Creating Conditions for Independent Living
The European Day of People with Disabilities 2009
4th of December 2009

ICT Assistive Technology in Europe
Carmen Pastor (TECNALIA-Health & Quality of Life)
44.6 million— one in six –persons aged between 16 and 64 report a long standing health problem or disability i.e. at least 16% of the overall EU working age population. Among young people (16-25), the figure stands at 7,3%.\(^1\)

The share of people aged 65 years or over in the total population is projected to increase from 17.1% to 30.0% and the number is projected to rise from 84.6 million in 2008 to 151.5 million in 2060.\(^2\)

Many assistive technology devices are allocated to the elderly and the needs will not be smaller with an aging population. For example, in Sweden, around 70% of assistive devices prescribed go to people aged over 65.\(^3\)

\(^1\) “Men and women with disabilities in the EU”, Applica, CESEP and Alphametrics, 2007
To carry out an **in-depth analysis of the European Assistive Technology (AT) Industry related to ICT products and services and their accessibility**.

Principal questions addressed in this study:
- How the AT ICT industry functions
- Recommendations on how the AT ICT industry can network and cooperate more effectively on an EU level

The **conclusions and recommendations** of this study will be of use for the preparation of policy actions and recommendations by the European Commission in the fields of e-Inclusion, e-Accessibility and independent living

This project began in April 2007 and was completed in September 2008.

**Project Partners:** robotiker tecnalia  AAATE  IBV

*The views and findings expressed in this presentation express those of the project team contracted to conduct this project and do not necessarily reflect the views of the European Commission.*
Due to the extent of the AT ICT industry in terms of the number of products (estimated at over 20,000 in Europe) the five product groups of AT ICT products which have been selected to focus this study are the following:

**Hearing Aids.** This product group has been selected because it represents one of the biggest (in terms of expenditure), oldest and most widely used forms of assistive technology.

**Braille Readers.** This group has been included because Braille readers exemplify an AT product without obvious mainstream potential, i.e., an AT product that is likely to stay an AT product.

**Environmental Control Systems.** This is a particularly dynamic field with great mainstreaming potential and where developments are evolving from various directions.

**Software.** This has been selected because it is a product area driven largely by developments in the mainstream market. Also it is a product group where Language is an important issue because it serves as an important barrier between the different country markets of the EU AT ICT industry.

**Communication Devices.** These solutions for disabled users are very specific, individual solutions given that in many cases, the exact communication problems that a disable end-user has are quite unique. However, these products also have great potential for mainstream applications (i.e., voice to text).
METHODOLOGY EMPLOYED (II)

Database analysis
EASTIN, HANDICAT, other national databases where available.

Desk research
- Towards a Common Language for Functioning, Disability and Health (ICF), WHO
- Consensus Creation and Awareness for R&D Activities in Technology for Disabled & Elderly People (CORE), TIDE Project.
- Horizontal European Activities in Rehabilitation Technology (HEART), TIDE Study.
- Study in Technology Trends and Future Perspectives within Assistive Technology, European Commission.
- Company reports

Activities as a part of industry events
REHACARE 2007 18th International trade fair and congress rehabilitation-care-prevention-integration
AAATE 2007 Workshop at the 9th European Conference for the Advancement of Assistive Technology
ICCHP 2008 Workshop at the 11th International Conference on Computers Helping People with Special Needs
WCC 2008 Presentation at World Computer Congress

Interviews with companies from the AT ICT sector
- Over 30 interviews have been realised with companies and experts from the AT ICT field
- Over 50 responses from questionnaire sent to companies in the European AT ICT industry
A particular need is identified (i.e., hearing loss)

A specific, essentially “homemade”, solution developed in response

The solution has a certain appeal to others looking for similar functionality (i.e., through end-user support groups, education and training centres, etc.)

A company is born based on solving a need, and not necessarily on the profitability parameters of the business model.

**SOME ILLUSTRATIVE EXAMPLES**

**Optelec Tieman Group** began producing a video magnifier for the wife of a very good customer

The first line of **Siemens Hearing Instruments**, initially intended for hearing-impaired employees and family members

**BAUM Retec AG** began as one-man engineering office with the aim to provide electronic aids for blind and low vision people

**B&J Adaptaciones S.L.** founded by an architect who suffers from Multiple Sclerosis and his brother.
Interviews, questionnaires and research confirm that **power lies with the Service Delivery Systems.** 90% of companies surveyed agreed that at present, the service provider function (assessment, product selection & financing) has the greatest relative power in the European AT ICT value chain.
Assistive Technology up until now: SERVICE DELIVERY (I)

The reality that service delivery systems and national procurement systems have the largest level of relative power in the industry supply chain holds back the industry because:

- The different rules and procedures by country and by product type mean that companies cannot achieve important levels of economies of scale.
- Additional costs have to be incurred to develop solutions for attending to the different national markets (i.e., decentralised distribution networks, specific product adaptations to individual markets).

Different models: Social, Medical and Consumer + Different languages

<table>
<thead>
<tr>
<th>HEARING AIDS</th>
<th>BRAILLE READERS</th>
<th>APPLS FOR VOICE COMMUNICATION</th>
<th>SOFTWARE FOR COMMUNICATION</th>
<th>ENVIRONMENTAL CONTROL SYSTEMS</th>
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<td>AUSTRIA</td>
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<td>UK</td>
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Information provided by national contact points of AAATE, own elaboration.

Results in a COMPLEX SITUATION FOR COMPANIES LOOKING TO SELL TO DIFFERENT MARKETS (products and geography)
## Assistive Technology up until now: SERVICE DELIVERY (II)

### SMES AND THEIR AT PRODUCT SOLUTIONS

<table>
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<tr>
<th>NATIONAL SERVICE DELIVERY SYSTEMS AND THEIR COMPONENT PARTS</th>
<th>SOLUTIONS THAT ARE REALISTICALLY MADE AVAILABLE TO DISABLED END-USERS</th>
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<tbody>
<tr>
<td>PROCUREMENT MODEL</td>
<td>FINANCING POLICY</td>
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<td>Medical, Social, Consumer</td>
<td>100%, partial, conditions, ...</td>
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**KEY PROBLEMS WITH THIS SITUATION**

1. End-users have a reduced choice of solutions
2. Companies have a reduced market size (sales and profits)
The fragmentation caused by different national systems and policies makes an already limited market (accessibility products), even smaller.

In addition, companies have to bear the costs of building and maintaining an extensive decentralised distribution network. Such a network is costly to build and maintain, and also ends up being a type of barrier to manufacturer’s having direct knowledge of different markets, including the specific needs and requirements of these markets.

80% of questionnaire respondents agree that maintaining a European-wide distribution network represents an important cost for European Assistive Technology ICT companies.
There are many relevant players in the AT ICT industry in Europe, including some which are not a formal part of the value chain (i.e., the European Commission) but which have an indirect role, for example in opinion setting.
One useful way to overcome the relative disadvantage of being a small or micro firm is through networking.\(^1,2\) However, in terms of the situation among industry players in AT ICT, there is currently no one organisation that groups together all Assistive Technology at the European level.

In the ICT industry there does exist a powerful industry organisation, European Information & Communications Technology Industry Association (EICTA) which has 40 national associations from 28 European Countries and approximately 100 corporate members (virtually all of whom are multinationals).

And, within specific assistive technology product areas, hearing instruments are one of the most formally organised groups. However, the smaller assistive technology product groups (communication devices), lack virtually any type of formal organisation, especially at the European level.

**EICTA:** 40 national associations representing 10,000 companies.

**Hear-it-org:** Industry sponsored website directed towards end-users to educate and promote the use of hearing instruments.

**European Software Association:** Represents European software industry to policy makers at European level.

**Telecare Services Association:** Representative body for telecare industry in the UK.

**ATIA:** Assistive Technology Industry Association (USA).

*The industry is composed of many actors, but there is currently no one organisation that groups together all Assistive Technology at the European level.*
The degree of fragmentation in AT ICT in general is high, driven largely by the unique, national-level or regional level service delivery systems that minimise the ability for companies to realise significant economies of scale. However, the level of fragmentation and consolidation is also dependent on the type of product, some which permit a greater level of economies of scale than others.
72% agree that the effect of the Mainstreaming of Assistive Technology products will have an important effect on the European Assistive Technology ICT industry. Also that new companies will enter the Assistive Technology ICT industry via new, mainstream solutions (76% agree).

86% agree that Mainstream solutions will not be a serious threat to the Assistive Technology ICT industry because some specific Assistive Technology products will always need to exist (i.e., not everything that is currently AT ICT will be mainstreamed).

69% agree that Mainstream solutions will not be a serious threat to the Assistive Technology ICT industry because specific AT product solutions are superior in quality and functionality to mainstream solutions.

Industry agrees that mainstream products will have an impact on national service provider systems. 69% of respondents agreed that Mainstream solutions will be less likely to be financed by national service provider systems.

From AT companies’ perspective, the main reason mentioned for using Universal Design as a design concept were to increase market size by developing products that can be used by other markets, such as the elderly or other types of disabled users.

AT ICT companies recognise the importance that mainstreaming will have on the industry. However, they are not alarmed that this will signify the end of AT product and service market.
87% of companies agree that the lack of knowledge by the marketplace of the types of solutions available is an important barrier to the development of their business.

Via product databases and similar resources, there is a growing awareness among end-users as to possible solutions that exist outside of their service provider systems. Such an increase in the level of available information for end-users should help the AT ICT industry better market their products and services.

Knowledge about possible product solutions does not necessarily mean that disabled end-users will bypass their national service provider systems in the event that the system does not carry or cover the sought after product. However, at a minimum it is likely that end-users will be more aware, and will be more likely to ask about different solutions, thus taking a more active role in the selection of their AT ICT solutions.
These demographic shifts are going to be an important driver behind increases in demand, as well as increases, or changes in the types of demands for more accessible products, including some forms of AT ICT.

How countries are responding: Trend toward a Consumer Model.

This should result in less formal public structure in determining product solutions for end-users, and instead, more power passes to end-users via their being given personal budgets to decide what product solution to buy. This free market trend is essentially cost driven, as well as being supported by the idea of end-users having more empowerment in their health decisions.

Industry also recognizes the cost pressures that national service provider systems are facing. 90% of company respondents agreed that national service provider systems are increasingly cost-based, as opposed to being based on offering the widest number of AT ICT product to disabled end-users.

83% of respondents agree that the assessment and selection of different product solutions should be the right and responsibility of the disabled end-user, and not of the national service provider systems.

62% agree that European AT ICT companies are well-prepared to operate in an industry where disabled end-users take increasing direct responsibility for their product solutions.
LOOKING AHEAD: HOW TO BEST STRUCTURE THE EU AT ICT INDUSTRY

70% of respondents agree that the European Assistive Technology ICT industry needs an organisation that represents its interests in Brussels.

The majority view (66%) is that the organisation should be a free-standing, newly established entity.

The scope should be AT ICT:

66% agree that such an organisation should include only Assistive Technology ICT and not the AT industry as a whole (i.e., mobility products, etc.)

73% agree that the main challenges and opportunities that the AT ICT industry face are quite special, and in general not the same as those experienced by other areas with the entire AT industry.

The main functions that such an organisation should realise are:

- NETWORKING between the stakeholders in the Assistive Technology value chain (industry, R&D, end-users, national service providers, etc).
- KNOWLEDGE EXCHANGE to enhance professional development, marketing and technical information.
- POLICY LOBBY to the extent that this is possible at the EU level.

These functions largely coincide with those already carried out by ATIA. To best take advantage of possible lessons learned from ATIA that could be applied to an EU association, it is recommended that the start-up be done in coordination with ATIA.

Another important voice is the AAATE. This association has recently voted to change its charter to allow industry as members. This change has been sought out by AAATE members in order to better incorporate the voice of the EU AT ICT industry in their association.
LOOKING AHEAD: HOW TO BEST STRUCTURE THE EU AT ICT INDUSTRY

For an association to work and achieve the objective of promoting and strengthening the EU AT ICT industry, the following basic tenets should be followed:

- Network members should **include both large and small industry players**. It needs the voices of both multinationals and SMEs to be successful.

- Geographical coverage should **cover all EU member states**, for example via connections to existing national organisations, such that representatives of national organisations becoming members of the EU level network.

- **Strong support for the implantation and start-up of the network**, for example on the form of specific EC policy support action and/or a type of grant to off-set initial start-up costs.

- **Good operational financial structure** to guarantee continuity. This would be principally financed through member fees and income from network events, activities and services.

- And most importantly, that the **EC recognises this network as the key point of contact with the AT ICT industry**, and likewise, that the industry values and recognises the network as their voice to the EC.
This was a tender project for the EC, and therefore the project results and all associated reports are property of the Commission. As such, the decision to disseminate these results lies with the Commission.

Any comments on the work carried out can be directed to:

Carmen Pastor
carmenp@robotiker.es
THANK YOU
FOR YOUR INTEREST AND PARTICIPATION

Carmen PASTOR
carmenp@robotiker.es