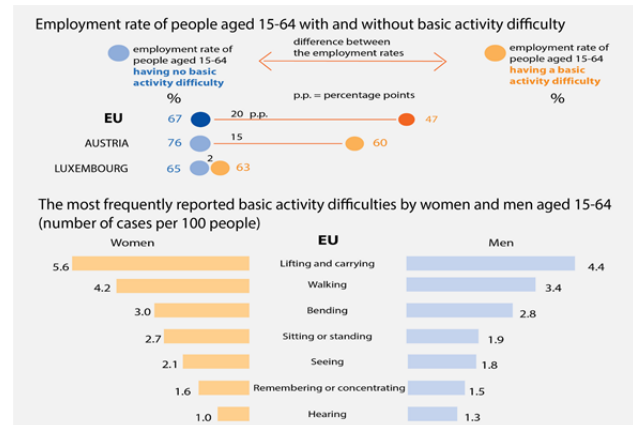


Inclusion through assistive technologies?

In contrast, for people without disabilities the dominant reason for not seeking employment was education or training. With regard to education, similar results prevail. More than twice as many people with basic activity difficulties leave education and training prematurely than people without such impairments. The share of disabled persons attaining tertiary education levels is almost ten per cent lower than for non-disabled persons. In addition to employment and education, societal, attitudinal, political and physical barriers also negatively affect disabled people's social participation. To date, several socio-political initiatives have been launched to actively foster the inclusion and full participation of people with disabilities.

In brief

- People with disabilities are facing numerous challenges and barriers in their everyday lives.
- Several socio-political initiatives have been launched so far in order to actively foster the inclusion of disabled people (in areas such as education, employment and social participation).
- Technologies can play an important role, but full inclusion may only be achieved if additional measures are also implemented.



Disabilities still lead to different employment rates.

Noteworthy guidelines and instruments are the UN Convention on the Rights of Persons with Disabilities (UNCRPD), the European Disability Strategy 2010-20 (EDS) which implements UNCRPD at EU level, and the European Accessibility Act (EAA). The EAA directive is currently under negotiation. It aims at ensuring full participation of people with disabilities in society and at reducing fragmentation of legislation governing access to products and services. In addition to political initiatives, and as an essential part of a comprehensive strategy of economic, social, political and regulatory measures, technologies can and should play a crucial role to improve the inclusion of disabled people. Technical progress has accelerated both the development of specific ATs and the opportunities to use technologies available to many, particularly mobile devices. Such technologies range from relatively low-tech (e.g. reading glasses or hearing aids) to high-tech devices using cutting-edge science and technology (e.g. auditory brainstem implants or "social robots").

What is it about?

Almost everyone will, at one point, experience temporary hardship and difficulties in everyday life. For people with disabilities, however, this is the norm as they are confronted with numerous challenges and barriers in their everyday lives. These include for instance non-accessible physical environments, people's negative attitudes towards disabilities, services, systems and policies that are either missing or prevent people with disabilities from becoming involved in all areas of life, and a lack of adequate assistive technologies (ATs). All these challenges and barriers have negative effects on employment, education and social participation of people with disabilities. According to a statistical survey conducted by Eurostat, the employment rate of people with basic activity difficulties (such as seeing, hearing, communicating) was 47.3 % (EU28; 2011). This is almost 20 % below the rate of people without such impairments. People named their disability as one of the main reasons to not seek employment.

Basic data

- Project title:** Assistive technologies for people with disabilities
- Project team:** Čas, J., Capari, L., Krieger-Lamina, J. (in an international consortium)
- Duration:** 02/2016 – 06/2017
- Funded by:** European Parliament — STOA Science and Technology Options Assessment

Technology as the key to a more inclusive society?

The STOA foresight study investigated if and how assistive technologies could improve the inclusion of people with disabilities in Europe. It focussed on three specific disabilities: blindness/visual impairments, deafness/hearing impairments, and autism spectrum disorders. Experts, stakeholders and disabled persons took part in a comprehensive online survey which focussed on needs and perspectives with regard to ATs.



Despite several regulations, many barriers in everyday life remain in place for people with disabilities.

The survey confirmed that many barriers to full social inclusion remain. With some variations depending on the type of impairment, all three disability groups are facing physical, infrastructural, communicative, informational, social and attitudinal barriers. Many participants expressed dissatisfaction with current regulations, in particular with regard to access to employment, education, finances and everyday support. Approximately 90 % requested accessible environments and barrier-free infrastructures and asked for an open-minded and prejudice-free society.

Some experts highlighted the high costs of ATs as a significant problem, creating further social inequalities. Experts also stressed the importance of universal design principles contributing to flexible products and mainstream technologies which could then also serve as assistive technologies.

Whilst ATs can play an essential role for better inclusion, technology alone will not be enough; it is also important to take social and regulatory action to improve the conditions for people with disabilities.

What to do?

Assistive technologies play an important role in the lives of people with disabilities and can support their inclusion in society, education and employment. However, politicians need to be aware that technology can only be one element in an otherwise holistic inclusion strategy which includes the following aspects:

- Many technologies and regulations already available are not used to their full potential. Implementing and enforcing existing legal frameworks as well as using current technologies more effectively would contribute to overcoming social discrimination and stigma.
- To ensure effective distribution and use of already available assistive technologies, ATs should be integrated into social services, health, education and employment. Providing financial support where affordability is problematic as well as training a new generation of assistive technology professionals to support individuals in finding the right solutions for their conditions are also important.
- Involving users in the development of future ATs ensures that technologies are designed specifically for their needs.
- These technologies need to be carefully regulated to ensure quality without adding unnecessary cost or delaying innovation. Privacy issues need to be addressed because data generated from use may be particularly sensitive.
- To eradicate discrimination and stigma, broad attitudinal and organisational changes must permeate society.

Further reading

Nierling, L. *et al.* (2018) Assistive technologies for people with disabilities. Europäisches Parlament – STOA Science and Technology Options Assessment
epub.oeaw.ac.at/ita/ita-projektberichte/STOA-assistive-technologies/

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