

COMMISSION OF THE EUROPEAN COMMUNITIES

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PROPOSAL FOR A

COUNCIL DECISION

ON A COMMUNITY TECHNOLOGY INITIATIVE FOR

DISABLED AND ELDERLY PEOPLE (TIDE)

(1993 - 1994)

(Presented by the Commission)

EXPLANATORY MEMORANDUM

1. Background

One of the challenges for our society is to improve the quality of life for the very large number of people with disabilities and handicaps, due to impairment or ageing, by facilitating their independent living, promoting greater community/social integration, and enhancing their opportunities for communication, transportation, education and training, employment and leisure.

Today a major contribution to meeting this challenge can come from technological intervention, for example, by providing equal access to all citizens to telecommunications, information and control equipment. Unfortunately, technology as such does not necessarily solve the problem, on the contrary it can itself form a barrier and be a further cause of isolation and alienation. The Commission has been concerned for some time about this effect of existing technology and the inadequacy of efforts across Europe toward solutions to this problem. There are many reasons (social, economic, financial, legal, technological) for this inadequacy or lack of availability of proper technology, but the main ones relate to the structure of both the market and the rehabilitation technology industry.

Activities in the field of technology for the disabled and elderly have been going on at national level, in Community research and technology development programmes like ESPRIT, RACE, TELEMATICS, BIOMED I, BRITE/EURAM II and action programmes like HELIOS, HORIZON and in concerted actions such as COST 219. COST 219 activities are very limited in budget, ESPRIT, RACE, etc very limited in scope in this field and HELIOS and HORIZON do not deal with technological promotion. At the national level the current activities are insufficient. Community action is needed.

A first step in this direction was provided by the TIDE (Technology Initiative for Disabled and Elderly people) pilot action^(a). This action started in 1991 with a contribution from the Community budget of 8 MECUS followed by a contribution of 10 MECUS in 1992. The present proposal for a Community action in the field of the development and application of technology for disabled and elderly people builds on the results of the TIDE pilot action. It covers, within the potentially huge rehabilitation technology sector, the fields of information technology, telecommunications, teleinformatics, robotics and environmental control.

2. The aim and rationale of the present proposal

In the European Community today some 60 to 80 million people are disabled or elderly and the population is growing older, with people living longer and the numbers of younger people falling. The proportion of people with disability and/or frailty due to age in the population will continue to climb across the Community. Both the incidence of disability and the per capita cost of care rise steeply with advancing age. Today, it is estimated that nearly 70% of persons with disabilities are aged 60 or over. The number of people over 60 is projected to rise to one in four of the population by the year 2020. The cost of health care will rise even more steeply. The burden of caring will fall, both physically and financially on an ever smaller proportion of the population. Ways of reducing the burden of care and improving the quality of life for our elderly and disabled people through independent living are urgently needed.

Rehabilitation technology not only provides means for independent living but can help reduce the cost of care. Rehabilitation technology is applied technology provided directly to elderly and disabled people to enable them to live independently and participate in the everyday social and economic activities of the community. The use of this technology to enable people with disabilities to gain access to education and to contribute to society through working is both cost-effective and socially desirable.

^(a) See TIDE pilot action, The Synopses (March 1992)

Rehabilitation technology addresses a market sector defined by the needs of its consumers; - elderly and disabled people. However, there is no cohesion between the different industrial sectors (Eg between SMEs and large enterprises) nor a coherent structure to the market in Europe today. Particularly in the advanced technology sectors, the majority of companies are Small to Medium sized Enterprises (SMEs) operating in different though potentially related fields, addressing regional or national markets. The European rehabilitation technology market is extremely fragmented^(b), by technical area and sector, by the different national regulations and standards, by different cultural norms, by different impairments (Eg. sight, hearing, mobility, cognitive). Fragmentation of the market results in high prices for technological products and keeps down the size of production, limiting the resources needed to innovate in a field that is becoming increasingly technologically sophisticated, as well as limiting the size of the companies involved.

The completion of the internal market makes the rehabilitation technology market more attractive to competition from the US, where affirmative legislation on equal opportunities has produced a vigorous Rehabilitation Technology industry. At the same time completion of the internal market offers a historic opportunity to stimulate the creation of an efficient and coherent rehabilitation technology market in Europe. However, there are technical obstacles to be overcome in developing this market including the lack of standardisation.

The Commission, in consultation with experts from industry, universities and user organisations in the Member States, has concluded that using advanced technology to provide equal access to telecommunications, information and control systems for all people is both a social goal supporting the full integration and equal rights for all European citizens as well as, desirable from an industrial and economic viewpoint. The fragmentation of the European market, the scarcity of resources across the Community, particularly the scarcity of human resources, and the social and economic imperatives require a collaborative action at Community level, in conformity with the principle of subsidiarity. As a matter of fact, the inadequate dimensions of national markets and their extreme fragmentation provide a justification of Community action from the point of view of subsidiarity in terms of scale, while the arguments on coordination of effort at industrial level and lack of technological development and standardization, provide justification of Community action in terms of the effect of stimulation of the internal market in Rehabilitation Technology. The TIDE pilot action (1991 - 92) has demonstrated that the sector actors are capable and indeed eager to respond to the challenge.

3. Conclusion

The Commission has included research and development in the area of rehabilitation technology in its proposals for the 4th Framework Programme (1994 - 1998)^(c). However, the results obtained during the TIDE pilot phase (1991 - 1992) have demonstrated an urgent need for an initiative based on those results. Action is needed now, in order to promote further cooperation between industries in the area of rehabilitation technology, and not to lose the impetus created nor miss the window of opportunity that the completion of the internal market represents. The present proposal is for a two year Community action (1993 - 1994) to stimulate application and promotion in the area of rehabilitation technology. The Community action will be implemented as a general rule by shared-cost projects with a small number of fully funded direct actions. Without prejudice to the amounts engaged for the pilot phase of TIDE, the amount deemed necessary for Community financial participation in the TIDE initiative is ECU 35 million, of which ECU 15 million have been allocated in the budget of the European Communities in 1993 and ECU 20 million are deemed necessary in 1994.

A committee should be set up to assist the Commission in carrying out the responsibilities conferred on it by this Decision.

(b) See TIDE 2nd phase Workplan (draft, 14 February 1992) for details.

(c) See COM(92) 406, working document of the Commission concerning the Fourth Framework Programme of Community activities in the field of Research and Technological Development, Core Theme 18; "Science and Technology for the struggle against Social Exclusion".

**PROPOSAL FOR A
COUNCIL DECISION**

**on a community Technology Initiative for
Disabled and Elderly people (TIDE)
(1993 - 1994)**

The Council of the European Communities,

Having regard to the Treaty establishing the European Economic Community and in particular Article 235 thereof;

Having regard to the proposal from the Commission;

Having regard to the opinion of the European Parliament⁽¹⁾;

Having regard to the opinion of the Economic and Social Committee⁽²⁾;

Whereas, the Community has as its task, *inter alia*, to promote a harmonious development of economic activities and a continuous and balanced expansion throughout the Community: whereas pursuant to Article 130a of the Treaty in order to promote its overall harmonious development the Community is to develop and pursue its actions leading to the strengthening of its economic and social cohesion;

Whereas the resolution of the Council and of the representatives of the Governments of the Member States, meeting within the Council, of 21 December 1981⁽³⁾ on the social integration of handicapped people stresses the importance of promoting the development and availability of technical aids, the pooling of information and experience in the field and the application of new

(1) OJ.

(2) OJ.

(3) OJ. No C 347, 31.12.1981

technologies, so as to facilitate the communication, mobility and employment of handicapped people;

Whereas the Commission has carried out the Technology Initiative for Disabled and Elderly people (TIDE) pilot action⁽⁴⁾ to provide data on the necessity of launching a Community action in this field;

Whereas the European Parliament, in its resolution of 17th September 1992⁽⁵⁾, called on the Community to launch a programme for 1993 and 1994 based on the results of the pilot phase of TIDE and further to allocate sufficient resources for such a programme;

Whereas 10 to 15% of European people experience the handicapping effects of disability in their daily living and consequently do not enjoy an equal level of personal and socio-economic opportunity;

Whereas old people and particularly very old people constitute a very high proportion of people with disabilities and the proportion of these people will increase substantially in the Community population in the future, with a resulting large increase in the overall cost of care;

Whereas new technologies can offer many opportunities to assist disabled and old people to live more independently, satisfying their aspirations, furthering social and economic cohesion, and helping to contain the cost of care, thereby also greatly benefiting social security systems by reducing the need for expensive residential and nursing care;

Whereas the current market for this technology to assist independent living and socio-economic integration is very fragmented, by technical area, by national regulation, by culture and by impairment, leading to poor provision of technological solutions across the Community and high prices to individuals and funding agencies;

Whereas greater and convergent efforts are required to develop further coherence and cost effectiveness in the market for rehabilitation technology, both supporting the interconnection of rehabilitation devices with mainstream technology devices and progressively improving access to mainstream technology for disabled and elderly citizens;

Whereas the national rehabilitation technology markets with their extreme fragmentation do not provide the needed possibilities of economy of scale and action at the level of the Member States

⁽⁴⁾ OJ. No C 76, 21.3.1991

⁽⁵⁾ OJ. No C 284, 2.11.1992

is insufficient to promote the convergence necessary to obtain the internal market in Rehabilitation technology and would involve unnecessary duplication of efforts;

Whereas this action will result in much greater availability of rehabilitation technology across the Community to disabled and elderly people and greater access to mainstream technology for these groups:

Whereas action at the Community level, in conformity with the principle of subsidiarity, is needed to bring together the scarce and fragmented expertise across the Member States to formulate coordinated, multidisciplinary activities in order to assure the socio-economic integration of disabled and elderly people through technology and to improve the basis for the international competitiveness of the European rehabilitation technology industry;

Whereas the inadequate dimensions of national markets and their extreme fragmentation provide a justification for Community action from the point of view of subsidiarity in terms of scale and the arguments on coordination of effort at industrial level and lack of technological development and standardization, provide justification for Community action in terms of the effect of stimulation of the internal market in Rehabilitation Technology.

Whereas the mentioned objectives can therefore be better achieved by coordinated action at Community level.

Whereas a committee should be set up to assist the Commission in carrying out the responsibilities conferred on it by this Decision.

Whereas, the Treaty does not provide the necessary powers other than those of Article 235, to undertake the action concerned,

HAS DECIDED AS FOLLOWS:

Article 1

1. A Community action for Rehabilitation Technology for disabled and elderly people, referred to as the "TIDE (Technology Initiative for Disabled and Elderly people) initiative" is adopted for a period of two years commencing on the date of adoption of this decision .

2. A summary of the Community action and its implementation procedures is set out in the Annex which forms an integral part of this Decision.

Article 2

The aim of this Community action shall be as follows; to stimulate the creation of an internal market in rehabilitation technology in Europe to facilitate the socio - economic integration of disabled and elderly people. This aim will be achieved through the promotion of technology application in the area of rehabilitation technology and the stimulation of the cooperation between industries in this area.

Article 3

1. For the purpose of the Community action this rehabilitation technology shall be defined as technology provided for the use of elderly and disabled people so as to enable them to live independently and be more integrated in the socio-economic life of the community.

2. For the purpose of the Community action, 'disabled people' or 'people with disability' means all persons with all kinds of disabilities, however minor, resulting from impairments as listed in the World Health Organisation's International Classification of Impairments, Disabilities and Handicaps. The elderly population, because of increasing age, must expect to begin to suffer from mild sensory or motor handicaps, or from illnesses which restrict their lives.

Article 4

An evaluation of the results achieved shall be conducted by the Commission, which shall report thereon to the Council and the Parliament.

The above mentioned reports shall be established having regard to the objectives set out in the Annex to this Decision.

Article 5

1. The Commission shall be responsible for the implementation of the TIDE action.

2. A Committee of an advisory nature, hereinafter referred to as 'The Committee', shall be set up to assist the Commission. It shall be composed of the representatives of the Member States and chaired by the representative of the Commission.

The representative of the Commission shall submit to the committee a draft of the decisions to be taken. The committee shall deliver its opinion on the draft, within a time limit which the chairman may lay down according to the urgency of the matter, if necessary by taking a vote.

The opinion shall be recorded in the committee minutes; in addition, each Member State shall have the right to ask to have its position recorded in the minutes.

The Commission shall take the utmost account of the opinion delivered by the committee. It shall inform the committee of the manner in which its opinion has been taken into account.

3. With respect to the implementation of the action, the procedure referred to in paragraph 2 shall apply to the following points:

- priorities for the action plan set out in Annex I,
- content of calls for tender ,
- criteria for selecting projects and contractors,
- appropriations for priorities,
- evaluation of projects,
- derogations from the second subparagraph of Article 7,
- evaluation of the Community action for the purposes of drawing up the report provided for in Article 4.

4. The Commission will take care of the coherency and complementarity of the activities within TIDE and with other Community programmes and actions.

Article 6

1. With regard to the activities provided for in Article 1, the Member States and the Commission shall exchange all appropriate information to which they have access and which they are free to disclose concerning the areas covered by this decision, whether or not planned or carried out under their authority.

2. The information shall be exchanged in accordance with a procedure to be defined by the Commission and will be treated as confidential at the supplier's request.

Article 7

1. The Community's financial contribution shall be adapted to the characteristics of the specific case. It may take the form of a direct or indirect subsidy, an advance on own capital or any other form.

2. The Commission shall, as a general rule, implement the TIDE action by way of calls for proposals, published where appropriate in *the Official Journal of the European Communities*.

3. In implementing the action, the Commission shall also make use of the instruments and bodies promoted by it within the framework of other Community policies, in particular regional policy, in order to reinforce the efficiency of the action and overall coherence.

4. The Commission's co-contractors must, as a general rule, except in the case of studies and services provided for the Commission, bear the major cost of financing, and at least 50% of the total cost. However, in exceptional cases, and in accordance with the procedure in Article 5, a Community contribution in excess of that percentage shall not be excluded, in particular for the purposes of taking account of the specific difficulties encountered by regions of lagging development or in industrial decline, in participating in transnational activities.

Projects eligible, other than studies and services, must involve participation of at least two participants from different Member States.

ANNEX I

SUMMARY OF THE ACTION PLAN AND ITS IMPLEMENTATION PROCEDURES

1. Objectives

The TIDE Community action is a technology promotion and application initiative with the specific main objective of:

'stimulating the creation of an internal market in rehabilitation technology in Europe to facilitate the socio - economic integration of disabled and elderly people'.

This will be achieved through the collaborative activities of multidisciplinary teams.. The detailed objectives of those activities are:

- Understanding, making clear and adapting technology to respond to the needs of the user groups.
- Developing new applications for Rehabilitation Technology such as intelligent houses for elderly people and advanced hearing aids.
- Encouraging innovation and technology transfer in rehabilitation technology.
- Accelerating the development of technical norms and standards.

2. Scope of measures to encourage the emergence of the internal market in rehabilitation technology

The scope of the TIDE action is described by the four action lines each with their respective work areas. These are⁽⁶⁾:

1. Access to Communications and Information Technology and support for interpersonal communication: Access to and interaction with multimedia environments; Technology to facilitate personal communications; accessible services and applications.
2. Environmental Control Technologies for daily living: User and System Interfaces; Robotics systems; Mobility and Transport control systems.
3. Restoration and Enhancement of Motor and Cognitive Functions: IT for individualised plans for assessment, rehabilitation and maintenance in the community; Technology for rehabilitation and maintenance of motor functions; Substitution devices for motor functions.
4. Integrated Systems Technologies: Smart environments and systems; Orientation and navigation systems for mobility; Working environments for disabled and elderly people.

The major activity will be a set of technology promotion and application projects. All projects are expected to participate in the TIDE action horizontal activities. These include consensus, market study, cost benefit and effectiveness and standardisation activities. Horizontal activities will cover a solution framework, a cost-benefit model, a market factors model and information activities. A set of common responsibilities will be placed on the individual projects, largely consisting of validating the models provided and providing data. Projects will also be expected to provide for the dissemination and exploitation of their own results.

⁽⁶⁾ See TIDE 2nd phase Workplan (draft, 14 February 1992) for details of action lines, work areas, etc.

The work to be carried out conforms to the basic principles of market and customer focused technology promotion which in TIDE are explicitly elaborated as five interlinked principles. They are;

- **User-focused principle;** Users are to be involved in projects. Projects should deliver statements of end user requirements and make statements of anticipated benefits of the technological solutions to the end users.
- **Market Oriented principle;** Projects will take advantage of the opportunities presented by the completion of the internal market and will lead to the development of technology based prototype products and services.
- **Innovation and Technology Adaptation principle:** Emphasis is to be on innovation and the adaptation and advanced application of new technology and it's integration with appropriate international standards.
- **Multi-disciplinary approach principle:** Projects will harness the scarce scientific, technical and commercial resources in a field which requires social, economic, educational and clinical expertise as well as, technological expertise.
- **Technology Verification principle;** The technology applications are to be evaluated with real or potential consumers in field trials or by using scenarios.

3. The TIDE action management

The execution of the TIDE action must include a large contribution from the telecommunications, information and rehabilitation technology industries. Small and medium enterprises, research institutes, user and service organisations, universities and companies in fields such as equipment, systems engineering and materials will be involved in close partnership with companies active in the Rehabilitation Technology market.

Every project involves cross-border collaboration within the Community. A minimum requirement is that each project consortium should involve at least two independent partners in the Community not established in the same Member State. At least two of the partners should be industrial undertakings. Participation is by cost-shared contract with the Commission. Contracts are awarded following an open call for proposals and independent evaluation of proposals. Calls for Proposals, referring to this action plan, will be widely distributed and published in the Official Journal of the European Communities. Participants are expected to bear at least 50% of their total expenses, but own the full rights to new information and patents arising from the work.

Where framework agreements for scientific and technical cooperation between non member European countries and the European Communities have been concluded, organisations and undertakings established in these countries may, under appropriate conditions, to be defined by the Commission, become partners in a project undertaken within this Community action.

ANNEX II

FINANCIAL STATEMENT

1. BUDGET TITLE

TIDE (Socio-economic integration of the disabled and the elderly)

2. BUDGET ARTICLE

- B6 - 8108

3. LEGAL BASIS

Article 235 of the Treaty establishing the European Economic Community .

4. ACTION DESCRIPTION

4.1. Objectives

The main objective of the TIDE action is; *'stimulating the creation of an internal market in rehabilitation technology in Europe to facilitate the socio - economic integration of disabled and elderly people'*. TIDE's contribution to this objective is to be achieved through the collaborative development of high technology prototype products and services.

4.2. Duration

1993 - 1994

4.3. Sector actors

- Information Technology, Telecommunications and Control Equipment suppliers.
- Rehabilitation Technology industry.
- Rehabilitation Centres.
- Research Centres and Universities.
- user organisations of disabled and elderly people.

There are between 60 and 80 million European citizens who are either elderly or disabled. Of these some 26 to 30 million are considered to require rehabilitation technology devices and services. These people are the indirect beneficiaries of the greater availability and lower unit prices for rehabilitation technology which should result from the present action.

5. CLASSIFICATION OF EXPENDITURE

DNO;CD

6. TYPE OF EXPENDITURE

The action is essentially implemented as shared cost, technology promotion and application projects (92% of contracts) and some direct actions (8% of contracts). Execution of the work will be undertaken by transnational teams, containing at least two industrial partners from different Member States usually involving SMEs, as well as, research institutes and/or universities.

Community co-financing to the technology promotion and application projects will not normally exceed 50% of full economic cost. Universities and charities may however opt for 100% of marginal cost.

Direct actions will in principle be funded 100%.

7. FINANCIAL IMPLICATIONS FOR INTERVENTION APPROPRIATIONS

35 Million ECU

7.1 Total cost over duration: (2 years: 1993 - 1994)

Indicative breakdown for the action implementation, based on extensive consultation of the sector actors and experience from the TIDE pilot phase, is given below:

Projects (shared cost actions)	MECU
1. Access to Communications and Information Technology and support for interpersonal communication	10.1
2. Control Technologies	5.6
3. Restoration and Enhancement of Function	2.3
4. Integrated Systems Technologies	8.8
Horizontal activities (direct actions)	2.2
Staff	2.2
Administration	3.8

7.2. a) Commitment Schedule

	1993	1994	1995	1996	TOTAL
Contracts	13.6	15.4			29
Staff Costs	0	2.2			2.2
Admin Costs	1.4	2.4			3.8
TOTAL	15	20⁽⁷⁾			35

⁽⁷⁾ This figure is entirely indicative given that the level of appropriations will be determined by the annual budget procedure within the constraints imposed by the ceilings of the current and any future financial perspectives.

7.2. b) Payment Appropriations

	1993	1994	1995	1996	TOTAL
Contracts	5	11	9	4	29
Staff	0	2.2			2.2
Admin Costs	1.4	2.4			3.8
TOTAL	6.4	15.6	9	4	35

7.3. Method of calculation

a) Expenditure by contract

This expenditure covers the Community's financial contribution to the technology promotion and application carried out under shared-cost contracts to be concluded with industry, universities and the research institutes of the Member States.

b) Operating expenditure

This expenditure covers administrative costs (the committee which supports the Commission in the execution of the action, working party meetings, document distribution and dissemination of information), auxiliary staff, consultants, use of data processing and telecommunications facilities and other supporting activities.

c) Financing of expenditure

The appropriations required to cover the Community's contribution to this action are to be entered in the Community's budgets for 1993 and 1994. The Community budget for 1993 already includes 15 MECU for this purpose.

8. TYPE OF ANTI FRAUD CONTROLS FORESEEN

- Administrative control by the Directorate-General for Financial Control as regards budget implementation.
- Right of audit and review by the Directorate General for Information Technologies and Industries, and Telecommunications.
- Control by Commission project officers responsible for the projects
- Audits by the Court of Auditors in accordance with the provision of the Treaty.

9. PERSONNEL

The requirements for this action have been estimated on the basis of costs of statutory required R&D staff of:

5	Statutory officials - category A
2	Statutory officials - category B
3	Statutory officials - category C

Staff costs are calculated on the basis of indicative 1994 rates multiplied by a factor of 6/12 to allow for the delay caused by recruitment and getting the people in post:

A staff	120 KECU
B staff	75 KECU
C staff	46 KECU

10. ELEMENTS OF ANALYSIS OF COST EFFECTIVENESS

10.1. Objectives and coherence with the financial programme

The TIDE action is a technology promotion and application initiative with the specific main objective of:

'stimulating the creation of an internal market in rehabilitation technology in Europe to facilitate the socio - economic integration of disabled and elderly people'.

This will be achieved through the collaborative activities of multidisciplinary teams. The detailed objectives of those activities are :- Understanding, making clear and adapting technology to respond to the needs of the user groups. For example, a TIDE handbook of user requirements and technological solutions will be published. (horizontal activities)

- Developing new Rehabilitation Technology applications such as intelligent houses for elderly people and advanced hearing aids. (projects) More than 50 new advanced technology prototype devices and services are expected.
- Encouraging innovation and technology transfer in rehabilitation technology. New models of cost effectiveness of deploying rehabilitation technology in the field and modelling of market and distribution factors in the European rehabilitation technology market will be developed. (horizontal activities)
- Accelerating the development of technical norms and standards. Rehabilitation technologists will participate in standards bodies such as ETSI and technical standards submissions will be put forward. (horizontal activities)

10.2. Justification of the action

The increasing impact of disability and ageing on the lives of European citizens is creating a strong demand for rehabilitation technology applications and services. These are needed to guarantee equal opportunity and participation in the socio-economic fabric of the Community. In addition, these rehabilitation technology applications could contribute to containing the growing costs of care. The actors in this market (industry, research institutes and user organisations) lack the structures and organisation to respond to the challenge of the internal market in a coordinated and cost-effective way. The rehabilitation technology markets are small and fragmented, technological developments are insufficient and overlapping, user requirements are not well defined and there is a lack of standardisation in the field.

The arguments on inadequate dimensions of national markets and their extreme fragmentation provide a justification of Community action on subsidiarity in terms of scale. The arguments on coordination of effort at industrial level and lack of technological development and standardization, provide justification of Community action in terms of the effect of stimulation of the internal market in Rehabilitation Technology. Furthermore, the actions launched in the context of the TIDE Pilot Phase have clearly shown that there are

insufficient, uncoordinated activities in the Member States in the field of Rehabilitation Technology. Also the Rehabilitation Technology market and industry are in their infancy and require financial stimulus and pan-European cooperation to develop coherently. Community regulations would be premature. The Community action will be a catalyst to bring forward a critical mass of investment and cooperation and thus will contribute to future regulation to be issued in this field.

10.3. Follow up and evaluation of the action

All technology promotion and application projects are required to submit interim and final reports, as well as, demonstrate their prototypes. In addition all projects are required to submit statements of user requirements, results of prototype testing with users and market statements. It is likely that some prototypes will undergo extensive testing in rehabilitation centres and will thereby also contribute to establishing new certification procedures and standards.

The action will be fine tuned in the light of the interim reports and the results of project reviews (every six months).

The action will be formally evaluated against the above objectives by the Commission with the assistance of external experts.

EVALUATION OF THE IMPACT ON SMALL AND MEDIUM SIZED ENTERPRISES (SMEs) AND EMPLOYMENT STATEMENT

The action has, as a general objective, the development and application of advanced technology for disabled and elderly people, and the stimulation of strategic partnerships and research/industry groupings, appropriate to allow the European industry (telecommunication and information industries, robotics and control system industry, technical assistive aids industry, etc), to meet the challenge of its competitors on the world market.

The pilot phase action showed that SMEs are eager to cooperate in collaborative developments in this area. SMEs constituted some 80% of the enterprises taking part in the pilot phase. Collaborative developments offers SMEs good opportunities not only to acquire new technology but also to gain knowledge of the business environment in other Member States. These factors are important to conducting effective business in the internal market. For small and medium companies collaborative, pre-competitive work offers a very good way of obtaining these benefits. SMEs lack knowledge of markets, knowledge of languages and the administrative and financial resources to acquire new technology and expand into new markets. In addition, the more high technology the basis for new products, frequently the longer lead times and the more money has to be invested in new products and processes. This makes it difficult, particularly for the many very small companies active in this industrial sector.

TIDE projects lend themselves particularly well to the promotion of cooperation between research centres, SMEs and the communication and information industry. Amongst the technological promotion activities to be developed by these sorts of groupings, one can cite examples such as computer developments for language rehabilitation, intelligent houses for elderly people, and advanced graphics transducers for the blind. Mutually beneficial relationships between the sector actors and appropriate technology transfer and development consortia need to develop if European industry is to take advantage of the opportunity presented by the internal market.

The SMEs can derive numerous advantages from their participation. One major benefit is access to the results of basic research originating from research laboratories, universities and the European high-technology industry. Another benefit to SMEs is the possibility of their updating their own technology and know-how to solve critical problems. There are sometimes important spin-offs from the innovative high-technology solutions developed for the very demanding elderly and disabled market, which are then employed in wider more conventional sectors. These include such examples as the ball point pen, originally designed for people with motoric dysfunction, the cassette tape recorder first developed for the blind, early remote control devices, machine shorthand transcribers etc. There is also the major possibility of gaining knowledge and contacts to address a very important high technology market across Europe.

Continual updating of high technology is the key to maintaining the current level of employment in the Rehabilitation Technology industry and creating new jobs. SMEs, in particular, are threatened by the opportunity that US industry, sustained by a vigorous, homogeneous home market sees in the completion of the internal market in Europe. Affirmative legislation in the US (Americans with Disabilities Act, 1990) has created a particularly strong, high technology industrial base. The completion of the internal market, particularly the mutual recognition of certification makes the European RT market attractive to US industry. European industry, with its many SMEs, needs a action of technology transfer, the development of appropriate norms and standards for interconnection, a greater, transparent understanding of user requirements and the stimulus to create appropriate coalitions and consortia amongst sector actors in order to survive. Furthermore, the new technological tools and services are critical to enabling the employment of disabled people, some 80% of whom are unemployed.

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