, KBOH, Woerden
- Kiezen voor het GQ Keurmerk, KBOH, Woerden
- Tevredenheid hulpmiddelengebruikers; verstrekkingen 2001, iRv, 2002 (in opdracht Ministerie VWS)

**Market demand side**
- Gehandicaptrenraad
- Centraal Planbureau, Rapportage gehandicapten 2002
- Centraal bureau statistiek, Gezondheidstoestand van de Nederlands bevolking, Heerlen 2002.
- Sociaal en Cultureel Planbureau – Rapportage Gehandicapten 2002
- Kerncijfers Wvg 2001

**Market supply side**
- KBHO
- Centraal Bureau voor de statistiek
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- Gewa

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- Interview UVW Amsterdam-Breda
- Keuzewijzer Computerhulpmiddelen, iRv-CZV, Hoensbroek 2003
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### Spain

**Spain**

**Structure of the legislation**
- Research legislation; Interviews with Ministerio de Sanidad y Consumo, Ministerio de Trabajo y Assuntos Sociales, IMSERTO, CEAPAT, COCEMFE, PREDIF, REAL PATRONATO.

**Anti-discrimination legislation**
- Definiciones de discapacidad en Espana; Miguel Angel Verdugo – SID, 2001

**AT at the workplace**
- Interview ONCE, Ceapat; PREDIF, Real Patronato, COCEMFE, Ministerio de Trabajo y Assuntos Sociales
- Legislation
- Instituto Biomechanicas Valencia

**Description of the delivery system**
- Interviews with CEAPAT; IMSERTO; COCEMFE, PREDIF
- “Las Prestaciones Sanitarias del Sistema Nacional de Salud”, Dias de Torres e.o. Ministerio de Sanidad y Consumo, Unidad de prestaciones, Madrid, 2002
- Documentation of and interviews with ONCE, Real Patronato, CERMI
- J. Vidal Garcia y Tomas Herrera, Sector de la Rehabilitacion, Madrid Fundacion COTEC; Libro Verde

### Future trends
- Interviews: COCEMFE, PREDIF, CEAPAT, Ministerio de Sanidad y Consumo, IMSERSO, EL PAIS 7/03/2003

### Classification of AT products
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<td>• Cheshire Social Services (<a href="http://www.cheshire.gov.uk">http://www.cheshire.gov.uk</a>)</td>
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