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Introduction

This collection of country reports is part of the research on Digital Skills, Accommodation and Technological Assistance for Employment, conducted by the European Disability Forum (EDF) with the support of [Google.org](https://www.google.org).

The aim of the study is to explore the situation of persons with disabilities in the open labour market, focusing in particular on the potential of digital skills training and the use of accessible and assistive technologies to foster inclusion in the workplace.

National experts from each EU Member State (with the exception of Luxembourg) and the UK analysed their respective national contexts. They outline policies and programmes to support reasonable accommodation as a Human Resources (HR) procedure, map trends in the use of accessible and assistive technologies in the workplace, and explain the main limitations experienced by employees with disabilities in acquiring accessible or assistive technology that meets their needs. They also analysed the barriers faced by persons with disabilities related to digital skills and highlight some good practices at national level.

The national reports cover the following countries: the UK, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden. Luxembourg is the only EU Member State that is not part of the study due to not finding a suitable national expert on the topic.

Glossary

Assistive devices: external devices that are designed, made, or adapted to assist a person to perform a particular task. Many people with disabilities depend on assistive devices to enable them to carry out daily activities and participate actively and productively in community or professional life.

Assistive technology: any item, piece of equipment, service or product system including software that is used to increase, maintain, substitute or improve functional capabilities of persons with disabilities or for, alleviation and compensation of impairments, activity limitations or participation restrictions.

Disability allowance: payments that persons with disabilities can receive from the State to cover basic living costs and services.

Discrimination: any distinction, exclusion or restriction on the basis of one or several grounds (sex, race, disability, sexual orientation, gender identity, etc.) that damages or nullifies the recognition, enjoyment or exercise of human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field, on an equal basis with others.

European Union (EU): a unique economic and political union between 27 European countries, as it stands at the time of publication of this report.

EU Statistics on Income and Living Conditions (EU-SILC): a regular cross-sectional and longitudinal sample survey by Eurostat that provides data on income, poverty, social exclusion and living conditions in the European Union.

General Comment: a General Comment is a treaty body's interpretation of human rights treaty provisions, thematic issues or its methods of work. General Comments often seek to clarify the reporting duties of State Parties with respect to certain treaty provisions and suggest approaches to implementing those provisions.

Member State(s) (of the EU): the EU currently consists of 27 countries, also called "Member States". Each Member State is party to the founding treaties of the European Union and is therefore subject to the privileges and obligations of membership. Unlike members of most international organisations, the Member States of the EU are subject to binding laws in exchange for their representation within the common legislative and judicial institutions.

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Number of observations (n): indicates the number of employers each national expert managed to interview.

Open labour market: this refers to work in a mainstream or “regular” employment setting, as opposed to a setting that has been created specifically to employ a specific group of employees, such as persons with disabilities.

Organisations of Persons with Disabilities (OPD): represent the interests of their members with disabilities and have the mandate to advocate for the realisation of their human rights and lobby for the consideration of their interests.

Percentage points: this term expresses the arithmetic difference of two percentages, whereas percent (%) refers to the rate of change. For example, if Country A has an employment rate of 30% and Country B has an employment rate of 60%, Country B’s employment rate is 30 percentage points higher than Country A’s but is also higher by 100%.

Persons with disabilities: individuals who have long-term physical, mental, intellectual or sensory impairments which, in interaction with various barriers, may hinder their full and effective participation in society on an equal basis with others.

Reasonable accommodation: the necessary and appropriate modification and adjustments, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms. To be “reasonable”, the accommodation cannot impose a disproportionate or undue burden. Denial of reasonable accommodation is a form of discrimination.

The Digital Economy and Society Index (DESI): an index that the European Commission reports between 2014-2022, monitoring Europe’s overall digital performance and tracks the progress of EU countries in their digital competitiveness.

United Nations Convention on the Rights of Persons with Disabilities (CRPD): an international human rights treaty that reaffirms that all persons with disabilities must enjoy all human rights and fundamental freedoms. The CRPD clarifies that all persons with disabilities have the right to participate in the civil, political, economic, social and cultural life of the community in the same way as anyone else.

National Overview

The EU-SILC data indicates that the employment rate of persons with disabilities in Sweden was 58.4% in 2019 compared to 82.4% for other persons. The resulting disability employment gap is around 24 percentage points, close to the EU average. However, according to data from a national survey, 74% of persons with disabilities and 63% of persons with reduced work capacity were in employment in 2020, compared with 84% of the general population¹.

The researcher for the European Semester 2021-2022 country fiche on disability makes the analysis that the relatively narrow disability employment gap in Sweden is the result of labour market measures from the Public Employment Services².

Digital Skills

According to a national study on internet use in the Swedish population, 6% of the population does not use the internet. However, this figure does not detail the characteristics of the non-digital part of the population in terms of potential disabilities. The report states that people not using the internet are more often found among senior citizens³.

A 2019 survey on internet use among Swedes with disabilities shows that 65% of persons with disabilities find it is not difficult to use the internet, compared to 89% of persons without disabilities⁴.

There is a wide variety of initiatives related to digital skills for employment purposes, ranging from highly specialised programmes to train skilled employees in the IT sector, to courses for more basic everyday skills for persons with low digital competences. Notably, the general programmes on lifelong learning/reskilling from the National Employment Agency and the civil society sector adult education also include courses on digital skills, in varying degrees of specialisation. See, for example, Arbetsförmedlingen (2023a)⁵, and Folkuniversitetet (2023)⁶.

There are a few examples of initiatives targeted at persons with disabilities:

- a basic course (folkhögskola) on IT for persons with intellectual disabilities⁷;
- a VET course for persons with autism/ADHD to work in IT⁸.

A national campaign to get more people to use the internet was conducted in 2010-2013, initiated by civil society organisations including adult education centres. The campaign included the creation of local information centres where citizens could get support with digital skills. The campaign later received more funding from the government, and the centres were turned into an ongoing network with digitalisation centres across the country where all citizens can get help with digital questions and queries⁹.

There are various best practices that focus on improving the digital skills of persons with disabilities. In a winning project in the Innovation competition funded by the Swedish Post and Telecom Authority and led by Funka, a platform was developed where people with cognitive impairments, older adults, and others who are new to online shopping can practise their digital skills. The

platform provides a safe environment and motivates the users with gamification features. The project also won the Zero Project Award 2022.

SeniorNet, a member organisation for older adults who teach other older adults digital skills on a peer-to-peer basis, has developed a website with free training resources for digital skills. The courses cover a wide range of topics and are often multimodal to ensure a wide uptake¹⁰.

Courses for specific target groups can be found on the market, for example, employment-oriented training for persons with low vision / no vision¹¹.

The EDF employer survey (n=21) shows that more than half of the employers (52%) provide training programmes for employees related to digital skills, and some even stated that they consider the different skill levels among people. Nevertheless, offering training or other solutions focusing specifically on the digital skills of employees with disabilities does not seem to be a focal point. At the same time, only 38% of the respondents consider that the lack of digital skills is an important hindering factor in hiring persons with disabilities, and that the diversity of digital skills needed by persons with different disabilities makes this even more difficult.

Interviews with Organisations for People with Disabilities (OPDs) show that the main training need is around the use of assistive technology and mainstream features used for accessibility services. People who need assistive technology often get an introduction, but afterwards they are left on their own. This is embedded in the dual framework of AT provision: in the first year the National Employment Agency is responsible, and they also provide support; afterwards, the Social Insurance Agency, where support is not prominent. This is a problem, as the ever-developing assistive technology and its IT environment would require regular training/support for efficient usage.

It has also been highlighted that public administration does not provide information, training, and support for mainstream products with built-in assistive technology, like a tablet or a smartphone, as they are excluded from the public AT provision system. Very few employers have the required skill set to provide support, for example, to a blind screen reader user. The organisation of visually impaired persons claims that there is also a need for generic digital skills, whereas the organisation of hard of hearing persons points out that interoperability for the wide range of video conference systems, platforms, and hardware that need to work together is where their members need most competence in the digital environment.

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An organisation for persons with cognitive disabilities highlighted that there is a lack of digital competence among teachers and support staff in secondary school, which makes people with intellectual impairments insufficiently prepared for today's IT society. In addition, some parents/caregivers believe the internet is dangerous for this user group, and deliberately prevent them from using the web.

Assistive Technologies

A study from Nordens Välfärdscenter provides examples of new solutions in the areas of technical solutions (AI, apps, exoskeletons, extended reality, haptic interfaces) and internal administrative systems – hearing AT, robots, smartphones, language technology (text to speech, speech to text), input controls¹². The study also mentions the initiatives of the Swedish Employment Agency in promoting the development and use of accessible and assistive technologies in employment. The Agency develops and co-finances the development of new AT where there is an identified gap in the market. Examples of recently developed solutions include an accessible cashier system for persons with low vision and a robotic glove for persons with motor disabilities. The AT programme has also developed methods for the use of existing technology, such as a web app replacing audio communication with visual communication for use by truck drivers in a warehouse.

A literature review conducted on behalf of the Swedish Agency for Work Environment Expertise on digitalisation trends and employment briefly describes a few academic studies showing that ICT tools can help senior citizens stay in employment longer and create new opportunities for persons with disabilities, as IT tools are easier to adapt and promote a more flexible working environment¹³.

The National Employment Agency and the Social Insurance Agency share responsibility for AT in the workplace. The individual or the employer can make a request, and when the request is approved, the individual or employer selects and buys the AT and gets reimbursed. The Agencies can also provide specialist support for selecting and testing AT. There is a maximum amount of reimbursement of €10,000 per year per individual. The National Employment Agency is responsible for the provision of AT during the first 12 months of employment; after that, the Social Insurance Agency takes over responsibility (unless the person is employed in a sheltered employment environment). The Social Insurance Agency has a maximum amount of €5000¹⁴.

In the EDF employer survey, no company indicated that they have policies implementing support for the acquisition and use of assistive devices and technologies. This aligns with the Swedish system, where individuals can request assistive technology directly from the central agencies, reducing the employer's role. This is also reflected in the answers about awareness regarding the public framework for providing assistive technology: around a third (32%) of employers know about the public framework. At the same time, only around a fifth (21%) of employers are aware of assistive technology usage by employees, which is also in line with the possibility to provide assistive technology directly

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to the employee. Employers listed peripherals and screen reader/text-to-speech among the assistive technologies used.

The Organisations for People with Disabilities interviewed represent persons with cognitive, visual, hearing, and speech impairments – and one is an umbrella organisation. In their view, the different levels of administration responsible for different parts of assistive technology provision are the biggest problem. It becomes very difficult for both end users and employers to understand what the rules are and where to turn for help when necessary. It is also a problem that some assistive technology can be used both at home and at work, which means that the different administrative levels can point to each other, leaving the end user without support. There is also a budget limit for assistive technology that is too low for the needs of hard-of-hearing persons in the workplace.

OPDs highlighted as a major problem that receiving allowance for assistive technology and adaptation measures provided by the National Employment Agency can take nearly one year. This can hinder or make entry to the labour market impossible, as it is much longer than the duration of a job advertisement or a probationary period. Another problem is that it is not possible to try out an assistive device before employment is considered.

An umbrella organisation claimed that competence development in the area is virtually non-existent: occupational therapists, physiotherapists, psychologists, and others do not keep up with technological developments, making it very difficult to give advice on the range of products available.

In parallel, AT providers seem to have difficulties incorporating new and innovative technical solutions within the product range offered. Innovation is apparently more likely to occur in “traditional” product areas, such as hearing aids, than in completely new technological areas. Hence, the current assistive technology supply system seems to preserve an existing product range rather than stimulate the introduction of new digital and technological solutions. Furthermore, the AT provision system excludes mainstream products with built-in assistive technology, like a tablet or a smartphone.

Finally, the employers’ lack of knowledge about the available technical solutions can also influence AT provision, and apparently, it differs among disabilities. According to the Stuttering Association, there is very scarce knowledge about existing assistive technology that can help stutterers, or about working environments that are detrimental for them¹⁵.

Reasonable Accommodation

The concept of supported employment is widely spread and used in Sweden. There are supported employment consultants both at the National Employment Agency and at independent organisations, helping persons with disabilities find employment. The supported employment consultants assist employers with the matching of candidates, and with preparations for recruitment and onboarding, including setting up reasonable accommodations.

Related to the reasonable accommodation concept, there is also a lot of research on the sustainability of the working environment as such, with a focus on preventing ill health at work and constructing workplaces that are adapted to people's abilities in general¹⁶.

Other research studies focus on accessibility in the workplace in the broad sense, for example, workplaces that follow the principles of universal design. The Swedish Work Environment Agency has also published several research reports and recommendations regarding accessible work environments, including a research report on cognitive accessibility in the workplace¹⁷.

There are several complementary laws that set up requirements on reasonable accommodation:

- Diskrimineringslagen (2008:567) (law against discrimination),
- Arbetsmiljölagen (1977:1160) (work environment),
- Socialförsäkringsbalken (2010:110) (social insurance),
- Lag (1982:80) om anställningsskydd (security of employment),
- Arbetsdomstolens praxis (judgements of the labour court).

Reimbursement possibilities regarding assistive technologies are discussed earlier in this document under the section "Assistive Technologies."

The EDF employer survey shows that usually there is no standardised HR policy on reasonable accommodation or a specific policy regarding the accessibility of recruitment processes. Considering other responses and the above research, a reason for that could be that companies aim at accessibility/universal design in general and therefore do not create specific sectional policies. Some respondents link reasonable accommodation to the provision of assistive technology (listing ergonomic peripherals as an example of reasonable accommodation), which often happens outside workplace procedures. Others

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mentioned accommodations that are used by a wider group of users, marking, for example, “quiet places” as accommodation applied – which actually can be used by anybody in an open office environment, to have phone calls without disturbing background noise. Only 2% of the respondents are aware of the public legal framework and/or public programmes supporting the provision of reasonable accommodation in the workplace, again linking reasonable accommodation to the provision of assistive technology.

Interviews with Organisations for People with Disabilities show that security issues may become a barrier to reasonable accommodation for both visually impaired and hard of hearing users. There is a lack of rules on disturbing noise in an office environment, and open office spaces create problems for some user groups. For persons with hearing impairments, the difficulty is not so much getting employed, but rather remaining in the workplace: individual needs that require sign language and captions are more difficult to receive than more general adaptations. Budget restrictions can also be an issue as there are limits on the support given by the government for rebuilding the workplace.

One of the OPDs emphasised that beyond accommodations in the built environment, providing assistive technology and other technological adjustments, employers also need to be flexible and adjust working conditions, such as providing flexible working time and teleworking possibilities. Increased use of job sharing and streamlining tasks would improve job opportunities for people who cannot work full time or are better at some tasks but have difficulty with others.

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