

**Partial Agreement
in the Social and Public Health Field
Accord Partiel
dans le domaine social et de la santé publique**



Resolution ResAP(2001)3

**Towards full citizenship of persons with disabilities
through inclusive new technologies**

Integration of people with disabilities

Resolution ResAP(2001)3

**Towards full citizenship of persons with disabilities
through inclusive new technologies**

(Adopted by the Committee of Ministers on 24 October 2001
at the 770th meeting of the Ministers' Deputies)

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This publication is also available on our web site: www.coe.int/soc-sp

The text of Resolution ResAP(2001)3 is also available on the Internet:
http://cm.coe.int/stat/E/Public/2001/adopted_texts/resAP/2001xp3.htm

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Council of Europe member states

| | |
|------------------------|--|
| Albania | Liechtenstein |
| Andorra | Lithuania |
| Armenia | Luxembourg |
| Austria | Malta |
| Azerbaijan | Moldova |
| Belgium | The Netherlands |
| Bosnia and Herzegovina | Norway |
| Bulgaria | Poland |
| Croatia | Portugal |
| Cyprus | Romania |
| Czech Republic | Russia |
| Denmark | San Marino |
| Estonia | Slovakia |
| Finland | Slovenia |
| France | Spain |
| Georgia | Sweden |
| Germany | Switzerland |
| Greece | "the former Yugoslav Republic of Macedonia" |
| Hungary | Turkey |
| Iceland | Ukraine |
| Ireland | United Kingdom |
| Italy | |
| Latvia | |

Candidates for membership

| | |
|--------------------------------|--------|
| Federal Republic of Yugoslavia | Monaco |
|--------------------------------|--------|

States with observer status

| | |
|----------|--------------------------|
| Canada | Mexico |
| Holy See | United States of America |
| Japan | |

I. PREFACE

1. The Council of Europe

The Council of Europe is a political organisation which was founded on 5 May 1949 by ten European states in order to promote unity between its members. It now numbers 44 member states. Any European state may be invited to become a member of the Council of Europe, provided that it accepts the principles of pluralistic parliamentary democracy, the rule of law and the enjoyment by all persons within its jurisdiction of human rights and fundamental freedoms.

The main aims of the Organisation are to reinforce democracy, human rights and the rule of law and to develop common responses to political, social, cultural and legal challenges in its member states. Since 1989 the Council of Europe has integrated most of the countries of central and eastern Europe into its structures and supported them in their efforts to implement and consolidate their political, legal and administrative reforms.

The work of the Council of Europe has led, to date, to the adoption of over 170 European conventions and agreements, which create the basis for a "common legal space" in Europe. They include the European Convention on Human Rights (1950), the European Social Charter (1961), and the Convention on Human Rights and Bioethics (1997). Numerous recommendations of the Committee of Ministers propose policy guidelines for national governments.

The Council of Europe has its permanent headquarters in Strasbourg (France). It operates through a variety of bodies:

- The governing body is the **Committee of Ministers**, composed of the Ministers of Foreign Affairs of the 44 member states, which meets twice a year. Between sessions their Permanent Representatives in Strasbourg meet as the Ministers' Deputies. They determine the programme of activities of the Organisation, adopt its budget and oversee the work of the many intergovernmental committees. They also decide the follow-up to be given to the recommendations of the Parliamentary Assembly and of the various conferences of specialised ministers which the Council of Europe organises periodically.
- The other statutory organ is the **Parliamentary Assembly** comprising 602 members from the 44 national parliaments, as well as special guests from certain European non-member states. The composition of each national delegation reflects that of its parliament of origin. The Assembly meets in plenary session four times a year.

- The **Congress of Local and Regional Authorities of Europe**, also composed of 602 members, represents the entities of local and regional self-government within the member states. Its aim is to reinforce self-government structures at the subnational level, to promote their co-operation and to ensure their participation at European level.
- The **European Court of Human Rights**, comprising a resident judge from each Contracting Party, is the judicial body competent to adjudicate complaints brought against a state by individuals, associations or other contracting states on grounds of violation of the European Convention on Human Rights.

All these bodies are served by a multinational European Secretariat under the authority of a Secretary General elected by the Parliamentary Assembly for a term of five years. The members of the Secretariat are independent from the states of which they are nationals.

Non-governmental organisations work in close partnership with the Council of Europe, notably in the human rights field.

2. The Partial Agreement in the Social and Public Health Field

The intergovernmental work programme of the Council of Europe includes such fields as the media, local and regional democracy, bioethics, crime prevention and control, migration and refugees, nationality questions, equality between men and women, protection of the environment, as well as social cohesion and health.

When only a certain number of states wish to engage in some action in which not all of their Council of Europe partners desire to join, they can conclude a "Partial Agreement" which is binding on them alone, such as the quality of medicines (European Pharmacopoeia), combating drug abuse ("Pompidou Group"), financing social development projects ("Council of Europe Development Bank"), as well as the health protection of the consumer and the rehabilitation and integration of persons with disabilities ("Partial Agreement in the Social and Public Health Field").

The Partial Agreement in the Social and Public Health Field was concluded on this basis on 16 November 1959. The following states are members: Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom.

Estonia, Hungary, Iceland, Latvia, Lithuania, and Poland, as well as a Council of Europe non-member state (Canada), enjoy observer status with the committees operating in the sector integration of people with disabilities.

The activities of the Partial Agreement in the Social and Public Health Field are in particular aimed at:

- raising the level of health protection of the consumer in its widest sense, through constant efforts - with regard to products having a direct or indirect impact on the human food chain as well as in the field of pesticides, pharmaceuticals and cosmetics - to harmonise legislation, regulations and practices governing, on the one hand, quality, efficiency and safety controls for products, and, on the other hand, the safe use of toxic or noxious products;
- integrating people with disabilities into the community: by defining, and contributing to the Europe-wide implementation of a coherent model policy for people with disabilities, taking simultaneous account of the principles of full citizenship and independent living; and by contributing to the elimination of all types of barrier to integration whether psychological, educational, family-related, cultural, social, professional, financial or architectural.

As a general rule, Partial Agreement recommendations (called "resolutions") contain standard regulations, in order to facilitate the incorporation into national legislation and regulations of the provisions of international texts normally drawn up by those actually responsible for their implementation at national level.

Adopted texts are periodically revised in order to reflect scientific and technological developments. They are often of a pioneering nature in the fields concerned.

Partial Agreement bodies closely co-operate with equivalent bodies in other international institutions. They also co-operate with non-governmental organisations competent in similar or related fields.

II. Introduction

New technologies will increasingly play a major role in helping persons with disabilities to secure equal status in most areas of life and society. For people living in the 21st century the development of such technologies opens up endless possibilities, which heretofore were undreamt of. Advancements in the development of new technologies provide opportunities for people:

- to increase the extent of their knowledge; to enhance their performance in work;
- to enable people to interact and integrate into groups with common interests;
- to access information and to engage in a host of leisure and cultural activities.

These all contribute to a better quality of life for everyone, especially for people with disabilities and elderly people.

While technologies have the potential to significantly enrich the lives of persons with disabilities they also have the potential to exclude due to the following factors:

- Lack of exposure to new technology at home;
- Lack of exposure to new technology at work;
- Technology that is unfriendly to persons with disabilities;
- Isolation through non-availability.

The design and use of new technologies need to be permanently monitored to avoid them becoming yet another form of barrier or segregation for people with particular needs. In addition, priority should be given to developing economically accessible products and services for people with special requirements. This is particularly relevant from the point of view of production and cost rationalisation. Systems and services for persons with disabilities need to be developed alongside the design and delivery of products and services for the general population. The mainstreaming of this strategy for new technologies will improve the quality of life, independence and inclusion of persons with disabilities in society.

The Committee on the Rehabilitation and Integration of People with disabilities (CD-P-RR) is an intergovernmental committee working under the Committee of Ministers and within the framework of the Partial Agreement in the Social and Public Health Field. It aims at integrating persons with disabilities into the community: defining - and contributing to the implementation at European level - of a model of coherent policy for persons with disabilities, which takes account simultaneously of the principles of full citizenship and independent living; contributing to the elimination of barriers to

integration, whatever their nature, whether psychological, educational, family-related, cultural, social, professional, financial or architectural.

At its 20th session in Bled, Slovenia, 10-13 June 1997, the CD-P-RR adopted the terms of reference for the Committee of experts on the impact of new technologies on the quality of life of persons with disabilities (P-RR-NTH). Between December 1998 and summer 2001 the Committee of experts held six meetings, analysing a total of 28 written contributions received from the 18 member and 7 observer states of the Partial Agreement in the Social and Public Health Field. International non-governmental organisations which enjoy consultative status with the Council of Europe were invited to participate in two ways: firstly, following an invitation to submit written comments a total of 18 contributions were received and analysed, secondly, the European Disability Forum (EDF) was represented as an observer in the meetings. The work of other international organisations was a constant stimulus and source of inspiration.

The Committee elaborated a draft comparative analysis, ("The impact of new technologies on the quality of life of persons with disabilities") drawn up by Mr Theo Bougie, consultant, and draft recommendations, which were approved by the CD-P-RR at its 24th session, The Hague, 26-29 June 2001. The latter were submitted to the Committee of Ministers for adoption as a Partial Agreement resolution. On 24 October 2001 the Committee of Ministers of the Council of Europe adopted Resolution ResAP(2001)3 "Towards full citizenship of persons with disabilities through inclusive new technologies".

III. Resolution ResAP(2001)3 Towards full citizenship of persons with disabilities through inclusive new technologies

*(Adopted by the Committee of Ministers on 24 October 2001
at the 770th meeting of the Ministers' Deputies)*

The Committee of Ministers, in its composition restricted to the Representatives of Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Slovenia, Spain, Sweden, Switzerland and the United Kingdom, member states of the Partial Agreement in the Social and Public Health Field,

Recalling Resolution (59) 23 of 16 November 1959 on the extension of the activities of the Council of Europe in the social and cultural fields;

Having regard to Resolution (96) 35 of 2 October 1996, whereby it revised the structures of the Partial Agreement and resolved to continue, on the basis of revised rules replacing those set out in Resolution (59) 23, the activities hitherto carried out and developed by virtue of that resolution; these being particularly aimed at:

- a.* raising the level of health protection of consumers in its widest sense, including a constant contribution to harmonising – in the field of products having a direct or indirect impact on the human food chain as well as in the field of pesticides, pharmaceuticals and cosmetics – legislation, regulations and practice governing, on the one hand, quality, efficiency and safety controls for products and, on the other hand, the safe use of toxic or noxious products;
- b.* integrating people with disabilities into the community: defining and contributing to the implementation at European level of a model of coherent policy for people with disabilities taking into account the principles of full citizenship and of independent living; contributing to the elimination of all barriers to integration, whether psychological, educational, family-related, cultural, social, professional, financial or architectural;

Considering that the aim of the Council of Europe is to achieve a greater unity between its members for the purpose of facilitating their economic and social progress;

Bearing in mind the Convention for the Protection of Human Rights and Fundamental Freedoms, and in particular the right to receive and impart information (Article 10);

Bearing in mind the principles embodied in the revised European Social Charter, namely the right of persons with disabilities to independence, social integration and participation in the life of the community, in particular through measures aiming to overcome barriers to communication and mobility and enabling access to transport, housing, cultural activities and leisure (Article 15, paragraph 3);

Bearing in mind Recommendation No. R (92) 6 of the Committee of Ministers to member states on a coherent policy for people with disabilities;

Bearing in mind Recommendation No. R (98) 3 of the Committee of Ministers to member states on access to higher education;

Bearing in mind Recommendation No. R (98) 9 of the Committee of Ministers to member states on dependence;

Bearing in mind Recommendation No. R (99) 14 of the Committee of Ministers to member states on universal community service concerning new communication and information services;

Bearing in mind the Declaration of the Committee of Ministers on a European policy for new information technologies, Budapest, 7 May 1999;

Bearing in mind Resolution ResAP(2001)1 on the introduction of the principles of universal design into the curricula of all occupations working on the built environment;

Bearing in mind Recommendation 1185 (1992) of the Parliamentary Assembly on rehabilitation policies for the disabled;

Bearing in mind Resolution 1120 (1997) of the Parliamentary Assembly on the impact of the new communication and information technologies on democracy;

Bearing in mind Recommendation 1314 (1997) of the Parliamentary Assembly on new technologies and employment;

Bearing in mind Recommendation 1332 (1997) of the Parliamentary Assembly on the scientific and technical aspects of the new information and communication technologies;

Bearing in mind Recommendation 1379 (1998) of the Parliamentary Assembly on basic education in science and technology;

Bearing in mind Resolution 1191 (1999) of the Parliamentary Assembly on the information society and a digital world;

Bearing in mind Resolution 1233 (2000) of the Parliamentary Assembly on the impact of new technologies on labour legislation;

Bearing in mind Recommendation 54 (1999) and Resolution 76 (1999) of the Congress of Local and Regional Authorities of Europe on local and regional information society;

Having regard to the United Nations Standard Rules on the Equalization of Opportunities for Persons with Disabilities;

Having regard to the activities of international organisations active in the field of standardisation, such as the International Organization for Standardization (ISO), the European Committee for Standardization (CEN) and the European Telecommunications Standards Institute (ETSI);

Having regard to the Resolution of the Council of the European Union and of the representatives of the governments of the member states meeting within the Council of 20 December 1996 on equality of opportunity for people with disabilities;

Having regard to the Action Plan “eEurope 2002 – An Information Society for All”, adopted by the European Council at Santa Maria da Feira, Portugal, on 19-20 June 2000;

Having regard to other international initiatives and projects, such as Heart, Promise, Cost 219, Cost 219*bis*, Fortune, the Web Accessibility Initiative (WAI), Include, Ipsni and Ipsni II/Race, Guib and Guib II/Tide, Tide-Access and Acts-Avanti;

Having regard to the “European Manifesto on the Information Society and Disabled People” drawn up by the European Disability Forum (EDF) in 1999;

Considering that the aim of the Council of Europe can be pursued, *inter alia*, by the adoption of common legislation and practice conducive to the creation of a society for all;

Considering that the estimated number of persons with disabilities in Europe is 10-15% of the population and that the number of elderly and disabled persons is continually growing;

Considering that failure to promote the rights of persons with disabilities and ensure equality of opportunities is a violation of human dignity;

Considering that, despite recent achievements in integration policies, many persons with disabilities in Europe still feel discriminated against;

Considering that the lack of equal opportunities for members of all groups in society poses a threat to securing democracy and social cohesion;

Considering the impact of technologies on the quality of life of persons with disabilities;

Considering that, in particular, the rapid changes in information technology can enhance opportunities on the one hand and create new obstacles on the other;

Considering that the Design for All strategy has a key role to play in the creation of inclusive societies and should therefore be incorporated into all levels of the design process of goods and services;

Considering that globalisation requires intensified international co-operation, particularly in the technology field;

Acknowledging the work carried out in the field of disability policies by the Council of Europe's Committee on the Rehabilitation and Integration of People with disabilities and its subordinate body, the Committee of experts on the impact of new technologies on the quality of life of persons with disabilities;

Convinced of the urgent need to draw up and implement national strategies to provide the basis for a concerted effort concerning new technologies to secure full and active participation of persons with disabilities in all aspects of society,

Recommends that the governments of the member states of the Partial Agreement in the Social and Public Health Field, having due regard to their specific constitutional structures, national, regional or local circumstances, as well as economic, social and technical conditions:

- a.* draw up and implement, in the priority policy areas, national strategies that apply in their policy, legislation and practice the general and specific principles as well as the instruments set out in the appendix to this resolution;
- b.* promote the implementation and take steps towards the application of the principles and measures contained in the appendix, in fields where these are not the direct responsibility of governments but where public authorities have a certain power or play a role;
- c.* ensure the widest possible dissemination of this resolution among all parties concerned, particularly public authorities, industry, consumer associations, non-governmental organisations and users as well as other international organisations;
- d.* follow up the implementation of the provisions contained in the appendix by all appropriate means.

Appendix to Resolution ResAP(2001)3

1. National strategies

A national strategy should be drawn up, consisting of a co-ordinated set of measures or instruments such as action plans, to ensure that persons with disabilities benefit from the opportunities of new technologies, to avoid the risk of exclusion and to evaluate the impact of new technologies on the quality of life of persons with disabilities.

In this context all existing and future action plans, and in particular all action plans in key policy areas relating to new technologies, should be reviewed from a disability perspective to ensure compliance with these recommendations and should take account of the specific requirements of people with different kinds of functional limitations.

Co-ordination and co-operation are prerequisites to the development of any strategy.

2. General principles

Any coherent and global policy should aim at guaranteeing to all individuals full citizenship, equality of opportunity, independent living, freedom of choice, as well as full and active participation in all areas of community life.

Since in today's society the possibility of accessing and using technology applications is a prerequisite to achieving the aforementioned aims, it is the responsibility and duty of society to ensure equal access to technology applications for everyone, irrespective of age, gender or ability. To ensure equal chances of full and active participation in the life of the community, everyone should be able to benefit from technology applications and to access and use them as independently and as equally to others as possible, even though specific modifications or solutions might be required sometimes.

Through a co-ordinated set of measures, people of all ages and abilities should be enabled to have as much personal autonomy and independence as possible, so that they can play a full role in society and take part in economic, social, cultural, leisure and recreational activities.

Mainstreaming, Design for All and user involvement should be guiding principles in all the public authorities' policy areas.

3. Specific principles

The following specific principles and the responses to the leading questions will play a decisive role in determining whether persons with disabilities will benefit from the manifold opportunities that new technologies can offer, or whether they will be excluded from that potential by newly-created obstacles.

These specific principles and leading questions should be applied now and in future to all products, general services, systems and assistive technology for persons with disabilities in all spheres of life. Policy areas of particular importance are children and education, vocational guidance and training, employment, social integration and environment, the medical field, research and development and training of persons involved in the rehabilitation and integration process of people with disabilities.

3.1. Availability – Does it exist? Is it obtainable?

Products and services should be available to all potential users, including persons with disabilities, and be provided where required with additional equipment (such as special interfaces) or an equivalent alternative (such as personal assistance).

Assistive technology should be available to persons with disabilities who need it.

The user perspective: “How and where can I get it?” should be taken into account.

3.2. Accessibility – Is it reachable, approachable, convenient?

In accordance with the guiding principle of Design for All, the requirements of persons with disabilities should be taken into account in the design and application of all products and services.

Where this is not possible, persons with disabilities should be able to access the product or service by means of additional equipment, or an equivalent alternative should be offered.

The user perspective: “Can I get in touch with it?” should be taken into account.

3.3. Ease of use – Is it functional, practical, understandable, user-friendly and applicable?

Products and services aimed at the general public should be designed in such a way that all people, irrespective of whether or not they have a disability, can use them.

User instructions should be easy to understand and follow.

Training in the use of new technologies should be available to all potential users who require it.

The user perspective: “Can I use it?” should be taken into account.

3.4. Affordability – Can the expense be met?

Products and services should be available at equivalent prices to all people.

Extra costs in providing access to products and services should not be borne by persons with disabilities.

Governments should take all possible measures to ensure that financial circumstances do not exclude persons with disabilities from the benefits of new technologies, adaptations and assistive technology.

Products and services that are available for a “niche” market and are expensive should be made affordable to persons with disabilities when they depend on these products or services, at a price equivalent to a commonly used product or service.

The user perspective: “Can I afford it?” should be taken into account.

3.5. Awareness – Is its existence known to users and stakeholders?

Decision-makers in politics, industry, employment, education, health and rehabilitation services should be made aware of the needs of persons with disabilities and the ways in which these needs can be accommodated with the help of new technologies.

Product and service providers should be made aware of the requirements of persons with disabilities and the solutions made available to them by new technologies.

Designers of products and services should be more aware of the requirements of persons with disabilities, for example different ways of communicating and accessing information, so that they can take them into account at an early stage.

Potential users should be familiarised with the existence, possibilities and opportunities offered by new technology applications.

The user perspective: “Do I know of its existence and potential?” should be taken into account.

3.6. Appropriateness and attractiveness – Is it suitable, fitting, and appealing?

Products and services should be functional, age-appropriate and aesthetically pleasing, particularly for children, adolescents and elderly users, without features that unnecessarily complicate their use and potentially increase their cost.

Product design should also take account of different lifestyles.

Simplified versions of products and services should be available.

The user perspective: “Does it suit my needs? Does it do what I want? Do I like the look of it?” should be taken into account.

3.7. Adaptability – Is it adjustable?

Products and services should be adaptable to the user’s functional limitations and individual circumstances. This may be achieved through the availability of different product versions, alterations to key functionalities, modular design, auxiliary appliances or other means.

The user perspective: “Can it be altered to suit my needs?” should be taken into account.

3.8. Compatibility – Can it be used together with other relevant products?

New products should be compatible with existing products used by persons with disabilities, including assistive technology devices.

Several aspects of compatibility should be taken into account, for example hardware and software, mechanical and electrical properties, as well as the avoidance of electromagnetic interference.

The compatibility of products should be guaranteed in these aspects.

The user perspective: “Can I use it together with the technical aids I already rely on?” should be taken into account.

4. Priority policy areas

In drawing up national strategies governments should, with due respect to national priorities, pay particular attention to the following specific recommendations for priority policy areas.

4.1. Education

New technologies in education should be adapted to the needs of all learners, including those with special educational needs.

Learners with disabilities should be provided with the assistive technology devices and the services they need, and these should be included in individualised education programmes.

Training in the use of such devices is an essential component and should be provided for both learners and teachers.

New assistive technologies should be used pro-actively to facilitate integrated education, enabling learners with disabilities to be educated in normal surroundings along with their peers.

Since some learners, particularly those with learning difficulties, often have less access to assistive technology than others, special efforts should be made to ensure that they have access to appropriate technology and receive adequate instruction and support to use it.

The development and use of new special educational hardware and software for the education of learners with disabilities should be encouraged.

Given that all educational staff should be trained in the use of new technologies, in particular information and communication technologies, for educational purposes, due attention should be paid to the special educational needs of learners with disabilities in such training.

4.2. Vocational guidance and training

New technologies should form an integral part of all vocational training for trainees with disabilities, leading to enhanced competencies and qualifications enabling trainees to access further training and education programmes as well as employment opportunities.

Supporting trainees with disabilities in the use of new technologies should be an integral part of all pre-vocational and vocational training programmes.

Trainers should keep abreast of changes in new technologies and provide training programmes that are flexible and adaptable in order to meet the changing demands of the work place now and in the future.

The transition from the world of education and training to the world of work should be supported by:

- Job placements for trainees in work situations which already use new technologies;
- Facilitating the transfer of assistive and adapted technologies used by the trainees with disabilities in education and training to their place of employment. Particularly in cases where an individual has become familiar in the use of such devices, the assistive technology devices should, where necessary and appropriate, accompany him or her in the transfer from education and training to work.

4.3. Employment

New technologies should be used to enable persons with disabilities to gain or maintain employment and develop a lifetime career.

New technologies should be systematically applied in the work environment to provide workplace adaptations, access to training, flexible working arrangements (for example telework), appropriate equipment and accessible facilities.

Public funds or benefits and professional support services should be available to employers and employees to facilitate these actions.

In sheltered employment, new technologies should be used for job enrichment and to increase working opportunities for persons with disabilities and to provide the basis for enhancing the transition into the regular labour market.

The dissemination of disability-related technologies and relevant know-how about the possibilities of new technologies in the workplace should be a key priority and be combined with awareness-raising campaigns amongst employers.

4.4. Social integration and environment

Persons with disabilities and their families should be provided with the technology and services they need to enhance autonomy and flexibility and to enable them to live as independently as possible, if they so wish, and to engage in economic, social, cultural, sports, and leisure activities.

Technical household, mobility or communication aids should be available to everyone in need of them.

New technologies should be used pro-actively to improve the accessibility and usability of the built environment, such as lifetime-adaptable dwellings, “smart-house” technology, robotics, domotics, alarm and surveillance systems.

Since technology is increasingly used in all manner of private and public transport, new technologies should be used to meet the requirements of all persons, including persons with disabilities.

Since the availability of information is a prerequisite for full citizenship and active participation, persons with disabilities should have the choice of using appropriate means of communication, for example in the field of telecommunications.

When different distribution channels are used for information, the same information should be available irrespective of which distribution channels are used.

Additional funding for the use of new distribution channels should be provided for those who cannot use traditional distribution channels. The channels should be comparable in all relevant aspects.

Since new technologies are also used in the distribution of consumer goods and services, (teleshopping, telebanking, etc.) adaptations should be made to ensure use by persons with disabilities.

4.5. Training of stakeholders

All persons whose professional or other duties require them to act in areas of direct or indirect relevance to the rehabilitation and integration of persons with disabilities should receive training in the use and impact of new technologies, including appropriate assistive technology, with a view to applying the general and specific principles set out in this resolution.

Such training should cover all phases, such as initial (vocational) and further training as well as re-training, and be an integral part of continuing professional development.

Particular attention should be paid to the training of people working in the health sector, including both medical and non-medical staff: education and training, vocational guidance and employment placement, social services, transport, sports and leisure, the built environment as well as information and communication technologies.

Designers and manufacturers, engineers and technicians dealing with consumer goods, and in particular assistive technology, should obtain training on the Design for All strategy and on the specific requirements of persons with disabilities.

In order to comply with the principles set out in this resolution, the curricula of all relevant professions and vocations should be revised.

Organisations of and for persons with disabilities, as well as families, friends and informal carers should be offered training courses or supported in attending them, on such subjects as selection of appropriate technology or computer literacy.

4.6. Prevention, identification and diagnosis

The use of new technologies should be optimised to help prevent congenital impairment by improved methods and services of screening, scanning and diagnostics, including prenatal genetic testing, and should be carried out in compliance with ethical principles.

Action should be taken to maximise the use of existing technologies and to plan the development of new technologies for the diagnosis, assessment and follow-up of sensorial, physical and cognitive impairments.

4.7. Medical rehabilitation

Since chronic conditions and degenerative diseases pose major health threats to the individual, competent medical treatment, assistance and care, making use of suitable technology, should be available.

Clients, relatives and other carers should be able to make an informed choice of treatment, assistance or care, including the use of specific technologies.

New technologies should be used to enhance the effectiveness and efficiency of personal care in accordance with the user's requirements and preferences.

Any medical and functional rehabilitation programme should include full provision of the choice, supply and use of appropriate assistive technology devices including their adjustment, maintenance and replacement. Training in the use of the devices should be available to all persons requiring it.

Rehabilitation processes should be adopted in order to attain and/or retain the functional abilities necessary to use the technological products and services available.

4.8. Research and development

Since new technologies hold a strong potential to improve the quality of life of persons with disabilities, governments should support research and development programmes aimed at using that potential. The programmes should address technological features in mainstream systems, products and services as well as assistive technology devices.

Research, development and manufacture of new technologies for rehabilitation should be promoted.

In order to make optimal use of new technology applications for persons with disabilities, research is needed on methodologies for their introduction, training and use.

Research and development in this field should be interdisciplinary and involve human sciences and social sciences in addition to technology and rehabilitation or biomedicine. A broad, holistic perspective should be applied in order to cover the different aspects of the relationship between an individual and technology. Thus, efforts should be co-ordinated between different disciplines, funding sources and other actors.

The involvement and influence of disability organisations is vital in order to set the right priorities for research and development programmes.

In order to ensure the practical application of research and development results, close co-operation between researchers, industry and users should be sought.

Support for user participation in research and development projects should be provided.

In addition to research and development targeted specifically at applications for persons with disabilities, other research programmes with the ultimate aim of producing new technology applications should consider the needs of persons with disabilities, wherever relevant.

Research and development should be carried out both nationally and in co-operation across borders. Since the resources are limited in all programmes, mechanisms for the co-ordination of efforts, dissemination of information and exchange of knowledge will greatly enhance the efficiency of resource utilisation.

4.9. Electronic government

Since public authorities at all levels increasingly use new information and communication technologies in their contacts with the public, the requirements of all citizens should be considered when introducing such applications.

In all systems where information is provided to the public, access for persons with disabilities should be provided using the concept of Design for All or, if necessary, alternative formats should be available.

In particular, public websites should be made accessible to the widest audience possible by applying the design guidelines issued by the Web Accessibility Initiative (WAI), a project of the World Wide Web Consortium (W3C).

New interactive systems for providing government services should also be designed for the widest possible use. An alternative should always be available for those who cannot use the regular system.

Special consideration should be given to systems to be used when exercising an individual's civil rights or obligations, such as voting or filing tax returns. Public authorities should ensure that all citizens can use these systems or, if not, have access to an alternative system.

5. Instruments

5.1. Legislation and regulations

Existing legislation and regulations should be reviewed and new legislation and mandatory regulations should be considered in the light of these recommendations.

Legislation and regulation should ensure the inclusion of persons with disabilities in society by means of facilitating, *inter alia*, their access to new technologies.

Legislation and regulations should require that goods and services be made accessible to persons with disabilities.

5.2. Design for All

Accessibility and usability of products and services should be ensured at the design stage. Therefore, the Design for All strategy should be incorporated in the curricula of all designers and engineers.

An integrated design policy should guarantee that products and services are as widely as possible accessible, without requiring special design adaptations.

Design should simplify life for everyone by making products and services more usable by more people at little or no extra cost.

Design of new technologies should include all persons, regardless of age, gender and ability, and should accommodate a wide range of individual abilities and preferences.

Design should communicate essential information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

Design should minimise hazards and adverse consequences of accidental or unintended usage or actions.

5.3. User involvement

Policies, products and services should be designed, developed and evaluated with the co-operation of users across the age span, including persons with disabilities.

Users should be considered an essential source of information because of their first-hand knowledge and experience. Developers and providers of goods and services, as well as relevant authorities, should consult regularly with disabled users about their access requirements and take appropriate action.

User participation should form an integral part of sound project planning and should take place as early as possible.

Consequently, it should be considered in all policy areas. Thus, where it is necessary to reorganise a workplace with new technologies due to disability, the employee concerned and his or her representative within the company should be involved

Assessment practices for assistive technology should concentrate on involving the consumer in all aspects of decision-making.

Organisations representing persons with disabilities should be prepared to contribute their knowledge and experience. Project materials, communications and premises should be made accessible to users. Co-operation should be based on the idea of mutual partnership.

Since many user organisations are non-governmental organisations, often based on the efforts of volunteers, appropriate ways and means of compensation and support should be envisaged.

5.4. Standardisation

Given that standards can be an efficient tool for incorporating accessibility, usability and safety in new products and systems, governments should promote the use of accessibility and usability standards and their inclusion in national and international standardisation work. One way of doing this is to support the participation of informed representatives of persons with disabilities in the standardisation process.

Initiatives should be promoted, both for developing standards for products and services specially targeted at persons with disabilities and for including the needs and requirements of disabled users in the development of standards for products and services for the general public.

Public authorities should acknowledge the importance of involvement in work with both formal standards as carried out in international and European standards bodies and informal standards, such as guidelines, industry agreements, recommendations, best practices and benchmarking.

In order to ensure that standards are being used and applied, information and awareness-raising activities should be carried out.

5.5. Centres of excellence

In order to accelerate and consolidate progress, every member state should appoint a body, new or existing, promote the creation of a professional centre of expertise or use other bodies with competence to disseminate information and documentation as well as to give advice, assistance and support on issues relating to new technologies and persons with disabilities and to serve as a resource and development centre.

Using modern technologies, such centres should be efficiently connected within networks, both nationally and internationally, for the exchange of knowledge, sharing of information and experiences as well as project co-operation.

5.6. Public procurement policies

Given that public procurement provides a good opportunity to influence the design of products and services, public authorities buying products and services should ensure that these comply with accessibility requirements for persons with disabilities.

To ensure equal opportunities for all citizens, public authorities should procure products and services that can be used by as many individuals as possible, with or without disabilities.

Procuring entities should co-ordinate and co-operate, both nationally and internationally, to strengthen both the position of the procurers and the requirements.

5.7. Evaluation

Since the effectiveness of any measures cannot be determined without systematic evaluation, the degree of success of each measure should be considered and emerging problems identified.

It is therefore recommended that regular surveys should be carried out on the extent to which the above-mentioned concepts have been implemented. The impact of new technologies on the quality of life of persons with disabilities should be analysed. A standard monitoring procedure should be set up in each member state of the Partial Agreement in the Social and Public Health Field.

To establish a sound basis for the consecutive development of monitoring instruments, surveys and analyses should be based on parameters that are nationally comparable over time.

Evaluation systems should aim at the greatest practicable comparability of data not only within but also between countries, by bearing in mind the work of relevant international organisations on statistical indicators.

5.8. International co-operation

Member states should promote the sharing of experiences, research findings and other information. Channels and structures for such interaction should be set up.

Governments should facilitate co-operation across borders and foster contacts between professionals, researchers and users of technology in this field.

Research and development programmes and projects will benefit from being co-ordinated and well-informed, leading to more efficient use of resources.

The bodies referred to in Chapter 5.5. should be called upon to communicate with corresponding bodies and institutions in other countries.

The setting-up of an international centre to study the impact of new technologies on the quality of life of persons with disabilities should be promoted.

An international exchange of good practice should be developed, illustrating the major themes of this resolution by practical detailed examples, making the best possible use of new information technologies such as the Internet.

Such examples, although set in specific contexts, should be sufficiently transferable to demonstrate that solutions and good practice can be shared. They should inspire creative imitation in the spirit of this resolution.

6. International follow-up

The governments of the member states of the Partial Agreement in the Social and Public Health Field should present periodically to the Secretary General of the Council of Europe a report on their policy pursued and the measures taken in the application of the provisions contained in this resolution, preferably within the framework of an international conference to exchange information and share experience and best practices.

The reports should be presented at appropriate intervals as requested, in a form determined by the Committee on the Rehabilitation and Integration of People with disabilities (CD-P-RR).

Indicators of success should be determined by the CD-P-RR.

IV. Explanatory Memorandum

1. General commentary

Within the framework of the Council of Europe's Partial Agreement in the Social and Public Health Field the word "resolution" is synonymous with "recommendation". A resolution/recommendation is an instrument of legal and political significance, adopted by the Committee of Ministers of the Council of Europe, recommending certain special action that member states should take. It is not legally binding.

The resolution is addressed to the governments of member states, which are recommended to implement the resolution and its appended principles "having due regard to their specific constitutional structures, national, regional or local circumstances as well as economic, social and technical conditions". This reflects the discretion of member states to take account of their specific situation and circumstances.

The ways and means of implementing the resolution and its principles are not specified in the text. This enables member states to select any appropriate means of implementation according to their own margin of appreciation. Such means might comprise national law and practice or other initiatives.

The resolution does not seek to address directly the private sector. It is up to member states themselves to define any appropriate arrangements for ensuring that the private sector takes part in the implementation of this resolution. In addition, local and regional authorities might be instrumental in the implementation of the principles of this resolution.

2. Observations section by section

2.1. Preamble

The first four recitals of the preamble are standard. The next 23 recitals refer to major conventions, recommendations, declarations, initiatives and programmes of the Council of Europe and other organisations that deal with the rehabilitation and integration of persons with disabilities or with issues of new technologies. The last eleven recitals reiterate the main reasons for a concerted policy towards more inclusive participation of persons with disabilities in the life of the community.

2.2. Paragraphs of the operative part

Paragraphs a. and b. follow standard Council of Europe practice. The division of responsibilities between governments and other bodies varies between countries and over time. This resolution makes no attempt to harmonise practice in this regard, and it is worded so as to take account of the existing diversity. Government competence may, for example, be limited where matters fall within the scope of other autonomous decision-making bodies (e.g. universities). However, various steering instruments allow

governments to take steps as proposed in paragraph b. in favour of the application of the principles and measures put forward in the appendix, even where legal responsibility lies with non-governmental institutions or with intermediary bodies.

In paragraph c. member states are held to widely disseminate this resolution and bring it to the attention of all interested parties. Dissemination of the resolution is a prerequisite for its proper implementation, as this will help public authorities, the private sector and users to understand the opportunities and challenges of new technologies, and to contribute actively to harness those technologies for the benefit of all individuals.

Following standard Council of Europe practice paragraph d. leaves it to the member states to arrange for appropriate follow-up.

2.3. Appendix to the resolution

The specific recommendations and principles are appended. This appendix forms an integral part of the resolution.

2.3.1. Explanation of terms

The explanations of terms are made for the purpose of this resolution and are not of general application.

New technologies

The concept of “new technologies” covers a very wide range of basic, intermediate and applied technology in a vast number of different fields.

The term "new technologies" also refers to the increasing speed of development of new products, systems and services based on the application of sometimes highly complex technologies.

For the work of this committee, it has not been possible or even relevant to look into all areas that may be seen as part of new technologies. Instead, the committee has focused on those technologies and technical applications that have emerged in the last few years or are forecast for the near future which can be expected to have a significant impact or a potential impact on persons with disabilities, in particular in their roles as active and participating citizens.

Thus, the main focus of the committee has been information and communication technologies and their impact on society in general and on persons with disabilities in particular. Other technology fields considered by the committee include medical and biomedical technologies, genetic engineering, new materials, design technologies and construction technologies.

Quality of life

The term “quality of life” is to be understood as the process of fulfilling one’s needs and pursuing one’s interests, preferences, values and aspirations in different spheres and phases of life. Preconditions for that process are full and active participation in interaction and communication processes as well as exchange with the physical and social environment.

Disability

According to the WHO International Classification of Impairments, Disabilities and Handicaps (ICIDH) of 1980 the term “impairment” refers to “any loss or abnormality of psychological, physiological, or anatomical structure or function”. The term “disability” refers to “any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being”. The term “handicap” refers to a "disadvantage for a given individual, resulting from an impairment or a disability, that limits or prevents the fulfilment of a role that is normal (depending on age, sex, and social and cultural factors) for that individual".

The WHO ICIDH-2: International Classification of Functioning, Disability and Health (ICF) (Final Draft 2001), adopted by the 54th World Health Assembly in May 2001, defines the terms "body functions", "body structures", "impairments", "activity", "activity limitations", "participation", "participation restrictions", and "environmental factors". "‘Body functions’ are the physiological functions of body systems (including psychological functions)". "‘Body structures’ are anatomical parts of the body such as organs, limbs and their components". "‘Impairments’ are problems in body function or structure such as a significant deviation or loss". "‘Activity’ is the execution of a task or action by an individual". "‘Activity limitations’ are difficulties an individual may have in executing activities". "‘Participation’ is involvement in a life situation". "‘Participation restrictions’ are problems an individual may experience in involvement in life situations". "‘Environmental factors’ make up the physical, social and attitudinal environment in which people live and conduct their lives".

Design for All

“Design for All” is a strategy, which aims to make the design and composition of different environments, products and services accessible and understandable to as well as usable by everyone, to the greatest extent in the most independent and natural manner possible, and right from the outset, possibly without the need for specific design solutions afterwards.

For the purpose of this resolution the term “design for all” is understood to have the same meaning as the terms “universal design” “inclusive design”, and “barrier-free design”, and others intended to cover the same purposes.

Assistive Technology

“Assistive technology” means any product, instrument, equipment or technical system, especially produced or generally available, used by a person with a disability, preventing, compensating, relieving or neutralising the impairment, disability or handicap.

Mainstreaming

The term “mainstreaming” in a disability context refers to the (re)organisation, improvement, development and evaluation of policy processes, so that a disability perspective is incorporated in all policies at all levels and all stages, by the actors normally involved in policy-making. It aims to achieve equal opportunities and full participation of persons with disabilities in society. The starting point should be the disability-screening of all policy proposals. However, mainstreaming goes beyond that since it requires a shift in organisational cultures and in the ways stakeholders approach policy-making.

Mainstreaming as a guiding principle is predicated on the principles of equality of opportunity and participation for persons with disabilities in a society that includes everybody – i.e. an inclusive society that respects difference.

An inclusive society is one that enables and empowers people to experience and participate in the economic, social and cultural life of society and is creative and adaptive in integrating the needs and requirements of all people.

The adoption of a mainstreaming approach requires the integration of policies and services for persons with disabilities and older people with the policies and services provided to the general public. The responsibility for implementing this integrated approach lies with policy-makers and service providers in general and not simply with specialist service providers/policy makers or persons with disabilities themselves.

2.3.2. National strategies

In this resolution governments affirm that all persons should benefit from the developments in technology, in particular concerning the use of products and services.

Since persons with disabilities are at risk of exclusion from the use of products and services it is necessary to draw up a national strategy to ensure their inclusion, particularly where new technologies are involved.

Within the framework of this strategy, all existing and future plans and programmes in relevant political areas should be reviewed to determine whether technology may be used as an instrument to reach the programme goals for persons with disabilities.

Moreover, plans and programmes on the use of technologies should be reviewed to ensure that persons with disabilities are not excluded.

The national strategy should be implemented through a co-ordinated set of measures, such as legislation, regulation, guidelines, recommendations, action plans, benchmarking, user participation, best practice application, awareness-raising and information.

2.3.3. General principles

The resolution takes as starting points the right of all individuals, including persons with disabilities, to full citizenship, equality of opportunity, independent living, freedom of choice as well as full and active participation in all areas of community life, which involves the right to access, to use and to understand technology.

Mainstreaming, design for all and user involvement are underlying concepts as well as methods to help achieve these goals.

The resolution recognises the responsibility and duty of society to make new technology beneficial to everyone, including persons with disabilities.

2.3.4. Specific principles

The following points in the resolution are addressed to governments and other institutions, according to the allocation of responsibilities in each country.

2.3.4.1. Availability

From the point of view of equal rights, all products and services should be available for all persons, including persons with disabilities. However, it is not enough to make new technologies available, they also need to be compared and evaluated from a user's perspective. The choice of the right product or service sometimes needs to be guided by specialists. The purchase needs to be accompanied by financing, adjustment and maintenance of the product or service and followed by appropriate training and long-term support of the user. Information on these aspects of technology should be available for everyone. These general consumer rights are particularly important in the case of persons with severe disabilities or persons who, due to learning difficulties or lack of training are unable to cope with complex processes such as handling technology. This is valid above all for entirely new developments where routine applications are lacking.

2.3.4.2. Accessibility

The right of all persons to full citizenship implies that all products and services should be equally accessible to all. From the very start of the design process, the abilities and disabilities of potential users should be taken into account.

2.3.4.3. Ease of use

Individuals dispose of a broad scope of abilities and disabilities. A prerequisite for the design of products and services is that these features are taken into account. This does not imply that everyone should be able to use every product or service. It does imply, however, that in cases where a given individual cannot use a specific product or service an equivalent alternative should be made available. In order to avoid extremely complicated products and services, possible adaptations or external interfaces should be envisaged or alternatives be made available. The usability requirement is not restricted to the product or service itself but should also apply to the user manual or instructions.

2.3.4.4. Affordability

Products and services for niche-markets or with a certain level of complexity will cost more than standard products or services. Yet they are necessary for persons with disabilities who cannot use the standard products. Since persons with disabilities often have low incomes, and are sometimes still at the risk of poverty, many complex products and services are financially out of reach. In that case those products and services should be offered at the standard price. If products and services are designed according to the “Design for All” strategy extra costs will be eliminated or significantly reduced.

2.3.4.5. Awareness

Attitudinal barriers still remain to be one of the biggest obstacles to equal opportunities for and full participation of persons with disabilities. They may even be harder to eliminate than any technological barriers. Consequently, awareness of the requirements of persons with disabilities should be raised at all levels and should be taken into account in all design processes.

2.3.4.6. Appropriateness and Attractiveness

Since some persons with disabilities have to live with daily use of and dependence on technical devices, such devices should be designed to be as attractive and acceptable as possible. This is important to all users but particularly so to children and elderly persons. For children with disabilities, the appearance of their technical devices is important to their self-esteem and their social contacts and for many elderly people technical applications, whether they are special technical aids or normal consumer products, are accepted only if they have an attractive design and fit in with the individual’s normal environment. Products and services should be attractive. They should invite people to use them. Functionality, attractiveness and user expectations should be combined.

2.3.4.7. Adaptability

Since persons with disabilities have individual needs, requirements and preferences like everybody else and since, in addition, the nature of the disability and its consequences may vary considerably from individual to individual, products and services should be designed in such a way that they can be adapted to the abilities of the user. For example, since a deaf person cannot hear sound signals it would be very helpful to him/her if visual signals could easily be activated or installed. Products which are not adaptive, i.e. adjust themselves automatically, should at least be adaptable.

2.3.4.8. Compatibility

Compatibility of products that some persons with disabilities need to use together should be guaranteed so that they can function together in a harmonious way, e.g. it should be easy to connect a Braille display to a cash dispenser.

Compatibility also needs to be tested in order to avoid negative effects on products used by persons with disabilities, e.g. electromagnetic interference of GSM mobile telephones and hearing aids.

Standards can play an important role in ensuring compatibility.

2.3.5. Priority policy areas

The following policy areas are highlighted and given priority status because they play a predominant role in any individual's life. Governments are strongly recommended to include them in their strategies and programmes.

2.3.5.1. Education

Education is a particularly powerful tool in creating equality for persons with disabilities in society. Early experiences of inclusion or exclusion are crucial in shaping the future participation of persons with disabilities. Opportunities or barriers experienced by persons with disabilities at any level of education impact critically on the choices they can make in the future and the extent to which they can achieve their full potential.

New technologies are a critical means for providing opportunities to ensure that barriers are removed and opportunities for persons with disabilities maximised. The right of all persons with disabilities to access and participate in the same educational opportunities in the same settings at all levels as their non-disabled peers (inclusive education) AND to access and participate in specialist education, is greatly enhanced through the provision of appropriate technology.

The use of technology in education, in particular information and communication technology (ICT), has become a basic requirement, just like reading, writing and mathematics. It is critical that technologies in education are used in an inclusive way and no one is left behind. Education in the use of new technologies should include basic trouble-shooting

2.3.5.2. Vocational guidance and training

Training and education are the two primary routes available to persons with disabilities towards realising their full occupational potential. It is vitally important that persons with disabilities have access to the widest possible range of vocational guidance and training provisions. Persons with disabilities should have the same right of access to the same training opportunities as non-disabled persons.

Vocational guidance includes the assessment of vocational capacities. New technologies can significantly contribute to improving assessment methods and, consequently, to obtaining an adequate picture of the person's occupational abilities. Account should be taken of the Council of Europe Resolution AP (95) 3 on a Charter on the vocational assessment of people with disabilities.

New technologies have a major role to play in enhancing the employability of persons with disabilities. In the fast changing labour market job-seekers and workers with disabilities need to be as vocationally flexible as their non-disabled peers to ensure their competitiveness.

Technological innovations can have a tremendous impact in helping individuals with disabilities to reach their potential. With recent developments in adaptations for technologies, there is no reason why talented young persons with disabilities should not find success in high tech fields. Trainees with disabilities should therefore have access to training and further education in all fields of new technologies. In addition, training programmes and schemes need to be flexible and adaptable if they are to meet the current and future demands of the workplace.

Training in the use of new technologies relevant to vocational integration should include basic trouble-shooting.

2.3.5.3. Employment

Work is a crucial ingredient of an individual's economic and social well-being. Without gainful employment, many persons with disabilities find themselves losing their skills and becoming demotivated, all of which has a major impact on the status of a person with a disability.

Despite economic growth and technological advancement, persons with disabilities remain at a disadvantage when it comes to enjoying the opportunities created by those conditions. Persons with disabilities still head the ranks of those unemployed in Europe, many of them are confined to sheltered employment.

New technologies, however, have the potential to assist in breaking this pattern of unemployment. New technologies can pave the way for a significant expansion in the number and range of employment opportunities that persons with disabilities, properly trained, supported and equipped, could undertake in a meaningful way.

There are a number of reasons why new technologies can do this:

1. New technologies are complemented by new developments in areas such as assistive technology and ergonomic applications, both of which play a significant role in maximising opportunities for the inclusion of persons with disabilities in meaningful employment.
2. Many of the new forms of employment are generated and sustained by new technologies. Such types of employment rely more on IT competencies and precision of electronic skills, rather than the physical strength of human operators. As a result these developments in employment are of particular interest to persons with physical impairments.
3. Advancements in information technologies and telecommunications has provided society with a range of flexible options for work (e.g. telework). This pattern of more flexible working arrangements is one which can favour persons with disabilities.

Technology properly applied to meet an individual's needs and the specific requirements of work increases independence for persons with disabilities; creates opportunities for gaining successful employment and engaging in the economic life of society.

Persons with disabilities in sheltered employment should not be excluded from the benefits of new technologies, which, once implemented, may help to increase diversity, to avoid monotony, to reduce the amount of low-skilled labour, and to enhance the chances of transition to the open labour market.

The following Council of Europe reports should be taken into account: Employment strategies to promote equal opportunities for persons with disabilities on the labour market (2000), The transition from sheltered to ordinary employment (1996), and Employment strategies for people with disabilities: the role of employers (1995).

2.3.5.4. Social Integration and environment

Since social integration starts in one's own family, and persons with disabilities often rely and sometimes depend on them, products and services should also be made available to these informal carers.

Persons with disabilities are at a great risk of being excluded from society. Where participation in education and labour is based on a personal contract between the provider and the person with a disability, a greater awareness of the field of social integration and environment is necessary.

Designers and policy makers should become aware of the fact that all products and services should be designed using Design for All principles so that all citizens can use them independently with or without additional equipment. Technology should be used more pro-actively to tackle the issue of accessibility.

Chapter 4.4. mentions several aspects of daily life in which the general and specific principles of this resolution could play a large role towards achieving full integration of persons with disabilities: economic, social, cultural, sports and leisure activities as well as technologies for housing, mobility and communication.

Technology could be a powerful tool to achieve the final goal of full participation

2.3.5.5. Training of stakeholders

Since training is considered as one of the principal engines of change in the field of human behaviour, all persons who directly or indirectly deal with the rehabilitation process and/or the social integration of persons with disabilities should be trained in the use, and even more so in the impact, of new technologies in their field of application

Although this could potentially apply to many persons, there certainly are some professions that should be seen as key players in the rehabilitation process and/or the social integration of persons with disabilities, such as doctors, nurses, social workers, teachers, trainers, or job and career counsellors.

However, some professions, which at first sight only seem to have an indirect influence on the rehabilitation and integration of persons with disabilities, may be important stakeholders in the integration process, since they shape the environment in which we all live, e.g. architects, engineers, and designers of products or services.

Indeed, inaccurate assumptions of designers of products and services about what potential users can or cannot do must be seen as one of the main reasons for shortcomings in the design of many products and services, which, as a result, fail to meet the requirements of many potential users.

The curricula of these professions and vocations should be revised, taking account of, *inter alia*, the following Council of Europe instruments: Resolution ResAP(2001)1 on the introduction of the principles of universal design into the curricula of all occupations working on the built environment, Recommendation No. R (93) 8 on the organisation of multiprofessional education of health care personnel, and the report Training of staff, other than health care staff, concerned with rehabilitation (1992).

In the informal sector, families, friends and other informal carers as well as co-workers should be trained in the use and impact of new technologies in relation to persons with disabilities.

2.3.5.6. Prevention, identification and diagnosis

Correct diagnosis of physical, sensorial and cognitive impairments are essential for planning efficient rehabilitation processes and thus for the reduction of disability. New technologies may furnish the necessary instruments in terms of accuracy and affordability. Similarly, the prevention of congenital impairments can be improved through the use of new technologies for wide prenatal testing.

2.3.5.7. Medical rehabilitation

The final goal of any rehabilitation process is the attainment of sufficient ability for a client's participation; where "participation" is, according to the WHO International Classification of Functioning, Disability and Health (ICF), "involvement in a life situation".

Basic steps are:

- a. the reduction of impairments;
- b. the reduction of functional limits, possibly with the recruitment of compensatory mechanisms;
- c. recruitment and/or reinforcement of specific functional abilities, necessary for using the available technology, including assistive technology, especially when they are essential aids for an individual to perform the activities in his/her current environment;
- d. training in the use of the available and/or assistive technology.

Therefore, technology influences rehabilitation in two main ways:

- i. it can improve a client's outcome with reference to the above steps a. and b., through more effective medical treatment, assistance and care;

- ii. it may require for its full benefit a specific rehabilitation phase, (steps c. and d. above) even the re-definition of the objectives, while trying to reduce the functional limits (step b. above).

2.3.5.8. Research and development

Disability aspects of new technologies should be addressed in all relevant research and development programmes and projects linked to those issues. Special, targeted programmes and projects should be set up to develop new solutions and applications for persons with disabilities. Both highly innovative projects and new practical applications of existing technologies should be supported.

To succeed in developing useful and cost-effective solutions, the work must be multidisciplinary and knowledge from different sources be brought to bear on the problem. Creative integration of different kinds of expertise and experience can be hampered by a lack of understanding and mutual interest between research communities in different disciplines and between research and development institutions and the world of persons with disabilities. Creating settings in which they can meet and find a common language and a common cause is an important task.

Studies on functional capabilities and limitations and the interplay between technology and human beings as well as needs, requirements and preferences of the target groups are needed in order to provide better basic knowledge. Other urgent areas of study are design methods, organisational issues, socio-economics, assessment methods and market factors.

Application projects should be guided by the needs, requirements and preferences of the intended users, preferably with the participation of user representatives. Small-scale and private research activities can contribute efficiently to the application of new technologies for persons with disabilities, because of a close relation to the problem owner and the market.

Involvement of users and user organisations is essential. The type of involvement varies during the different stages of research and development of projects. Some countries have introduced conditions for research grants like establishment of partnerships between research centres and organisations representing persons with disabilities or the involvement of industry.

In development projects, applications of new technologies - products, systems and services – should be designed and evaluated with users. Demonstration projects will yield more knowledge about the benefits and restrictions of technology applications. Research should also be carried out to improve the availability of useful applications for the respective user groups.

Up to now, knowledge and information on usability and user experiences have not been systematically collected and made accessible. A systematic approach with international coordination and exchange would enhance and spread the knowledge about users and thus contribute to the accuracy and efficiency of research and development projects.

Special efforts are made in some countries to ensure that research and development results are brought to the market in the form of new products and services. The production of new assistive devices is stimulated and contacts between researchers, industry and users are encouraged.

More research is needed into the use of new technologies for persons with cognitive and psychiatric disabilities. Technology holds a great potential for these groups although very few applications exist today.

Research and development efforts should also be made into improving the services for health and welfare at a personal level. New technologies can be used to improve the coordination between service providers with the aim to develop seamless services for the individual. Other applications can be developed to facilitate remote care and services.

Some countries have national databases and systems to gather and disseminate information on research projects and results, which is a way of promoting research activities and stimulate the uptake of the outcome of projects. A closer co-operation between such national systems would increase the efficiency and extend the coverage.

2.3.5.9. Electronic government

Government, like business, is going on-line. Europe is moving rapidly towards an information society in which electronic government at international, national, regional and local levels will play a central role. In the Internet age, government websites will become the gateways for people to conduct their business with government and a central feature of public service delivery.

From a perspective of democracy and equality, it is vital that all citizens have access to and can use the electronic tools and channels used by governments and public authorities. Websites will be a major instrument for interaction between governments and citizens. The eEurope Action Plan of the European Union states that all member states and the European Commission shall have adopted the Web Accessibility Initiative (WAI) guidelines for public websites before the end of 2001.

WAI is a working group sponsored by the U.S. government, the European Union and the World Wide Web Consortium (W3C), an independent, international body that creates Internet and programming language standards. All its recommendations are highly regarded and the WAI guidelines are currently accepted as best practice in the industry.

In several countries, legislation dealing with discrimination against persons with disabilities may be used as a basis for legal actions against website providers. This has already happened in Australia. In a ruling by the Australian Human Rights and Equal Opportunity Commission, the organisers of the Sydney Olympics were found to have breached section 24 of the Australian Disability Discrimination Act (1992) by failing to make their web site (www.olympics.com) accessible to persons with visual impairments. They were ordered to take immediate action to make the Olympics and Paralympics sites accessible. Although the commission is not a court, legally enforceable damages of AUS\$20,000 have been awarded against the organisers.

Both accessibility and usability are key concepts when including persons with disabilities in the digital world of government. Achieving universal accessibility is part way towards the goal of achieving universal usability. Accessibility problems are those that make it more difficult for a person with a disability to use an application or service than for a non-disabled person. An "accessible" website may still have serious usability problems that make it equally difficult for any person, disabled or non-disabled, to use the site for its intended purpose. Usability focuses on making software applications and services easy for all people to use, so good usability practices are also good accessibility practices.

Some activities necessary for achieving usability are: understanding user requirements, focusing on common tasks, supporting the user, maintaining consistency, providing regular feedback, meeting user expectations, ensuring that interfaces are versatile and regular testing.

It is highly advisable to involve users in the process of designing a digital government service, in particular in the requirements gathering stage and the usability testing at key moments in development.

2.3.6. Instruments

2.3.6.1. Legislation and regulation

It is the responsibility of, amongst others, product designers, manufacturers and service providers, to ensure that the products and services in the information society are for all people. This responsibility is based on national, European and international legislation and regulation as well as on ethical obligations. At the most general level, the ethical responsibility can be derived from the intrinsic value of all human beings. General codes can be found in human rights agreements and in various recommendations as well as in relevant non-binding documents such as the United Nations Standard Rules on the Equalization of Opportunities for Persons with Disabilities.

Equality entails non-discrimination. Some countries ban discrimination in their constitution or basic law, others have specific non-discrimination legislation. There also exists more specific legislation which could be characterized as consumer protection

legislation and as a support for the Design for All principle. A few examples exist in the telecommunications sector in Europe.

Other particular legislation aims to meet the specific requirements of persons with disabilities. This legislation may concern the various social, health or rehabilitation services.

2.3.6.2. Design for All

Traditionally, design has always focused on meeting the need of the “average” person, on the assumption that design for the average person provides for the needs of the majority. The Design for All argument is that designing for the “average” person is by definition exclusionary, because the average user is a fictitious construct. Design for All is a holistic approach to creating products and services that are accessible and understandable to, as well as usable by, everybody regardless of age, gender, size, ability or other physical characteristics.

Design for All, by definition, does not exclusively address the needs of persons with disabilities but it is inclusive of their requirements. By not thinking about separate user groups but about the whole spectrum of human-environment interaction, it increases the number of persons whose requirements are being met. It encourages an integrative approach rather than multiple separate solutions and is thus an essential component of any social inclusion policy.

The intent of the Design for All strategy is to simplify life for everyone by making the environment, products, and communications equally accessible, usable and understandable at little or no extra cost. The strategy promotes a shift to more emphasis on user-centred design by following a holistic approach and aiming to accommodate the requirements of all persons, regardless of age, gender, size and abilities, including the changes that people experience over their lifespan. Design for All makes products and services more convenient to use for everybody. This should also apply to the packaging of the product.

Paradoxically, Design for All is most successful when it is not apparent since it may not be as visible as a special appliance. Design for All is a “design-in-time” consideration rather than an afterthought that may lead to subsequent adaptations.

2.3.6.3. User involvement

Involving users in the design process could be seen as one of the most valuable instruments to achieve universally designed products, since the best experts are often people who are stakeholders and whose needs are not sufficiently met by current environments and products. Users are most valuable in giving designers the opportunity to view the product from a different perspective.

User accommodation is not merely the third element in design, alongside aesthetics and technology, but it is in fact the context within which all factors of design should be placed. The most promising way to enhance accessibility and usability of products and services is to consider the requirements of persons with disabilities in all stages of the design process, including requirements gathering, task analyses, usability tests and design guidelines.

Particular attention should be paid to including the broad diversity of users who interact on a daily basis with the creations of designers and engineers.

Assistive technology devices prescribed should offer consumers more advantages than the burden involved in their use. Therefore, careful evaluation to determine the costs and benefits of using assistive technology from the consumers' perspective are crucial to ensure the full and continuous benefit of assistive technology in the future.

2.3.6.4. Standardisation

A report on how needs and requirements of persons with disabilities can be taken into account in standardization of information technology has been prepared by a project team set up by the ICT Standards Board, a collaborative group for CEN, CENELEC and ETSI, the three European standards organisations.

Since the 1960's, the International Organisation for Standardisation (ISO) has carried out extensive standardisation work in the field of assistive technology for persons with disabilities. The main product groups covered are "traditional" aids for persons with mobility disabilities, such as wheelchairs (manual and electrical), walking aids, prostheses, hoists and beds as well as aids for persons with incontinence and ostomy. Some work has also been done regarding aids for persons with visual impairments. A standard on terminology and classification of technical aids has also been produced. Implementation of the ISO standards depends on individual nations, institutions or companies and has been varying. One example of widespread application is standards on testing methods.

In 1993, the European standardisation organisation CEN (*Comité Européen de Normalisation*) started producing assistive technology standards for Europe, most of which are linked to EU product directives, in particular the Medical Devices Directive. The result is that all technical aids marketed in countries applying the EU trade regulations must comply with these standards. The CEN work is done in close cooperation with ISO, aiming at identical standards.

Formal participants in these standardisation activities are national standards bodies, who must approve all new standards in a voting procedure. Experts involved in the writing of standards come from industry, research institutions, government authorities, customers/procurers and sometimes from the end users. A high degree of consensus is always sought in the work.

Recently, the CEN and ISO committees have initiated a process to expand their work into the field of technical aids based on information and communication technologies. Work has started on remote controls (environmental controls) and other product groups are being considered.

The role of standardisation has been very different for telecommunications, broadcasting and computing. Historically, telecommunications has had a very rigorous system for developing international standards to ensure that one can communicate by voice across the globe. The main standards bodies are ITU (International Telecommunications Union) and ETSI (European Telecommunications Standards Institute) who have been receptive to representations from disability groups. However, future telecommunication systems are unlikely to use the same process, as can be seen with UMTS (Universal Mobile Telecommunications System) where only the most basic communication protocols are subject to formal standards with all other aspects being left to industry consensus.

In broadcasting, there is a standardisation process but it is handled by groups made up of representatives from industry. In Europe, digital television standards are developed by the DVB (Digital Video Broadcasting) and then passed to ETSI for formal standardisation. However, the digital television bodies have been amenable to the inclusive design message as long as it does not involve their members in any extra expenditure or delay in the introduction of new systems or services.

The computing industry has strongly resisted standardisation preferring to leave it to industry consensus (which often means that the dominant commercial player determines the standards). It has proved difficult for disability groups to influence these standards. However, American legislation (such as the 1996 Telecommunications Act) and government purchasing policy has begun to influence the industry. A recent success has been the development of the WAI (Web Accessibility Initiative) guidelines for the design of websites so that the needs of persons with disabilities may be considered.

Recently, the European Commission has issued two mandates to the European standardisation organisations CEN, CENELEC and ETSI. Mandate M/273 requests a review of existing standards in the ICT field, an analysis of the needs of disabled and elderly persons, a plan of action to consider those needs and implementation of the plan. Mandate M/283 asks for a set of guidelines on how functionality and usability for disabled and elderly persons can be incorporated in all relevant standardisation work, a review of existing standards and a mechanism for ensuring the use of the guidelines.

Part 1 of Mandate M/273 was completed when an extensive report drawn up by a team of independent expert was submitted in May 2000 to the ICT Standards Board (set up by the three standardisation organisations and industry), covering ICT standards in areas such as mobile telecommunications, computers, smart home technologies, alarms etc. Agreement has not yet been reached on its concrete follow-up.

The European Union eEurope Action Plan will follow up on the two mandates. Two specific actions will review present standards and legislation, analyse the current situation, identify needs for action and promote the development and use of standards that will increase accessibility for persons with disabilities in the information society.

2.3.6.5. Centres of excellence

Several countries have established national centres in the field of technology and disability. The centres vary in size, competence and areas of responsibility. Some of the more common tasks are the following:

- collecting, compiling and disseminating information to persons with disabilities on assistive devices, service delivery systems and financial support for assistive technology;
- maintaining a database on assistive technology products;
- stimulating research and development by identifying the need for new developments, providing knowledge about the requirements, giving general advice on research and development plans and ideas or by financial support;
- testing and evaluating products and services for persons with disabilities;
- serving as an expert consultant in the field of technology, accessibility and disability to public authorities and others maintaining a high level of expertise in all areas involved in technology accessibility and disability;
- keeping a technology watch to identify important future developments with a potential impact on persons with disabilities;
- participating in standardisation work;
- participating in international exchange of information and knowledge and international collaboration.

Such centres have generally had considerable success in promoting and consolidating the field of technology, accessibility and disability. In a time of rapid development and when the impact of technology is seen everywhere, it is vital to have one or several points of reference and competence to turn to for information, knowledge and advice.

Creating an international network of such centres will increase efficiency and quality and help further develop the field.

2.3.6.6. Public procurement policies

Accessibility of products and services is going to be achieved more rapidly if the purchasing consumers require such features. Industry will always listen to and comply with the demands of strong buyers on the market. Governments and public authorities can play such a role in their procurement of goods and services for their operation.

The European project ACCENT has studied the possibilities to include requirements on accessibility for persons with disabilities in public procurement procedures and policies. Based on the outcome of the project, several recommendations can be made, such as:

- accessibility should be explicitly identified as an appropriate goal of public procurement policy;
- accessibility should be defined as primarily a technical issue that adds value to the technology, to be addressed as such in procurements;
- governments should ensure that accessibility is given priority attention in the context of World Trade Organisation or other bilateral agreements.

The Assistive Devices Industry Office (ADIO), Canada, has issued an “accessible procurement toolkit” for employers, procurement professionals and managers with purchasing authority, including advice on procurement and contracting in order to ensure that the product or service to be acquired will be accessible to the widest possible range of people. (<http://strategis.ic.gc.ca>)

Experiences from the United States may be very worthwhile to follow. Section 508 of the Rehabilitation Act requires all Federal agencies to purchase only equipment that is accessible to persons with disabilities. In December 2000, specific, detailed requirements for the equipment were established by the U.S. Access Board.

2.3.6.7. Evaluation

Given the fundamental importance of new technologies, it is considered necessary to provide for a specific body or bodies to evaluate progress in this field. The characteristics of such a body are not specified in this section. It could accordingly be a government or public authority, or an independent institution. This function could also be conferred to the body referred to in chapter 5.5.

The term “evaluation” refers to systems of national monitoring and not to any general measures to police the implementation of this resolution.

2.3.6.8. International co-operation

The goals of the resolution can in any case only be attained if sound law and policy is accompanied by good practice. This section invites countries to continue to draw on each other's experience. The transborder exchange of information and good practice it is proposing would contribute to that aim by developing relations and co-operation across national frontiers.

2.3.7. International follow-up

To enable the Council of Europe to follow the implementation of the provisions enshrined in this resolution it is recommended to establish a system of periodical reports. In order to ensure efficiency of this follow-up system, the resolution entrusts the Committee on the Rehabilitation and Integration of People with disabilities (CD-P-RR) with the examination of the reports. This machinery for the follow-up will make it possible to assemble and analyse a body of objective information while respecting to the full the specific competences of the member and observer states.

