
Knut Fossestøl (Ed.)

Stairway to heaven?

ICT-policy, disability and employment in
Denmark, the Netherlands, United Kingdom and Norway

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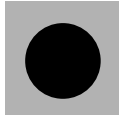
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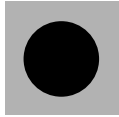
The aim of the project *ICT, disability and employment*, funded by the Norwegian Research Council, is to understand how the development of the new IC-technology can be utilized in ways that increase disabled peoples' chances to employment. The project's fundamental assumption is an optimistic one; the new technology generates increased possibilities for labour force participation also for persons with severe disabilities.

In this collection of articles we present a state of the art study of the political ICT strategies for disabled, and other different means that governments use in order to reach the goal of employment of disabled. The articles analyse the situation in the United Kingdom, the Netherlands, Norway and Denmark, and has been developed in cooperation with researchers in the respective countries. The data sources are primarily public reports and research; in addition we have conducted interviews with selected experts in the field. The articles report from phase two (out of three) of a larger research project, and provide a basis for a more thorough empirical and analytical third phase.

The articles describes key features of the reform landscape linked to ICT, disabilities and working life; analyse principal challenges for a social ICT strategy e.g. universal design and the system for diffusion of aid – and consider how these challenges has been met in the different countries. The articles also outline some political strategies for exploiting the social potential the technology might have, and present some of the authors' recommendations for further development in this policy field.

Keywords:

Accessibility, assistive technology, computer aids, digital inclusion, disabled people, disability policies, eEurope, eNorway, employment, equal opportunity, information society, open standards, people with disabilities, work.



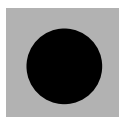
Foreword

Disability policies have shifted from focus on economic compensation and medical oversight to focus on equal rights and full participation in society, among that increasing the labour force participation of qualified persons with disabilities. The aim of the project ICT, disability and employment, funded by the Norwegian Research Council, is to understand how the development of the new IC-technology can be utilized in ways that increase disabled peoples' chances to employment. The project's fundamental assumption is an optimistic one; the new technology generates increased possibilities for labour force participation also for persons with severe disabilities.

In this collection of articles we present a state of the art study of the political ICT strategies for disabled, and other different means that governments use in order to reach the goal of employment of disabled. The articles analyse the situation in the United Kingdom, the Netherlands, Norway and Denmark. The data sources are primarily public reports and research, in addition to interviews with selected experts in the field have been conducted.

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Oslo, 19th December, 2007
Tone Fløtten, Project co-ordinator



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1

A policy for social integration. ICT strategies, employment and disability in the United Kingdom, the Netherlands, Denmark and Norway

By Knut Fossetøl, Work Research Institute

Most EU countries are trying in various ways to address the challenges and opportunities offered by the new information and communication technology for participation in the labour market and social inclusion of persons with impairments. There are great expectations with respect to the social and integrating role in working life that ICT should play for people with disabilities. However, it is not a given that ICT technology will serve such purposes. If the social potential of the technology is to be exploited, substantial political effort is required, partly in opposition to fundamental technical, financial and social market dynamics that prevail in society. Moreover, the policy field itself – a social ICT policy – is very complex: Actors with differing aims and interests must be coerced, persuaded or stimulated into pulling in the same direction. Consequently, new institutional and organisational infrastructures must be established in which the authorities will most probably have to play a key role.

In this collection of articles we will present policies for ICT, employment and disabled people in Denmark, the Netherlands, the United Kingdom and Norway. Is there one or perhaps more policies for developing the use of ICT to increase participation in the labour market of people with disabilities in these four countries, and if so, what does this policy entail? The aim is to examine the policy the Norwegian authorities apply to disabled people, ICT and employment in light of international experiences.

The comparison between ICT strategies, employment and disability in the United Kingdom, the Netherlands, Denmark and Norway has been developed in cooperation with researchers in the respective countries. In Denmark we have cooperated with Steen Bengtsson, Institute of Social Research, Copenhagen. In the UK we have cooperated with Sally Wilson, Nigel Meager and Darcy Hill at the Institute for Employment Studies, and Femke Reijenga and Freek Lôtters at Astri in the Netherlands. The Norwegian paper in this publication is written by Inger Lise Skog Hansen at Fafo.

To illustrate the background for our article, we first outline the research project of which these comparisons are a part. Thereafter, we present some main results of the comparisons. First, we give a brief outline of some key features of the reform landscape the activities linked to ICT, disabilities and working life are part of in Norway, Denmark, the Netherlands and the United Kingdom (Chapter 2). Second, we analyse two principal challenges for a social ICT strategy – universal design and a system for diffusion of aid – and we consider how each of the countries has addressed these challenges. Third, we summarise the similarities and differences between the countries. Finally, we outline some political strategies for exploiting the social potential the technology might have, and then present some of the authors' recommendations for further development in this policy field.

1.1 Background for the project

This collection of articles is part of the reporting from the first sub-study in the project 'ICT, disability and employment' funded by NFR (the Research Council of Norway). In this sub-study we catalogue

how the potential of ICT¹ to increase participation in working life of disabled people is expressed in national policy planning, in legislation, action plans and measures. The study will constitute the background for sub-study 2, which is a comparative cataloguing of the system for development, production and diffusion of ICT for persons with disabilities in the countries in question. In sub-study 3 we intend to undertake a closer study of the system and three different ICT solutions that could be characterised as key technologies for deaf people, blind and partially sighted people and those with movement impairments. The aim of the project is to examine different systems (or the absence of systems) for controlling and coordinating activities linked to ICT, disabled people and working life to develop systems that better match persons, workplaces and technology.

The basic assumption of the project is that ICT increases opportunities for participation in the workforce for persons with disabilities. Workplace design and organisation of work tasks have traditionally excluded large groups of persons with movement, sensory, cognition or communication challenges. Implementation of ICT in workplaces has provided new opportunities for several groups of people with disabilities to participate. General technology combined with individual aids may increase accessibility for many. However, our hypothesis states that this work-integrating potential has not been adequately exploited, in part due to a sub-optimal organisation of the technological innovation/diffusion system.

For most ICT products the link between technical solutions and individual needs occurs effectively and simply in the marketplace. However, in the field of disability, ICT and employment, we find a number of circumstances that we assume require more than what the marketplace is able to provide.

First, there are circumstances connected to the technology itself. Technology is continually changing, and it is developed by many large and competing producers of hardware and software. This creates compatibility and accessibility problems. Each producer makes products that supplement each other but which may be hard to combine with products from other manufacturers. The lack of standardisation and the failure to adhere to the principles of universal design undermine the development of solutions that benefit large groups of people with disabilities, and can even make these solutions unsuitable.

Second, are the circumstances connected to the diffusion system? As ICT aids are expensive to develop and acquire, and bearing in mind that the market for ICT aids is limited, (public) funding is required. Third, a system for developing, testing, training and adapting the technology for each individual (and employer) is needed. Any flaws in this system will make it more difficult to adopt the technology's potential.

Fourth, there are circumstances connected to employers and the workplace. The employer's attitude and assessment of risks and expenses in hiring persons with disabilities will have an impact on their recruitment behaviour. Our assumption is that risk assessment can be affected if an employer is familiar with products that might ease integration of persons with disabilities into the workplace. Matters such as waiting time for acquisition and repair, training, problems adapting to new software, and systems for in-house cooperation in the company between staff and ICT management will also be important factors in determining the realisation of the technology's potential.

Fifth, digital competence is essential for each and every person if they are to participate to the utmost in working life. This requires that basic ICT skills are part of the competence job-seekers with

¹ By technology we mean tools (machines, material processes) that help people resolve problems. By information and communication technology we mean computer technology and ancillary communication technology that collects, stores, processes, transfers and presents information.

disabilities have acquired from the education system, i.e. before they enter the labour market, and which are continuously maintained in working life.

Individually and together these issues represent major challenges that must be resolved to avoid new digital barriers from impeding development. Supranational and national standards and design criteria are needed and must be followed up in practice. A funding and diffusion system has to be in place for development, diffusion and adaptation of technology, and this presumably means cooperation between R&D, manufacturers and suppliers, users and user organisations, employers and the public authorities. Employers need to be willing to take social responsibility, and systems are needed for efficient adaptation of individuals and technology to the workplace. Moreover, job-seekers must have digital competence. In brief, we believe that bearing all this in mind, a comprehensive policy for ICT is required if ICT is to function as a tool to increase participation in working life among persons with disabilities.

What does the comparison between the United Kingdom, the Netherlands, Denmark and Norway tell us?

1.2 Some common principles in policies for persons with disabilities

A common factor for all the countries involved in this study is that they have tightened the criteria for disability pension/incapacity benefits and combined this with greater emphasis on active labour market schemes (Pearson and Prinz, 2005). Moreover, all the countries have implemented comprehensive reforms of administrative organisations to promote more efficient and holistic public services. The vertical and horizontal differentiation of the administration has often been defined as a main problem area when it comes to actions aimed at increasing integration (Hvinden, 1994).

The principles for the reforms have been linked to what in an EU context is called ‘mainstreaming’, and which in Scandinavia is called the sector principle. This means that disabled people shall not be segregated with separate institutions and schemes dedicated only to them, but rather that measures aimed at such target groups shall be integrated into the regular administration system. The principles of mainstreaming have followed from the normalisation ideology that emerged in the 1970s, and have probably been expanded and reinforced with the greater emphasis on anti-discrimination legislation which places equal rights and equal treatment as the basis for activities in various sectors and areas of life.

Anti-discrimination legislation has increased and become a more positive element in the policy of all the countries that are part of our study, but perhaps particularly so in the United Kingdom. Norway does not yet have a discrimination act, but the Norwegian Working Environment Act provides protection against discrimination of persons with disabilities in working life. The Netherlands also has an anti-discrimination act, but this appears to have less clout than the law in the United Kingdom. The anti-discrimination acts focus on protecting individuals against unreasonable differential treatment, including in working life. In the United Kingdom there is now also a special ‘public duty’ amendment to the act assigning public authorities a special positive responsibility for providing measures to promote equal opportunities for people with disabilities.

In addition to this legislation and these principles, a special labour market policy has also been developed for people with disabilities in all these countries. There are two sides to this policy, focusing on the demand side (employees) and the supply side (employers). The demand-side policy emphasises financial incentives and competence to stimulate individuals to enter and participate in the labour market. The supply-side policy focuses on the employer with a number of measures providing employers with financial and other incentives to hire persons with disabilities (for example pay

subsidies, differentiated employer fees, reimbursement of sickness benefits, and so on). With the exception of the Netherlands, the responsibility of employers to facilitate the situation for employees who have or are stricken with a disability is limited. Dutch employers have full responsibility for up to four years for adapting for and rehabilitating their employees. Employers in the other countries have also been given responsibility for facilitation at the workplace, but this must be 'reasonable', and employers have the option of public funding benefits if comprehensive changes are required.

An important feature of the development is also the social understanding of disability. The idea of social understanding was initially developed in the United Kingdom and is used as the basis for the official Scandinavian policy in this field. Such a perspective is important as it defines socially created barriers to participation in social life and working life as discrimination, thus making it a political and social responsibility to ensure that these barriers are removed. It is the responsibility of the collective to ensure that persons with disabilities are given the same opportunities (equal opportunities) to lead as independent a life as those without disabilities. This principle is particularly important when it comes to ICT, as we shall see.

The general integration policy is thus characterised by a mixture of regulatory measures (legislation) and more positive interventions in which the authorities use tax-funded income transfers to develop support and measure systems that facilitate the integration of people with disabilities into social and working life. While the regulatory measures appear to retain a stronger position in the United Kingdom and in part in the Netherlands, income transfer systems for individuals and employers claim a stronger position in the Scandinavian countries.

The fact that these features characterise or impact the overriding design of the policy does not, however, mean that they can be found in practical policies. The distance between the ideal and the actual situation is great, and often, operationalisations of these principles are absent, as well as efficient systems for implementing and monitoring whether political goals are met (OECD, 2003).

1.3 ICT policy, disability and employment

There is, to varying degrees, a national ICT strategy in the countries studied. These strategies are partly connected to the EU's initiative to make Europe the most competitive knowledge economy in the world, but also connected to other EU initiatives for digital inclusion (E-inclusion 2006, 2010). The focus is, nevertheless, primarily on the rationalisation potentials of the technology, ICT as a tool for achieving greater competitiveness, web trade (electronic signatures), simplified relations between public administration and citizens, ICT as a control and information tool, and so on.

The national ICT strategies also include social objectives, not least connected to the positive aspects ICT might have for participation and the opportunity to lead an independent life. There is also awareness that the technology may create new digital barriers and divisions along geographical, social and age lines. It is, therefore, vital to ensure that the technology is as accessible as possible and that technological solutions are not developed that are difficult to use for various groups and which do not exclude already implemented adaptations and solutions. In recent years, more and more, the focus in the EU system has been on social objectives (cf. the Riga Ministerial Conference on eInclusion June 2006). However, this so far has been negligibly operationalised in the overriding political documents dealing with the future of ICT in Europe, neither in general terms nor in relation to persons with disabilities. The question is therefore whether these objectives should be taken into consideration when implementing ICT policies in specific social fields, such as product development, purchasing rules, modernisation and innovation activities in the public sector, or restructuring in the private sector.

1.4 Universal design² as a measure

Even if people with disabilities are not specifically mentioned in the general ICT policies, other elements of the policies focus on how accessibility and universal design should be applied as measures to ensure that the social potential of the technology may be utilised. For many disabled persons needing special equipment or special software, the absence of open standards³ may create barriers because these special solutions are incompatible with the existing solutions. The lack of standardisation and the use of proprietary systems in combination with the lack of awareness that the technology must be accessible to everyone may therefore effectively bar persons with disabilities from the information society. Therefore attitudes must be developed that ensure that there is a continuous focus on accessibility and universal design at all stages, from the development of a product to its implementation. This challenge not only applies to the major technology manufacturers, but also to applications of general technology taking place continuously in all sectors of society.

This is, needless to say, easier said than done. There are still major flaws in the operationalisation of the meaning of universal design in the ICT field, and so far there is little willingness to follow up this standardisation activity by making universal design an official policy or by establishing efficient comprehensive legislation in this field. Requirements have gradually been formulated for accessible websites (the WAI standard), which have been complied with, to varying degrees, in the four countries. Anti-discrimination legislation in the United Kingdom and the Netherlands does not emphasise universal design, and for these two countries has not led to a national strategy in this field. Norway has drawn up a special action plan for universal design, but it is not very comprehensive within the ICT field. The proposal for a new anti-discrimination act in Norway from an official committee (NOU 2005:8) does not include accessibility provisions linked to ICT. A Green paper is to be announced in autumn 2007 and indication is that in this proposal demands for universal design of ICT will be included in the new discrimination and accessibility act. The government has also initiated a hearing on a new proposal that all new ICT directed towards the general public should be universal designed by 2011.

There are positive developments, but progress is fragmented and occurs at varying rates in different sectors of society in relation to special legislation, action plans, measures and knowledge dissemination. Examples of positive efforts include projects that get the international and national standardisation movement to take universal-design requirements into account (Norway); changes in public acquisition legislation making it possible to demand that procurements satisfy universal-design requirements (Norway and Denmark); publicly funded competence and research centres to work on, develop and disseminate knowledge about and monitor implementation of universal design, and

² The Center for Universal design, North Carolina University defines universal design as the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialised design. They operate with seven principles of universal design: 1) Equitable use: the design is useful and marketable to people with diverse abilities. 2) Flexibility in use: the design accommodates a wide range of individual preferences and abilities. 3) Simple and intuitive use: use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level. 4) Perceptible information: the design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities. 5) Tolerance for error: the design minimises hazards and the adverse consequences of accidental or unintended actions. 6) Low physical effort: the design can be used efficiently and comfortably and with a minimum of fatigue. 7) Size and space for approach and use: appropriate size and space is provided for approach, reach, manipulation and use regardless of the user's body size, posture or mobility.

³ The European Union adopted the following definition The following are the minimal characteristics that a specification and its attendant documents must have in order to be considered an open standard: A) The standard is adopted and will be maintained by a non-for-profit-organisation, and its ongoing development occurs on the basis of an open decision-making procedure available to all interested parties (consensus or majority decision, etc.). B) The standard has been published and the standard specification document is available either freely or at a nominal charge. It must be permissible to all to copy, distribute and use it for no fee or at a nominal fee. C) The intellectual property – i.e. patents possibly present – of (parts of) the standard is made irrevocably available on a royalty-free basis. D) There are no constraints on the re-use of the standard. <http://europa.eu.int/idabc/en/document/3761>

maintain special responsibility for national eEurope initiatives (all stages); development of templates for websites (WAI standards); monitoring compliance with these standards and nominating the best website (all countries); national action programmes for disabled people where universal design is an important element (Denmark and Norway).

Important initiatives and policies are also being developed by major technology producers such as Microsoft and IBM, both of which have policies for universal design. Some of the major telecom companies such as British Telecom and Telenor Norway also have policies focusing on people with disabilities, ICT and accessibility issues, without claiming that this applies to the ICT industry as such. The challenge in relation to universal design may lie less with the major suppliers of technology than with those customising and adapting the technology to their various purposes.

Thus, there are major challenges in connection with the accessibility of ICT for people with disabilities. Accessibility issues continue to rank low on the agenda in all the countries, but they have to some extent been sustained by NGOs and interested organisations for persons with disabilities. There are few supranational political initiatives and legislation in this field. Attention given to this issue is, nevertheless, on the rise in all the countries, and more progress has probably been made in Denmark and Norway than in the Netherlands and United Kingdom, even if the Disability Discrimination Act (DDA) and public duty provisions in the United Kingdom may eventually yield results.

In many ways we can state that 'accessibility' is a policy field under development, where much work remains before we can claim that a policy for universal design has been developed and implemented. Such policy requires great awareness from all actors and stakeholders in the development of electronic services and products as to what universal design means, and such considerations must be embedded in the many decisions made at all levels of society. However, it would appear that there is still little knowledge about universal design. If the requirement for universal design is not regulated by clear legislation with sanctions, it will be easier for employers to deem universal design an unnecessary and costly affair of minor importance for the major groups of customers and service recipients.

1.5 The aids diffusion system

The accessibility of ICT technology is an important requirement if we are to realise its social potential and avoid creating new digital barriers. Another important assumption is that a system is necessary for developing, testing, training and adapting (hereinafter called the diffusion system) ICT-based solutions and products, or aids, that can be used in the workplace.

Both Denmark and Norway have developed rights-based and relatively comprehensive aids diffusion systems, the Danish system being more locally based than the Norwegian. Many and varied actors may be involved in this system, but the central idea is that there must be competence and resources on the national and local (the county/municipality) level to assist job-seekers and employees with different disabilities to select adequate ICT solutions and adapt these solutions to the workplace in question.

These aids diffusion systems are nationwide, even if there are regional variations relating to granting practices, competence and service quality. A principal challenge appears to be the division of roles and responsibilities between the public authorities (and the suppliers) and the workplace on installation, repair, training and adaptation of the aids. At least in Norway, preliminary findings suggest that the number of disabled people and the number of workplaces exceed the competence and capacity that is available from the public authorities.

Both the Netherlands and United Kingdom appear to lack national systems for diffusion of aids. There are several funding sources and responsibility is divided between several actors. The United Kingdom

has the 'access to work' (AtW) scheme, which assists persons with disabilities who want a job and who are employed. Special Aids and Equipment (SAE) Support is part of this scheme. They assist employers and the self-employed with financial assistance for acquiring aids and adapting the workplace. However, few users and employers appear to be aware of the AtW scheme (under-use) and the large majority of those who avail themselves of this scheme are already working. It is also difficult to ascertain the proportion of these funds that is allocated to ICT-based aids.

In the Netherlands, employers bear the full financial responsibility to facilitate the situation for people with disabilities who have ties to working life. They can purchase assistance from large (private/commercial) rehabilitation centres specialising in ICT aids. The public authorities can offer financial assistance to job-seekers without a job. The public authorities then buy assistance from the same rehabilitation centres as the employers. These privately operated centres also have independent public funding allowing them to counsel and disseminate knowledge about ICT aids to institutions, companies and individuals. The scope and quality of these services are not known.

Moreover, all four countries have various projects and initiatives to demonstrate the possibilities offered by ICT as a tool for integration of persons with disabilities in working life. These might, for example, be specific projects showing how to adapt the workplace to different types of disabilities, or developing best-case methods or knowledge dissemination projects. Other projects stimulate greater use of ICT, upgrading the ICT competence of people with disabilities, job creation using ICT and projects to develop new, promising and expensive technology (for example speech recognition technology). These projects are often organised as partnership projects where user organisations, employers, the public authorities and/or supplier organisations are involved.

Some of these projects or initiatives have long-term funding, while others are short-term projects linked to a specific national initiative or action plan. All in all, these initiatives reveal a relatively substantial effort, which in all probability will contribute to disseminating knowledge about ICT, disabilities and work and provide many persons with disabilities work experience and lasting employment. However, the question is whether the scope of the technological changes and the potential of ICT for increased participation in the labour market for persons with disabilities also require more comprehensive approaches and greater emphasis on mainstreaming.

1.6 Central characteristics between the countries

Even though the countries have similar ICT, disability and employment challenges, there are substantial differences in how these countries deal with their challenges.

One area is the relationship between disabled people and the state authorities, which appears to be much closer in Norway and Denmark than in the other countries. The state is an ally rather than an opponent when it comes to realising equal-opportunity objectives and an independent life. People with disabilities and the organisations for persons with disabilities are involved in the design of policies on all levels, as well as implementation. Official bodies have also been established on the political level, in addition to advisory bodies with responsibility for coordinating the government's policy across sectors and policy areas. There are also two-year action plans with concrete aims that the government undertakes to implement. Finally, there is a rights-based and relatively generous national aid diffusion system, where users and user organisations also wield significant influence.

All in all, this allows us to ask whether the possibility of a coordinated and comprehensive policy for ICT, people with disabilities and work is somewhat greater in Denmark and Norway than in the United Kingdom and the Netherlands, and, consequently, the potential for using ICT as a tool to

increase work participation for people with disabilities should also be greater. However, we do not know whether this takes place to a greater extent than in the Netherlands and the United Kingdom.

On the other hand, regulatory measures have been better developed in the United Kingdom, and partly also reinforced through the 'public duty' provision in the DDA. The responsibility of employers has also been made clear in a different manner in the Netherlands than in the other countries. This is important as the integration of persons with disabilities in working life in the final instance depends more on how successful one is in influencing the understanding employers have of their societal responsibilities than on welfare state arrangements.

NGOs are active and their involvement has decisive importance in all the countries. However, it is claimed that in the Netherlands NGOs spare little attention to ICT, people with disabilities and work, and that the attention is mostly focused on website access. There are similar experiences in Norway. This might be linked to the fact that the reforms in several of the countries have threatened income protection systems, and that protection of primary goods, such as access to healthcare, home assistance, social programmes and so on, has been found to be more imperative than the struggle for equal opportunities in the labour market.

1.7 Conclusion

Given the ideological and political expectations connected to ICT when it comes to social integration and an independent life, there is little to suggest that ICT technology in itself has an integrating function. The technological development does not appear to contribute to any marked increase in employment among people with disabilities, not even in the ICT industry itself. A Norwegian survey tells us that the ICT industry scores high on ideology but low on factual recruitment of disabled people (Widding, 2007).

Thus, technology in itself does not provide any promises of increased social integration of people with disabilities in working life. If such an aim is to be realised, social measures must be developed around the technology, both in connection with universal design and knowledge about it in the workplace. The market or commercial interests linked to such social use may not be strong enough in themselves to develop or deal with such considerations.

In addition to such interests, attempts have been made to develop regulatory measures and to build systems and programmes that might promote the social use of technology. However, based on the study of the four countries we present in this report, the results of these attempts appear to be limited, at any rate in view of the integrative potential ascribed to ICT by technology optimists.

The development of a policy is still in its infancy, and will probably continue to be so for a long time given the complexity of this policy field and the absence of political acceptance and resource allocation that people with disabilities have traditionally encountered in politics.

Focused political work on the national as well as the supranational level appears to be necessary if the potential of technology is to be taken into use, and if we are to succeed in developing a social organisation around the technology that will enable it to *be* taken into use. This means legislation, supervision and penalising violations of the law, i.e. measures that make mainstreaming a practical reality, and also means developing institutional and organisational control systems that can counteract the fragmented administrative approach that appears to be an insoluble aspect of the emergence of a modern information society. We thus need regulatory measures calling for the various actors involved to focus on particular issues, whether this concerns universal design or ensuring equal opportunities for all (anti-discrimination legislation). We also need redistributive mechanisms in addition to the

regulatory ones, which can create equal opportunities to a greater extent than today through institutional and organisational measures and schemes.

This does not mean setting market forces free within the framework of an anti-discrimination act, nor hierarchical and expert-based political control. Rather it means both, in addition to creating infrastructures for cooperation and exchange between more or less autonomous actors. In his article, Bengtsson characterises the Danish strategy as a form of network control. Policy should create an infrastructure for social use of the technology, and to facilitate for initiatives coming from below, from private individuals, universities and organisations of people with disabilities.

1.8 Recommendations

Steen Bengtsson claims in his article on Denmark that there is a policy for getting more disabled people into job/employment, and that a policy exists for ICT and people with disabilities. However, there is no general policy outlining a public strategy for how persons with disabilities can be integrated into working life by means of ICT. He also maintains that the development of the information society 'calls for a more specific public strategy for the inclusion of people with disabilities in the workforce through the use of ICT'. He claims that the target group for this market is so small that private enterprises will not find it profitable to undertake it alone. The public authorities must contribute. He also states that such publicly funded solutions might also benefit other groups, bearing in mind that technology for people with disabilities is often at the cutting edge of technology development, and that products often might benefit larger groups (cf. the telephone, typewriter and e-mail, which he claims were first developed for people with disabilities).

Nigel Meager et al. maintain that the acquisition of ICT in the United Kingdom needs to be improved across sectors (health, education, social services and labour market services). They believe that the situation in the United Kingdom in the ICT field is dominated by fragmentation, inadequacies and lack of accessibility, and that the DDA legislation has still only had limited influence. On the one hand, they call for simplification of the public effort and implementation of new types of service provision, and find initial attempts at this in the so-called individual budget pilot project, where six different funding sources and systems are merged into one. On the other hand, they call for more mainstreaming so that employers also see ICT aids as an integrated element of their human resource policies. They see the germination of this in the public sector duty in the discrimination legislation, which ideally should apply to all employers. They refer, moreover, to a decision where the AtW scheme for the same reason can no longer be used by public employers, but should be reserved for employers with less resources and awareness about such issues. The organisations of people with disabilities and the DDA commission have, nevertheless, both expressed a concern that this would lead to a reduction in public funding more than the realisation of a new principle.

Inger Lise Skog Hansen points out that according to Norwegian conditions there has been a shift from focusing on assistive aid to emphasising universal design. Universal design has been on the agenda for some time, but there is a need for operationalising the concept within the field of ICT and obtain stricter demands to follow the principles. As an example of such positive development trends she mentions that the Labour Inspectorate in Norway has now developed guidelines for universal design related to working with computers in its control activities.

One option is that the new anti-discrimination act in Norway should include provisions to this end. The proposal from the government that all new ICT directed towards the general public should be universal designed by 2011 could be an indication that this will be the case. One of the challenges in Norway is to get more focus on how ICT can be utilised as a measure for increased employment, and

the importance of accessibility to general ICT and the compatibility between general ICT and assistive aid to achieve equal participation in modern working life.

Femke Reijnga states that the Netherlands lacks a strategy to improve the chances of gaining employment for people with disabilities by means of ICT. Universal design has not been operationalised in relation to the labour market.

Reijnga believes that mainstreaming and focus on equal opportunities should serve as the basis for the policy, and is sceptical about special programmes and special policies, which she claims stigmatise persons with disabilities, both in the public gaze and their own eyes. However, she realizes that such overriding regulatory schemes need many changes in the existing schemes, practices and attitudes.. The practice in which local public bodies for provisions for people with disabilities are explicitly not dealing with employment provisions is just one example of lack of an integrated approach. She notes that mainstreaming principles – for example the equal opportunities act or the sector responsibility principle – are very little used in the Netherlands.

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2

Table overview of the situation in the involved countries on some key areas

By Inger Lise Skog Hansen, Fafo

The table below is intended as a tool to help gain a better overview of the countries involved in this project. In all the countries involved there have been great expectations of the role ICT can play for increased employment of people with disabilities; however, these expectations have not been followed up to a great degree by actual action. All four countries have in common that they have a relatively high general employment rate and an active workfare policy over recent years. In all countries there has been mainstreaming of the responsibility of disability issues. In the table we present some of the key factors contributed by the different countries.

ICT policy, disability and employment. A table of key factors from Norway, the Netherlands, UK and Denmark.				
Variables	Norway	The Netherlands	The United Kingdom	Denmark
Employment rate	45 % LFS 2007	48 % (LFS 2003)	49 % (LFS 2003)	55 % (SFI-Survey 2006) or (51 % LFS 2005)
Regulation	No anti-discrimination legislation, but the Work Environmental Act gives protection against discrimination on grounds of disability in working life and gives employers a responsibility for reasonable adjustments that can involve ICT solutions.	Anti-discrimination legislation: The Equal Treatment Act covers disabled people and employment. Act is in practice not a leading principle. In political sense the financial incentives for employers to recruit people with disabilities are more important	Anti-discrimination legislation: The Disability Discrimination Act (DDA). Requires employers and service providers to make reasonable adjustments for disabled people, and an accessible website is given as an example of a reasonable adjustment in the DDA Code of practice.	No anti-discrimination legislation on grounds of disability.
ICT policy and disabled people	National ICT policy, both an economic and a social dimension, increasingly focus on digital inclusion, accessibility to information technology, websites, and open standards.	ICT policy, mainly focused on economic dimension, but social participation and accessibility more articulated in recent years.	National ICT policy, but mainly driven by an economic development strategy. To avoid digital divide is a task, but mainly related to class, poverty and age, not disability as such.	National ICT policy, and since the 1990s a national target to have ICT development for an information society for all. A part of this is access to ICT for disabled people.
Universal design	Action plan for universal design, ICT one of the areas. Work on operationalising universal design within the ICT field. Public procurements as a driver for universal design.	No specific policy on universal design. Ministry of Social Affairs paid attention to several projects on Design for All	No specific policy on universal design. Extensions in DDA from 2004 on goods and services may have an effect on ICT and universal design of products.	Universal design is an issue in national policy, but no action plan. Public procurements used as a driver for universal design and accessibility.
Accessible websites	National target to make public websites accessible, followed up by guidelines, campaigning and an annual award to most accessible website.	New law on the quality of governmental websites, guidelines for accessible websites.	National target to make public websites accessible. Guidelines on accessibility in the Guidelines for UK Government Websites.	National target to make public websites accessible. Guidelines for accessible websites and an annual award for most accessible website.

Public stimulation to innovation and development	Targeted research programme over several years, public funding of innovation and development projects.	Have had research programmes and development projects with public funding. Campaigning for accessibility of ICT	No initiatives in this area.	Building up universities milieus with competence in the area, research funding and funding of development projects, per example speech synthesis.
Public bodies on ICT and disabled people	Delta centre, a governmental competence centre on accessibility for disabled people, ICT as one of their target fields. Special national units on ICT as assistive technology within the National Assistive Aid Centres.	National institute ICT for Healthcare (not for employment issues), Expertise Center XIDIS on ICT & handicap (not completely public) with emphasis on healthcare & , education	The Disability Rights Commission, as a nongovernmental public body also advocating and monitoring the situation on ICT and accessibility. Campaigning for accessible public websites. From October 2007, the Disability Rights Commission has been superseded by the new Commission for Equality and Human Rights (which also covers discrimination on grounds of gender, race, age, sexual orientation, religion and belief)	KIA: The competence centre ICT for All, under the Ministry of Science.
Access to ICT and assistive technology at workplaces	Employers responsible for adjustments at workplaces, but large degree of public funding.	Employers financially responsible for ICT and assistive technology at workplaces, but special arrangements and adaptations can be compensated.	Employers financially responsible for disabled people within working life, possibilities for programme funding (Access to Work) for those trying to get a job.	Employers responsible for ICT and assistive technology at the workplace, but large possibilities of public funding.
Distribution system	Right-based system. Regulated public system for distribution, centralised system.	Private / commercial rehabilitation centres important (Law on occupational health)	Low degree of regulation, several actors and the NGOs plays an important role.	Right-based system. Regulated public system for distribution, but very locally based.

3

ICT and employment of people with impairments

By Steen Bengtsson

3.1 Background: Danish disability policy principles

As a basis for understanding the politics of ICT in relation to employment of people with disabilities, we first look at some of the main principles of Danish disability policy. In particular, the principles of sector responsibility (mainstreaming) and integration, especially labour market integration. These principles are very important, and their historical development has determined many of the features of the picture we see today.

3.1.1 Sector responsibility

A social action to promote equal treatment and equal opportunities for people with disabilities may take place either in the framework of special organisational and legislative settings, or in the framework of the same organisational and legislative settings that concern people without disabilities. In the first case we have made use of the principle of special care, in the second case we have used the principle of sector responsibility.

A principle of special care was established as a legal concept with the social reform of 1933 comprising physically disabled, intellectually disabled and mentally disabled people. After the Second World War special care was improved, but at the same time the idea of integration and sector responsibility gained ground. Sector responsibility was laid down in the white papers behind the second social reform in the 1970s. In fact, the chairman of the social reform commission was also chairman of the Danish Council of Organisations of Disabled People.

The situation however differed for the three groups of disabled people. Developments through the 1960s and 1970s had already dismantled most of the special care apparatus for physically disabled people. This group could most easily leave institutions and special legislation behind and become part of normal society and general administration and legislation. By the end of the 1970s, relatively few were still part of the institutional world.

Intellectually disabled people, on the other hand, were very much affected by the abolishment of special care in 1980. This major reform meant that a number of large institutions were closed throughout the following decade and the inhabitants moved into smaller units, thus the living and working place were separated.

The mentally disabled group were however not part of this process. A few years before the abolishment of special care this group was separated out and placed within the county-based hospital system. Thus the mentally disabled were the only remaining group to remain in a system dominated by medical doctors.

In 1980 the Central Disability Council was established as a replacement for the earlier councils of blind people, deaf people, mobility impaired people, etc. The Central Disability Council became the main instrument for implementation of the principle of sector responsibility. It comprised members from the various organisations of disabled people, all the relevant departments and the local authorities.

In practice, the Central Disability Council came to function as a network between most of the departments whose functions were relevant for disability policy. The departments are represented by civil servants, and the council has bound together disability policy across areas. The local authorities, on the other hand, are many and diverse, and are represented by politicians and so the Central Disability Council has been an effective means of integrating state disability policy.

The Americans with Disabilities Act has had a great influence on European disability policy, and most countries passed anti-discrimination legislation sometime in the 1990s. In Denmark the disability organisations did not want this, as they understood it to be contrary to the principle of sector responsibility. Instead, the Centre of Equal Opportunities was established. It is a body with at first 10, now 16 employees, whose job it is to survey problems, arrange conferences and other information, and thus promote equal treatment, in cooperation with the Central Disability Council. This body has, of course, made the council's work much more efficient.

Since 2000, the Centre of Equal Opportunities has campaigned for implementation of sector responsibility within local authorities. This has been hard work with few results. As part of the ongoing municipal reform, however, disability councils have been introduced in all the new and larger municipalities, thus the chance may have come for a breakthrough here.

In practice, sector responsibility has developed into a process, where a policy network is established and continuously built outwards, and a coherent disability policy built up. The method is not just to remove various barriers and obstacles, as it is for the anti-discrimination strategy, but rather to prepare the way for people with disabilities. It is a widely held opinion that people with disabilities get better results in that way.

3.1.2 Labour market integration

Even in and before the times of special care, self-provision through work has played a major role in disability policy. In 1872, a pastor established an organisation for mobility disabled people built on the ideology that we have to help disabled people to become self-supporting. They developed different aids and established workshops, and grew into a great complex of organisations including an organisation of mobility disabled people that took over power. In the first decades of the twentieth century, they exerted influence all over Scandinavia.

In the twentieth century, legislation such as the disability pension in 1921 and the social reform in 1933 provided the possibility of maintenance provision for disabled people outside the poor law, but the benefits were low and employment was still the main strategy and thinking, also among people with disabilities. Only with welfare expansion in the 1960s did pension provision become a real alternative. During the second part of the 1960s disability pension rates were almost doubled, and pensions were awarded to a much wider circle than before.

At the same time, labour market integration of disabled people was strengthened too. Some of the work developed by the organisation mentioned above was taken over by public authorities, and a law on vocational rehabilitation passed in 1960. The new public rehabilitation centres were built on the tradition of the organisation, but now with far more means. Thus not only the pensions, but also the possibilities of gaining employment or returning to work were ameliorated in this period.

The mass unemployment that came in 1975 and for almost two decades ahead was bound to have serious consequences for the employment of people with disabilities. It was much more difficult to motivate rehabilitation in a situation where getting a job was rather hypothetical, especially as pensions had become easier to obtain and, furthermore, so generous that they were virtually

comparable to many wages. Nevertheless, in the second decade of the crisis a much more active and employment-oriented policy was adopted.

In the latest decade, more favourable trade conditions have created growth, and currently almost full employment. In connection with a considerable political reluctance to increase immigration, pressure for exploitation of the last labour market reserves has come into being. Since 1999 the Institute of Social Research has carried out systematic research into disability and employment, and a great deal of the recommendations arising from this research has been realised in politics.

3.1.3 Employment policy for disabled people

As a consequence of the principle of sector responsibility and the network governance that functions in disability policy, the aim of the policy is to open up all areas for people with disabilities. Thus the areas of employment and ICT in general should be opened up for people with disabilities. A policy of ICT in the employment of disabled people is only relevant in the way that ICT as a technique is relevant for solving these problems.

As mentioned, the tradition of self-provision through work for disabled people was only broken in the first decade of the oil crisis, and municipal and institutional reforms contributed to this break. From the late 1980s an active labour market policy was again installed. The 1990s were used to produce the legislative framework, and the years since 2000 to build up a comprehensive governance network and structure to further the goals.

Through the 1990s a series of laws created more instruments of vocational rehabilitation and limited the access to disability pensions. The Law on Compensation to Disabled Persons in Employment from 1998 (amended in 2000) aims to strengthen and stimulate disabled persons' possibilities to working with the goal of giving them the same options as those without disabilities. It includes provisions for preferential treatment for public jobs, personal assistance and subsidised salaries for the newly qualified. The law for an active effort for employment from 2003 (originally 1995, 1998 – in 2003 revised, renamed and moved from social to employment politics) also includes provisions for disabled people. It stipulates guidelines for subsidised salaries (flex job scheme), subsidised assistance aids and a mentor scheme.

Since 2000 the effort has shifted from legislation to endeavours to get companies, public authorities and disabled people to use the legislation. The government's latest action plan in this area, 'Disability and Jobs – an employment strategy for people with disabilities' from December 2004, sets out three goals regarding employment of people with disabilities: (1) to increase the share of employed persons with disabilities by 2000 persons a year; (2) to increase the share of companies employing disabled persons by one percentage point a year; and (3) to increase the knowledge of employment opportunities and the possibility of getting support or assistive aid that can compensate for disability both among companies and people with disabilities.

The strategy focuses its efforts on three areas which it identifies as the main challenges for disabilities and jobs: increased knowledge about disabilities and jobs, changed attitudes towards disabilities and jobs, and making it easier to combine disability with jobs. There are twelve initiatives within the target areas to reach their goals, among which we find new research projects to create knowledge about both citizens and companies, development of methods for protected employment in municipalities as well as in ordinary companies, different forms of information initiatives, some adjustment of legislation, and a job search and information site for persons with lowered functional capacity.

As part of the negotiations for the special pool for the social area (satspuljeaftalen) for 2005, 80 million DKK (10,8 mill. €) has been allocated to increasing the efforts of securing employment for

disabled people. In connection with this 31 new initiatives have been implemented to improve the employment situation for persons with disabilities. They focus on five target groups: persons with mental disorders and intellectual disabilities, visually impaired persons, persons who have suffered brain injury, persons with dyslexia and persons with impaired hearing, as well as initiatives that target disability in general.

From 2006, another strategy in this area is the action plan 'New roads to employment – Help for persons with mental disorders/intellectually disabled persons and other exposed groups'. The aim of the strategy is to improve the individual's connection with the workforce or education system. It includes initiatives targeted at the individual, the employer and the public area. For the individual it includes initiatives for personal assistance, activity offers and refresher courses. Measures for the workplace are support for colleagues and exchange of employers' experiences while efforts on the public front include a new partnership between the municipalities and local companies, a nationwide network and education and guidance for caseworkers.

The various laws and strategies in this area lead to a situation where employment aid schemes now in use include the aforementioned personal assistance, preferential treatment for public jobs and salary subsidies for newly qualified persons (the 'icebreaker' scheme) as well as for people who receive early retirement pensions. Other measures are payment of the adaptation of the workplace or of assistive aids, including ICT devices, in the workplace by public funds and a mentor scheme. Even if these laws are made use of, the person is said to be in employment 'on ordinary conditions'. This applies to unemployment insurance, sick pay and other factors.

Employment 'on special conditions' is provided by the flex job scheme. In this scheme there are also provisions for situations such as unemployment, but they are a little less favourable. The flex job scheme was used by 24,000 people in 2002 and 44,000 in 2005 (The Danish National Institute for Social Research: forthcoming) and aims to give disabled persons increased options in the job market. It constitutes jobs with special agreements for breaks or working hours and if people with disabilities work part-time the salary is subsidised by public funds to make up a full-time salary.

With regard to reaching the goal of employment for 2,000 more disabled persons a year the latest research from The Danish National Institute for Social Research (forthcoming) shows that 8,000 more disabled persons per year have achieved employment in the years from 2002 to 2005. This result is higher than the action plan's goal, but there are concerns about the coming period.

3.2 ICT policies for disabled people

The first communication issue involving technology that was taken up by the Central Disability Council in its first year was the so-called writing telephone. It was realised six years later, and afterwards transformed into the so-called text telephone. The original concept was adjusted to a telephone monopoly, where it was possible to let the company pay the extra cost. With the liberalisation of the telephone market this was no longer possible.

The report 'The Info-society 2000' in 1994 was the first to place disabled persons' use of ICT on the political agenda. The report was followed up by a government action plan in 1995 'From vision to action', which aimed to develop a plan for the support and integration of disabled persons by the use of ICT. This resulted in the action plan 'Freedom of choice – action plan for disabled persons' use of IT' in 1996 which was followed up by the latest action plan in this area 'Disability no obstacle – Action plan for disabled persons' IT and telecom use 2002'.

The goal of the 2002 action plan is to secure disabled persons' access to the network society and to set out guidelines to ensure that the disabled experience technology as a help, not as a hindrance, in

working life as well as in leisure. The basic attitude of the action plan is that knowledge, counselling, fieldwork and supported development of technology should further disabled people's access to the network society. Thus there is less focus on legislation, although it is acknowledged that if the initiatives do not reach the goals, legislation may be a necessary step. The plan builds on projects that have already been carried out.

The Ministry of Science, Technology and Innovation has, for example, supported a project for synthetic speech, counselling on web accessibility, a pc drivers' licence for visually impaired persons, video telephony and the development of eye tracking software for computers. Furthermore, the National IT and Telecom Agency has introduced initiatives aimed at making public information accessible for all: the web check 'Best on the Net' (an annual project for evaluating the accessibility of homepages of public institutions and authorities), guidelines for the accessibility of net places and electronic documents as well as the development of an internet application that will make accessibility less expensive.

The action plan has six specific goals:

- A strengthened and systematic effort that furthers IT and telecom accessibility in Danish society in general.
- Accessibility to be considered in tenders, development and purchases of new systems and equipment to be used by the public administration.
- Digital self-service in the public sector to be accessible by the use of universal solutions and various types of equipment.
- To further the development of Danish speech recognition.
- To define a new framework for disabled persons in the telecom area, and as a minimum sustaining the current state of affairs while making sure that new technology continuously benefits disabled persons.
- To make use of the type of working relationship between the government, the disability organisations and the IT and telecom trade that best considers the priorities and utilisation of resources.

The main initiatives of the action plan are:

- The founding of the Competence Centre IT for All (KIA) – a new centre under the auspices of The Ministry of Science, Technology and Innovation run by The National IT and Telecom Agency. The main efforts of the centre focus on the key areas of the action plan: accessible information and accessible public workplaces. The fact that the centre is organised within the public sector shall be utilised to influence all IT political decisions and ensure that accessibility is considered wherever it is possible and relevant. The development within digital administration is especially focused upon.
- A strengthening of the Danish Centre for Accessibility which focuses on counselling about accessibility (the centre was closed in 2005 and its ICT functions moved to KIA).
- To increase investments in development.
- Universal design in Europe. The Danish Centre for Assistive Technology is the national contact for the new European Design for All e-Accessibility Network.
- Digital collection and preservation. An initiative to preserve the digital cultural heritage.
- Modernisation of the regulation for the obligation of supply in the telecom area.

- New focused organisation. The Ministry of Science, Technology and Innovation to appoint a steering group for the action plan with representatives from the disability organisations, the IT and telecom trade and The Equal Opportunities Centre for Disabled Persons.

Within the action plan there is a special focus on universal design. This is in line with the general trend in the EU where the eEurope action plans has the furthering of universal design as a goal. In the Danish action plan it is the intention to further universal design on many fronts, although it is recognised that it is not a solution for all problems and sometimes special solutions are needed. In connection with the development of digital administration and digital tools in the public sector, it is the intention that accessibility and universal design is considered.

One reason for this is that it will increase the possibility of recruitment from all groups in society including disabled persons, hence the employment opportunities of people with disabilities are also considered. Therefore, universal design in equipment and software should be the norm when the public sector invests in new systems and accessibility should be considered in all aspects of the procuring of systems in the public sector. The Competence Centre IT for All is an important factor in ensuring that these intentions are met as it is the centre's responsibility to follow up in regard to other public authorities' use of universal design as well as having a counselling and informational role.

The action plan was evaluated in 2005 and the conclusion reached that the legislative preconditions are in place. Therefore, the main issue is to encourage the specific endeavours and utilise all possibilities. This can be achieved by campaigning, increasing knowledge about the existing options, and to further networking and the sharing of knowledge among the relevant partners in the field. The focus on furthering knowledge and innovative projects is therefore in line with the general strategy for assisting disabled persons' access to the job market which also has knowledge and practice as central factors.

With regard to the accessibility of public homepages The Equal Opportunities Centre for Disabled Persons carried out an evaluation of public homepages based on Web Accessibility Initiative's standards in 1998. The test found that few homepages met the required standards, especially the front pages. After new standards were set out by WAI in 1999, the centre carried out a new evaluation. It found that front pages had improved considerably. Apart from that, however, general improvements were slow but moving in the right direction. In 2001 new tests were carried out which found that only 13% of public homepages met the WAI standards and in 2002 it was even less. The centre deems it unacceptable that Best on the Net gives out prizes to public homepages that do not meet the accessibility standards (The Equal Opportunities Centre for Disabled Persons annual report 1998, 1999 and 2002).

Another initiative from the Competence Centre IT for All is the supply-toolbox: program accessible from the homepage which assists the user in making the appropriate demands for a digital solution that is accessible to disabled persons (for example a new homepage or new software). It guides the user through a selection process with various options, and focuses especially on the demands made on the supplier of the solution. The idea is to make these demands early in the ordering process to avoid changes at a later stage which can make the project more expensive.

The supply-toolbox was originally developed for public authorities to use with regard to tenders but everyone is welcome to use it. It is difficult to assess how much this tool is used by public authorities as there is no obligation on their side and users of the program are not registered. There is also no legislation that requires authorities to comply with the standards it sets out.

Currently, the Competence Centre IT for All is running a project to chart the accessibility of public homepages and the most commonly used IT tools in public administration as well as an analysis of the extra cost of implementing accessibility. The report was ordered by the Danish Parliament. It is most important to consider the most commonly used IT tools in public administration as the public sector accounts for a great deal of the market, and may have considerable influence on the development of ICT software.

3.3 Use of ICT in employment of disabled people

Building on the theory of network governance in disability policy, in the form of sector responsibility, we have to consider *agencies and institutions* that have the function of furthering the use of ICT in the endeavours to get disabled people into work and keeping them there. According to the theory, networks supported by agencies and institutions are the flesh and blood of policies. Without such networks, legislation is just a formal frame without content, and projects are merely shooting stars that flash up and disappear as quickly as they came.

On the other hand, networks, agencies and institutions are as nothing if they do not transform their potential into concrete projects, which eventually serve the purpose of opening up society for people with disabilities and giving them opportunities. Therefore, first, agencies and institutions in the field of ICT in employment of disabled people are discussed, and second, examples of projects, which relate to ICT, employment and disabled people are given.

3.3.1 Agencies and institutions

Disability policy is, as previously mentioned, structured in a network governance way. The network was created by the Central Disability Council from 1980, assisted by its agency the Centre of Equal Treatment from 1993. The 'soft' network governance however became a little 'harder' in the late 1990s, when a ministerial committee for transverse disability policy was formed, and one of the ministers was given the task of being the coordinating minister for disability policy. In order to underline the place of disabled people *in* society, this minister is never the social minister. Thus the bottom-up network governance from the 1980s has moved in the direction of a more top-down governed network; however it is still network governance and sector responsibility.

Technological development has moved rapidly in the ICT field. Before a new technology is fully implemented and all relevant citizens with disabilities have got access to it and learned to use it, it is replaced with a much more advanced technology. This is a challenge to state delivery systems of social protection, and creates a situation where only market organisation can keep abreast. There is a development of ICT hardware and software which is impossible to get an overall view of without specialist knowledge. Therefore, the institutes and expert milieus in this area are most important and some examples of such milieus are provided.

Movement and hearing impairment, as well as most other impairments, are dealt with by The Danish Centre for Assistive Technology. It was founded in 1980 by the Danish counties, the city of Copenhagen and the city of Frederiksberg. The centre is a nation-wide, coordinating knowledge centre which aims to support the effort to integrate and ensure the best possible accessibility for people with disabilities in society. The centre works with all aspects of assistive technology including coordinating and participating in test, research and information activities.

Since 1993 the centre has hosted the annual Assistive Technology Fair which has displays of assistive technology as well as lectures, seminars and product demonstrations. At the fair the latest ICT technology in the field can be viewed and tested. The centre also publishes the HIT magazine which

has ICT assistive technology in education as its focus. The magazine contains articles on the latest technology as well as personal stories about disabled persons and their use of assistive technology. Another initiative from the centre is The Assistive Technology Database which is a tool in the provision, selection and purchase of all kinds of assistive technology as well as a source of inspiration for users and their families. Thus, the centre is a major presence in the field of assistive technology.

The Institute for the Blind and Partially Sighted is the organisation that deals with vision impairment. At the institute it is possible to obtain courses, information and counselling about digital solutions that are accessible to this group of disabled persons, also with a view to employment opportunities. The institute employs five data instructors to assist students and employees in assessing and implementing their digital needs. This includes every aspect from the assessment of the impairment in question, visiting workplaces and installing tools and assessing the lighting, etc. to helping people with disabilities person obtain necessary equipment and seeking funds for it. The institute also supports research in the field of visual impairments.

3.3.2 Projects

There is no specific government strategy for furthering disabled people's access to the workforce through the use of ICT. There are, as described above, strategies for labour force inclusion and there are strategies for the development of ICT solutions for disabled persons but the two areas are not directly connected in a joint strategy for ICT and employment. Obviously the development of ICT solutions in general has the potential for furthering employment as they can be used at work as well as at home. Thus the latest technology in the area has the potential to help many disabled persons in securing employment. Also, ICT plays a major part in more general strategies for furthering workforce participation as it is an integral part of the job market and society in general. Therefore the issue of ICT and employment is characterised by single projects in the area rather than a general policy.

The 1996 action plan, 'Freedom of choice – action plan for disabled persons' use of IT', was an initiative for gathering knowledge about research on the use of ICT and *working from home*. It focused on the potential to integrate disabled people in the workforce as well as looking at the risk of isolation from the social aspects of work, but this was not followed up in the 2002 action plan. The reason may be that working from home is of interest to many people other than only people with disabilities. This is an example of a general pattern; solutions that to begin with are disability problem solutions gain the attention of many other groups and are then no longer considered part of disability policy.

The 2004 action plan 'Disability and jobs – an employment strategy for persons with disabilities' seeks to establish a job search and information homepage for disabled persons which in this way utilises ICT to further employment. This site is up and running as information site and uses the job centre's database for job searches. The project is run by The Danish Council of Organisations of Disabled People (DSI) with funding from the Labour Market Administration. This is also an example of a more general phenomenon; the Internet makes it easier to belong to a small special disability group, but this applies to other special niches alike.

Another project is the NetJob project. It ran from 1995 to 2003 and aimed to further employment of highly educated disabled people through upgrading their IT skills. The project was established in cooperation between The Danish Centre for Assistive Technology, Århus County and Århus Job Centre. It worked closely with companies to make sure that the project met their specific IT needs. The project also focused on the integrated development of the skills of the person, thus it aimed to develop both the professional, personal and social skills of the participants to help increase their success in the job market. Through the project 85–90% of the participants found employment and it was widely regarded as a success and was presented as a best practice example by both the Danish

government and the EU Commission. With this recommendation it is astonishing that it closed in 2003 due to lack of funding.

Vejle Job Centre has also run some projects for furthering employment through the use of ICT. It has received funding from the Labour Market Administration for experimental schemes for visually and hearing impaired persons as well as for persons with dyslexia. The centre has also established ICT workshops, a special accessibility room for people with disabilities and installed software for dyslexic persons on all their computers. It has been an inspiration for other job centres and from January 2007, has had a specialist function in the field as a consultancy for job centres in the rest of the country. It also educates the staff from job centres who handle disabled persons' cases.

A project which started in Vejle and was taken further by Århus Job Centre is TegnKom (SignCom) is to secure employment for deaf people by the use of video telephony. The project is funded by the European Social Fund and has set up an interpretation service that interprets sign language via video telephone which is a useful tool in workplace communication as well as for home use. The future aim is to make the service available for users of mobile telephones with video functions as well. The project is an experimental scheme in cooperation with six selected companies and six places of education. The scheme will test digital interpretation, digital counselling and E-learning about workforce integration.

A private enterprise called Specialisterne (the specialists) works to secure employment for persons with autism spectrum disorders (ASD). The company utilises the characteristic traits of autism to solve problems for the business community. Some of these traits, for example attention to detail, structure and a systematic approach are very valuable to the labour market if followed up with attention to the special needs of autistic employees. Among these needs are careful planning, predictability and calm working conditions coupled with reduced working hours. Tasks which the company deals with are mainly testing of software and data entry and data validating. These are jobs that most people find tedious but are well suited to persons with ASD as they enjoy repetitive tasks. The company employs 29 ASD persons and as the employees are not expected to have the required ICT skills when they start out there are also 11 persons in a five-month training programme.

Another project is Huset Venture (Venture House), a business project to employ persons with physical disabilities. It started in 1997 as a project for young people with physical disabilities and was opened to all age groups in 2000. It sells services to companies who choose to outsource tasks, for example marketing, web design, ICT solutions and accounting. The project also has an educational division 'The road back', an assessment and training project for participants working in the Venture House or for another employer. The project was originally supported by funds from the special pool for the social area (Satspuljemidlerne) but the aim is to run the house as a normal business. Currently it employs 40 people.

At this year's Assistive Technology Fair the demonstration of the new speech recognition technology was an important feature. The system has been developed as a partnership between public institutions and private enterprise and won an award from the international 'Speech Technology Magazine' as the most innovative public speech technology project. The technology has both a commercial use as a tool for subtitling live TV programmes and a private use as a tool for writing documents, for example email, via speech recognition in Danish. Other publicly supported projects are the development of an ICT tool for dyslexic persons, access to electronic encyclopaedias for visually impaired persons, a Danish version of Linux that meets demands for accessibility and a Danish speech recognition system for people with physical disabilities to enable them to surf the Internet.

3.3.3 The workplace

Regarding the responsibility of the employer in securing employment for disabled persons it can be said that the responsibility is shared between the employer and the public offices. As already mentioned the adaptation of the workplace or of assistive aids, including ICT devices, in the workplace is paid for by public funds. The employers for their part have an obligation to make reasonable adjustments to the workplace if this does not incur unreasonable costs on the employer and this of course applies to ICT as well as to elevators and other physical adaptations. Thus the previously mentioned regulations that apply to the employment of disabled persons in general, apply to ICT as well.

3.4 Research

In Denmark there is research in the area of employment for disabled persons and into the development of new ICT tools and assistive technology but there is no research in the specific area of public policy, ICT and employment of disabled persons. Related research worth mentioning is that of Birgit Jæger from Roskilde University who conducts research into elderly persons (including elderly persons with disabilities) and their use of ICT and John Paulin Hansen from the IT University of Copenhagen who has done research into the development of eye tracking systems for computers.

Another related research project, run by the Danish Centre for Assistive Technology, is to evaluate the use of ICT for dyslexic persons in their daily life including education and employment. The ICT tool is a PC with software which uses synthetic speech as an aid to read computer documents. The reading skills of the participant are tested with and without the aid, and the long-term effect of the aid is also evaluated by testing after the participant has used the aid for a year. A change in the personal and social skills of the participant as well as changed options in the labour market is also evaluated as a possible effect of using the aid. The project is now at an early stage and will run through 2008.

A research project for ICT in special needs education was run by the European Agency for Development in Special Needs Education with participants from many countries including Denmark. The project aimed to establish a European web database on relevant information in the subject. More specifically, the aims were to provide an overview of existing country-based information in relation to ICT in special needs education (SNE), highlight the key issues regarding ICT in SNE in the countries and identify examples of interesting ICT in SNE practice that could act as useful reference material for teachers and support professionals in other countries. The project ran from 1999 to 2001.

The Institute for the Blind and Partially Sighted is also involved in research. Recently the report 'Of course I am going to work' was published. It is a study from 2006 into a group of blind and partially sighted persons' work experiences. One of the conclusions that concerns ICT in employment is that it without a doubt causes problems for people with disabilities when they have to wait for equipment and software to be implemented and installed at the workplace. This problem recurs when the workplace updates their systems or installs new ones and the whole process starts over again and is a particular problem for employees whose jobs rely heavily on ICT.

The Institute for the Blind and Partially Sighted is a partner in the E-learning for Visually Impaired Persons project, an international project with partial funding from the European Commission. The aim of the project was to improve the access to e-learning services and -products for people with visual impairments. The project focused on three strategies: a survey of existing e-learning courses in all the participating countries considering the special needs of people with visual impairments; spreading information about the problem to developers, service providers and other stake holders; and

developing an e-learning accessibility rating system and guideline for service providers and for developers of multimedia and e-learning platforms. It ran from March 2005 to August 2006.

Quite a lot of research into ICT for disabled persons takes place at Aalborg University. The network centre HanDiaTek is located there and is aimed at furthering dialogue and sharing experiences by persons who have communicative disabilities and professionals working in the field of alternative communication as well as researchers and manufacturers. HanDiaTek arranges one or two network meetings a year as well as theme days and newsletters. The network also builds on research from The International Society for Augmentative and Alternative Communication (ISAAC), Center for Sensory-Motor Interaction (SMI), the Center for Personal Communication (under the Department of Communication Technology, Institute of Electronic Systems, Aalborg University) and The Centre for Technology for Disabled Persons in the County of Northern Jutland.

Research projects at Aalborg University include Ove Kjeld Andersen's research into synthetic speech, Lotte Struijk's project on a tongue-controlled keyboard placed in the mouth and Tom Brøndsted's voice-controlled mouse.

3.5 Discussion of challenges attached to national policy

As described above there are general policies for the furthering of employment for disabled people as well as policies for the development and furthering of ICT for people with disabilities but no specific strategies for inclusion into the workforce of impaired persons through the use of ICT. The policies set out the framework but the initiatives in this area, to a great extent, come from below, from private initiatives, universities and organisations for disabled persons.

It could be argued that the information society calls for a more specific public strategy for the inclusion of disabled people into the workforce through the use of ICT. It is necessary to have public funding for development of ICT, both hardware and software, for disabled persons as the target group is too small for private enterprises to be interested on their own; it is simply not financially viable to develop ICT solutions for such a small market. On the other hand, public funding is viable as many solutions for disabilities are cutting edge technologically and eventually can or will be used by people without disabilities as well. The telephone, typewriter and email were, for example, all developed for use specifically by disabled persons but are now used by everyone. Also, the recently developed speech recognition system in Danish has a potential use far beyond persons with impairments.

It can also be said that the development of ICT both solves and creates problems for certain disabilities. An example is dyslexic persons. For them it is nearly impossible to find employment where basic reading and writing skills are not demanded due to the growth of the information society, on the other hand, the developments in ICT can be used by dyslexic persons to compensate for their disability, but generally more demands are made on the individual with regard to education and communication skills. These demands have an effect on persons with disabilities as well as the general population.

In connection with the forthcoming municipal reform, the country will be made up of five regions instead of 14 counties. The policies for development of business will focus on making each region a centre for certain types of business development and build up business clusters in the area. The region of Northern Jutland could be a likely candidate as a frontrunner or business cluster in the field of disabilities and ICT as there already are several research projects in place at Aalborg University. Likewise, the region of Southern Denmark could be a candidate as it has Vejle as its administrative centre and Vejle Jobcenter is already a frontrunner in the field of ICT and disabilities.

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The Danish Centre for Assistive Technology (Hjælpemiddelinstituttet)
The Danish Council of Organisations of Disabled People (Det Centrale Handicapråd)
The Centre for Technology for Disabled Persons (Teknologicenteret for handicappede)
The Equal Opportunities Centre for Disabled Persons (Center for Ligebehandling af Handicappede)
The Institute for the Blind and Partially Sighted (Instituttet for Blinde og Svagsynede)
The Labour Market Administration (Arbejdsmarkedsstyrelsen)
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Links

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www.hmi.dk (The Danish Centre for Assistive Technology)

www.ams.dk (The Labour Market Administration)

www.ijobnu.dk (Portal for information on jobs and aids for disabled persons and employers)

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4

ICT policy in Norway – disability and working life

By Inger Lise Skog Hansen, Fafo

4.1 Introduction

This paper gives an overview of ICT policy in Norway towards disabled people. We focus on national ICT policy, both in general and more especially towards disabled, and ask how this policy relates to accessibility for disabled people. We describe what has characterised development in Norway in recent years relating to both special technology and universal design. The platform for our interest in ICT policy is how these policies relate to ICT as a means for inclusion in the labour market. Finally, we give a presentation of the system for supporting assistive aid in Norway, both for everyday life and working life and, in addition, other measures to ensure that disabled people gain access to necessary ICT in the workplace.

4.1.1 Norwegian disability policy

Since the 1970s Norwegian disability policy has built on the principles of normalisation/integration and sector responsibility⁴. The two first White papers to the Parliament on disability policy were White papers no. 88 (1966-67) and no. 23 (1977-78). The two main goals stated in these papers were the principles of organisational and social integration of disabled people, and in Norway these have been recognised as a public responsibility. The motto for the international year of disabled people in 1981 was full equality and active participation, and this goal was later adapted by the Norwegian government. This policy has mainly been formulated through governmental action plans for disabled people, and the responsibility to follow up in different areas assigned to the different bodies and ministries responsible for that area in general, although, one ministry has had overall responsibility for disability policy and coordination of the efforts. This is the Ministry of Social Affairs, today the Ministry of Labour and Social Inclusion⁵. Since 1993 there has been a State Secretary Committee responsible for following up overall disability policy. In addition, there is the Norwegian State Council on Disability established in 1969, an advisory body for ministries and the civil service.

In 1990 the government presented the first Governmental Action Plan for disabled people, which was the first of three overall plan documents on disability (1990–93, 1994–97, 1998–2001).

The report of the Manneråk Committee, Official Norwegian Report 2001:22 *From User to Citizen*, made it very clear that there is a large division between the political goals of full equality and the reality. The report documents and describes how barriers in society exclude people with disabilities from equal participation. For the first time in an official report this exclusion is addressed as discrimination. The sub-title of the report was ‘a strategy for dismantling of disabling barriers’, and one of the committee’s recommendations was that Norway should formulate an anti-discrimination act. As a follow-up to the Manneråk Committee the government in 2002 appointed a legislative

⁴ Mainstreaming.

⁵ The Ministry of Labour and Social Inclusion consists of the former Ministry of Social Affairs and the Ministry of Labour.

committee to investigate the need for legislative and judicial measures to strengthen the legal status and protection against discrimination of people with disabilities. This committee presented a new report with a proposal for anti-discrimination legislation in 2005. In the recommendations of the committee they had not included demands of accessibility to ICT as part of a new discrimination and accessibility act. One of the many responses to the arranged hearing on the proposal is why they have not included demands on ICT. The government has noted that a Green paper to the parliament on this issue will be presented by the end of 2007/beginning of 2008 and signs from the government indicate that demands of the universal design of ICT will be covered in the legislative proposal.

The Manneråk report was followed up by White paper nr. 40 (Breaking down barriers for disabled people, 2002–03) to the parliament. In these documents the principle of sector responsible is established again, and one of the strategies together with universal design is to remove barriers and promote equal rights for disabled.

4.1.2 The position of disabled people in the labour market

The average employment rate in Norway is relatively high; around three-quarters of the population of working age (16–66 years) are employed. At the same time, less than half of disabled people of working age are employed. The proportion of disabled people in the workforce has been more or less stable at around 45% from 2000 to 2006 (LFS data, Hansen and Svalund 2007). During the same period there has been an intensifying of the workfare policy to get more people outside the labour market into employment. This policy has in recent years been concentrated around the agreement for an Inclusive Working Life (Inkluderende Arbeidsliv, hereafter called IA). The first IA agreement was signed in 2001 by the Norwegian government and the social partners⁶ in the labour market. The agreement has three aims: to reduce sickness absence, to increase the recruitment of employees with impairments and to raise the age of retirement. It is worth mentioning that signing up to the IA agreement is optional for businesses.

4.2 Norwegian ICT policy

Norway, like many other European countries has had a national ICT policy since the mid 1990s. The background is the rapid development during the 1990s and maybe, most importantly, 1993 when the World Wide Web made the Internet available to a mass market and the Clinton /Gore administration in the USA launched its action plan *National Information Infrastructure*. The need for a comprehensive ICT policy was discussed in a 1993 EU White paper and followed up by a high-level group of experts, that in 1994 submitted the report *Europe and the Global Information Society*, also known as the Bangemann-report (Storsul 2002:34).

The first overall ICT policy document in Norway came in 1996 with the report ‘The Norwegian Way to the Information Society. Bit by bit’ published by the State Secretary Committee for IT. There had been initiatives before that, but within different sectors and not as an overall ICT policy. Of specific interest about this paper are several White papers within the education field from the beginning of the 1980s concerning pupils with special needs and that they should have access to available computer technology in education.

Ten years later ‘The Norwegian Way to the Information Society. Bit by bit’ is fascinating reading. There is an underlying strong belief in technology as a driving force for development, new industry,

⁶ Employers’ organisations and unions.

jobs and welfare. The situation is described as standing on the doorstep to a new society, the information society. This development and change in society was seen as so fundamental that it could be compared with the industrial revolution and characterised as 'The revolution we are living in the midst of...' Much of this rhetoric could be explained with the need to draw attentions to a new policy area, but also a strong political desire that Norway should participate in this development and industry. In this document we find two core elements of political concern that have followed Norwegian ICT policy up to the present: one economic concern and one social concern. The first concern is about Norway participating in the new industry and not losing out in competition with other countries; the other concerns the risk that the information society and the new technology may lead to a divided society. The social concern has made accessibility for everyone one of the most important principles for all ICT policy since. The government has, in different ways, tried to contribute to greater accessibility so that all citizens should have access to new technology. These concerns have first and foremost been about geography, that citizens in all regions of Norway should have equal access, and then about gender, age and also disability. Disability has never been the main concern related to the danger of new social divides, but has been more and more articulated over the years.

The optimistic view of the new technology's prospects also concerns persons with disability, in the hope that there will be possibilities for participation.

For users with special needs and demands for accessibility information technology can support total different possibilities for active participation, reduce handicap and give possibilities for independence and quality of life.

(The Norwegian Way to the Information Society 1996: Chapter 2.)

In this first overall report we can identify three statements concerning disabled people. First, is that the new technology provides new possibilities for independence and quality of life for people with disabilities. Second, is a concern that this new technology may contribute to new barriers and exclude groups of disabled people if the solutions and products are not adapted to the needs of different user groups. Third, is that the new technology has already opened new doors to the labour market for people with disabilities, but that there is still great potential for utilising new technology and other kinds of assistive aid to create new jobs and workplaces for people with disabilities(The Norwegian Way to the Information Society. Bit by Bit; 1996). These three points could also be seen in the current approach towards ICT for people with disabilities.

From 1996 to 2000 the responsible minister for ICT gave almost annual statements to the parliament on ICT policy. In 1999 the EU launched the eEurope initiative and the year after Norway presented the first eNorway plan. Since then these eNorway plans have been the main policy documents for ICT policy.

The first time that universal design was mentioned was in the eNorway 2000 plan in relation to giving grants for research and development work in the area of research: 'Ensure that grants for R&D work contain requirements that the recipient must take into account the greatest possible degree of universal design' (eNorway 2000 p. 8, action 3.20). Universal design is not a topic of the plan, but gives a signal that universal design has come into the vocabulary. One reason for universal design being addressed by research could be that already in 1998 the government had initiated a research programme, IT-Funk that was to promote research within ICT and accessibility for people with disabilities.

In 2000 the State Secretary Committee on disability policy asked the Ministry of Trade and Industry to discuss how the considerations concerning people with disabilities could be dealt with in further work with eNorway. This led to a working committee that delivered recommendations that were followed up in the later eNorway plans. The Delta-Centre⁷ acted as secretariat for this committee.

4.2.1 eNorway 2009

The most thorough policy document on ICT of the eNorway documents is “eNorway 2009 – the digital leap (Ministry of Modernization 2005). The government’s ICT policy is presented and the documents form an umbrella for all ICT initiatives at government level. The Ministry of Modernisation is the ‘ICT ministry’ and supports cross-ministry cooperation. Each ministry, sector of business and all levels of authorities are responsible for realisation of the actual projects and initiatives within their area.

The eNorway 2009 has three target areas:

- the individual in the digital Norway
- innovation and growth in business and industry
- a coordinated and user-adapted public sector

The main goal in the area of ‘the individual in the digital Norway’ is:

The Governments wants everyone to have the opportunity of participating in the information society. Digital services must be adapted, focused on the needs of the individual (eNorway 2009:6).

Statistics show that the Norwegian population has a very high access to the internet and digital services. More than 80% had Internet access in 2005, and the number of people with access had grown from one million in 2001 to more than three millions in 2005.

In the area of digital participation for everyone, the eNorway emphasises it is important that electronic services and tools are adapted for general use, and that digital divides are avoided. In relation to more concrete policies and initiatives in this area they refer to the government’s action plan for increased accessibility for persons with disabilities. In the plan for universal design in key areas, presented in 2004, ICT is one of the prioritised areas.

One of the concrete goals in eNorway 2009 is that by 2007, 80% of all official websites shall meet Norge.no’s quality criteria regarding accessibility⁸. Official websites should adhere to the international WAI (Web Accessibility Initiative) guidelines. Norge.no carries out annual quality marking of official websites, where some of the criteria have been based on the international WAI requirements. In the eNorway 2009, the government also states that they will use public procurements to impose requirements to producers and suppliers concerning the universal design of ICT tools⁹. Another area is the transformation to a digital television network. In the plan the government states that licensing

⁷ The Delta Centre: Information and counselling office on accessibility under the Directorate for Health and Social Affairs.

⁸ In 2004 7% of public sector websites met the Norge.no criteria for accessibility. At the end of 2005 more than 30% met more than 75% of the criteria.

⁹ A new public procurement act – corresponding to the European Union Directive 2004/18EC came into force in January 2007. This act includes provisions concerning universal design, even though usability for disabled is not mentioned in particular.

authorities will emphasise the way operators and broadcasters offer accessibility to digital transmission for all.

Digital public services have been highly prioritised for several years now, and have for shifting governments been a main strategy for a modern and more effective public sector. In eNorway 2009 it is stated that development of digital services for the population shall build on open standards. The argument is that use of particular word processing systems, browsers and email software shall not be decisive for access to public services. Increased user adoption, standardisation and coordination are seen as one of the main challenges that the public sector has to face. Chapter 3.2. discusses the use of open ICT standards and open source applications. It notes that all applications must be compatible if user-focused services online are to be achieved. Standardisation, especially in the field of communication and data exchange, is important for increased electronic communication. Public sector agencies should apply open standards in their ICT and information systems.

eNorway 2009 has several goals in this area including the following:

- By 2009, all new ICT and information systems in the public sector shall use open standards.
- By 2006, a set of administration standards for data and document exchange should have been established.
- By 2006, all public sector agencies should have incorporated how they are going to use open standards, service-oriented architecture and open source applications in the relevant planning documents.

The former centre-right government presented eNorway 2009 in 2005, but there has been a large degree of political consensus on the main issues and targets. The present red-green government has had a high profile on ICT from the beginning, with several ambitious statements on this issue in their governmental declaration (Governmental declaration 2005-2009). One of the issues within the ICT area was to stimulate the development of technology following the principles of universal design, using public procurements to claim universal design and have an offensive ICT policy for the development of the public sector. These statements reflect a development that has taken place in Norway in recent years. Universal design and accessibility to ICT has become an issue on the political agenda. In addition, in the governmental declaration, this government also took up a clear position pro an anti-discrimination act to give legal protection against discrimination for disabled people. The government presented the first White paper on ICT policy in December 2007, An Information Society for All (White paper 17 2006–2007). In this White paper digital inclusion is one of the main targets. The government states that a policy for digital inclusion must have three pillars:

- accessibility to the net, to equipment and to information
- universal design of ICT
- digital competence

The White paper included several specific initiatives to promote digital inclusion and accessibility. This also included stricter regulations for official websites to follow the WAI criteria. The government has also made a proposal that all new ICT targeted at the general public shall be universal designed by 2011. The Government has also funded a project to work out indicators and standards for universal design of ICT.

4.3 Relevant institutions for ICT and people with disabilities

4.3.1 Norge.no

This is a government website responsible for guidance in making it easier to reach public services and public information. Norge.no is also responsible for encouraging implementation of government information policy concerning accessibility and universal design of online public services.

4.3.2 The Delta Centre

The Delta Centre was established by the Government in 2001 as information and counselling office on accessibility under the Directorate for Health and Social Affairs. The centre engages in work to promote universal design, participate in working out guidelines and having the possibility to contribute in funding relevant projects and research. The centre has published two guides to accessible web pages for use in public procurements and web design (Asplund 2006, Brynn 2006).

4.3.3 IT Funk

In 1998, the Research Council of Norway was commissioned by the Norwegian government to set up a Research and Development programme on information technology for people with disabilities, known as IT FUNK. The Ministry of Social Affairs and the Ministry of Trade and Industry funded the programme. The programme was evaluated in 2002 and found to be a useful tool in improving access to the information society for disabled people by supporting R & D on accessible ICT-based products and services. The government therefore decided to prolong the programme for a new four-year period. When the new four-year programme was launched the announcement to the press had as its headline '30 million shall get more disabled into work' (Ministry of Social Affairs 2003). Through research and development projects knowledge about how to design ICT-based products and services that are accessible for everyone should be placed on the agenda. The new programme should have a specific focus on education/training and work, and contribute to accessible solutions. As an example FAFO had a project partly financed by IT funk focusing on how the utilization of technological solutions at the new business administration office of Telenor was working in relation to including employees with disabilities at the work place (Drøpping and Hansen, 2005)

The purpose of IT FUNK is to:

Contribute to accessibility for all, including disabled, to information and communication technology (ICT) and to society through the use of ICT (www.itfunk.org/docs/engpres.html).

IT Funk provides financial support to different kinds of projects based on universal design and to projects on assistive technology. Enterprises in the ICT sector are in charge of most of the projects, so that the products and services developed will be updated and available in the market in the future (www.itfunk.org).

4.4 Universal design

As shown earlier, universal design is mentioned in eNorway 2000 in relation to grants for research and development projects. This reflects that universal design was starting to become known by decision-

makers. If we look at legislation and regulations there has been some provisions concerning universal design for a long time, but the problem is whether these provisions include ICT and what is meant by universal designed ICT.

The Act of University and Colleges has had provisions about Universal design since 1995. This act states that the physical learning environment should be designed upon the principles of universal design. It has not been clear, if this include ICT, and there has been a discussion about whether ICT is part of the physical learning/working environment.

The Government Action Plan for people with disabilities 1998–2002 dealt with several things that has contributed to bringing universal design onto the agenda. The Delta Centre was made a permanent body. There were increased demands to accessibility in the Act on University and Colleges, and the first action plan for increased accessibility was initiated. The report from the Manneråk committee in 2001 and the following White paper to parliament helped to bring universal design onto the agenda, and established universal design as one of the main strategies to dismantle disabling barriers in society.

From 2002 the Norwegian government gave the Ministry of Environment the mandate to coordinate efforts to achieve universal design and strengthen the overall impact of these efforts.

The first Programme of Action for Universal Design was implemented from 2002 to 2004. The programme was targeted towards decision-makers and employees at all levels of government administration. Its purpose was to raise awareness and promote training as well as foster good solutions in practice. An evaluation of the programme concludes that it only had access to limited funding, but clearly contributed to increased awareness and knowledge about accessibility issues (Hanssen and Schmidt 2005).

The programme of action was the precursor to the government's action plan for increased accessibility for persons with disabilities the 'Plan for universal design in key areas'. The Ministry of Environment and Ministry of Work and Social issues launched the new action plan for accessibility through universal design in 2004. Accessibility to ICT is one of the key areas and the main focus within this is accessibility to websites. The specific targets within the ICT area are: stimulating to research, making production and distribution of audio books and digital versions of student literature and fiction more effective, improving the contents and accessibility of government web pages based on principles of universal design, and developing software for improved accessibility to electronic maps and an interactive world atlas.

Other important initiatives are that the Delta Centre has worked out guidelines about universal design in public procurements, which also include guidelines about ICT (Brynn 2006), and Norge.no has cooperated with the the Delta Centre to work out guides on how to design accessible websites (Asplund 2006).

As mentioned earlier, the issue of universal design is lifted to a higher level with indications that a demand for universal design of ICT will be covered in the government's proposal for a discrimination and accessibility act. The government has recently arranged a hearing for a proposal that claims that all new ICT directed towards the general public should be universal designed by 2011.

4.4.1 Open standards and open source

A great deal to do with universal design and accessibility to ICT in Norway is about websites, open standards and open source. Standards are important in the perspective that they are essential because

for many groups of disabled standards determine whether they are able to benefit from the generally available ICT systems and devices and, of course, able to participate in many modern workplaces where digital equipment is an essential work tool for everyone.

Standard Norge has worked out a plan of action on how standards can promote the principles of universal design (Standard Norge m.fl. 2004). Within the ICT area are accessibility to websites, digital broadcasting, adjustments and adaptations in working life.

In the summer of 2005 a work group appointed by the Ministry of Modernisation presented recommendations about the use of open standards and open source in the public sector (Ministry of Modernization 2005).

The autumn 2006 the government launched an initiative on open standards and open source in the public sector. The argument was that everyone should be able to communicate with the public sector without being dependent on specific programmes from specific providers. This is not a specific measure for accessibility for people with disabilities, but of great importance for several groups of disabled. This was followed up in the White paper Information Society for All (White paper nr. 17 2006-2007).

4.5 ICT and working life

As showed earlier, ICT has from the first overall policy document been seen as opening new doors for people with disabilities to the labour market. However, it does not look as though this has actually opened doors dramatically, when the fact is taken into consideration that only 45% of disabled people of working age in Norway are employed.

Accessibility to general ICT is important to participate in today's working life. The work on WAI standards, open standards and open source is important in that perspective. One of the problems is that in many cases accessibility to ICT is not covered or it is unclear whether it is covered in provisions and acts on accessibility or universal design. The Planning and Building Act provides regulations about accessibility, but it is unclear whether this includes ICT.

Many initiatives has been taken on education and training. In the action plan for digital competence from the Ministry of Education and Research in 2004, one of the elements emphasised is that increased digital competence can contribute to reduced exclusion from the labour marked. They also emphasise adjustments for all, accessibility to websites and that with public procurements there should be claims about universal design. This document also emphasises that the public sector should stimulate the use of open source and open standards.

The Working Environmental Act has regulated decisions on accessible workplaces and adjustments in the workplace for many years. New provisions in the act from 2005 provide better protection against discrimination of disabled people in working life.

The following paragraphs from this act are the most important:

Chapter 4:

§4-1(4): Passageways, sanitary facilities, work equipment, etc. shall to the extent possible and reasonable be designed and arranged so that employees with disabilities can work at the undertaking.

§4-6(1): If an employee suffers reduced capacity for work as a result of an accident, sickness, fatigue or the like, the employer shall, as far as possible, implement the necessary measures to enable the

employee to retain or be given suitable work. The employee shall preferably be given the opportunity to continue his normal work, possible after special adaptation of the work or working hours, alteration of work equipment, rehabilitation or the like.

Chapter 13: Prohibition against discrimination.

Chapter 13 relates to all aspects of employment (advertising of posts, appointments, relocation and promotion, training, pay and working conditions, termination of employment). We do, however, find the same limitation here as in Chapter 4, 'as far as possible and reasonable...'

§ 13-1(1): Direct and indirect discrimination on the basis of political views, membership of a trade union, sexual orientation, disability or age is prohibited.

§ 13-8: Burden of proof

If the employee or job applicant submits information that gives reason to believe that discrimination has taken place in contravention of the provision of this chapter or that retaliation has taken place in contravention of section 2.4 as a result of the employee's notification of a breach of the provision of this chapter, *the employer must substantiate that such discrimination or retaliation has not occurred.*

To follow up on the new provisions in the Work Environment Act the Norwegian Labour Inspection Authorities in cooperation with the Delta Centre has produced a booklet on guidance on arranging work by computer screens. In these guidelines they emphasise the principles of universal design. It is pointed out that the workplace must have the capability to adjust to the user and that the employee should have training in this. They also state that it should be possible to add and/or supplement with assistive technology and equipment that could compensate for handicaps (The Norwegian Labour Inspector Authorities 2006).

The government has in different ways contributed to some projects on ICT and work for people with disabilities. In the form of Funk Web and Funk Work, projects initiated and run by FFO – an umbrella organisation for user organisations of people with disabilities. The project offered education and training for people with disabilities in computer and net-based work. In addition, they established Funk Work to assist in getting people into work. There have also been projects on tele work for people with disabilities, using ICT-based work tasks. Telenor, the largest telecom company has a trainee programme for disabled people with some computer skills giving them further education within ICT and later on work as a trainee in ordinary departments of the firm.

The right to necessary ICT equipment is well covered in the Norwegian system and the next chapter describes this system. The major challenge is maybe to ensure that employees and employers know about these rights and the different technological solutions available.

4.6 The system for accessibility to assistive technology

The National Insurance Administration, from July 1 2006 the Norwegian Labour and Welfare Organisation (NAV), has the overall professional, financial and administrative responsibility for assistive aids in Norway. This is a public, tax-financed responsibility.

There is an Assistive Technology Centre in every county. There are two nation-wide resource centres on information technology: the Centre for Assistive Information Technology in Oslo and one in Bodø (northern Norway). This is a unit within the NAV (Norwegian Labour and Welfare organisation) that develops human resources and spreads information about IT aids. This unit has two target groups:

people with complex mobility problems (people with physical handicap and/or brain damage) and people with combined loss of senses (sight/hearing).

The right to assistive aid is covered in the National Insurance Act and the National Insurance covers the costs of assistive aid for people with disabilities.

In the National Insurance Act § 10 disabled people's rights to assistive aid are defined:

§ 10-5: Support to increase functional ability in working life.

- To members that have had their capabilities to carry out income aggregating work reduced long term or have had their possibilities to choose an occupation or workplace considerably reduced.

§10-6: Support to increase capabilities (degree of functioning) in everyday life.

When a person has had his degree of functioning in everyday life considerably and lastingly reduced due to illness, injury or impairment, there is given support. The support is given in relation to devices that are necessary and adequate to increase the member's functional ability in everyday life or so that the person can be nursed at home.

Those who fulfil the criteria after § 10-5 and § 10-6 have the right to assistive aid as more specifically defined in § 10-7.

In 2005, assistive aids, parts, accessories and services in this field were purchased for a total of NOK 2.5 billion. Almost 25% of this expenditure related to spending on ICT (e.g. computers and accessories (NIA 2006). The NAV owns the assistive aids, which are lent to the users.

A special unit (Division for Assistive Technology Procurements Contracts) at the National Insurance Administration decides what products and aids will be approved and taken into the national collection (national database). There are specific rules for participating in these public tenders. There is a national and local assortment of assistive aid. Each Assistive Technology centre in the counties establish a local collection from the national database.

The Assistive Technology system (different levels) within the NAV has many different responsibilities within this area. They have contact with producers, arrange tenders, approve and assess which products are most adequate, assess the user's need of assistive aid, lend out the products to the users and are responsible for maintaining the budgets. In short, this means that the NAV or the state plays a role at all stages in the Norwegian diffusion system.

To ensure user participation in the assistive aid area a national committee has been appointed. Meetings are held once every quarter. In addition to the user organisations the Assistive Technology Division and the Division for Assistive Technology Procurements Contracts in NAV are represented. Producers are not represented on this committee.

The Assistive Technology Centres are expected to have the expert knowledge needed to find solutions for a range of areas, including home, school, works and leisure time.

From 2006 the Assistive Technology Centres introduced a Guarantee Certificate, a guarantee for quick help and assistance in the adjustment of workplaces. This arrangement came as a consequence of users experiencing that it could take a very long time before they received the support, equipment and guidance they needed. The aim of this arrangement is to make it easier for disabled job-seekers to be considered in the employment process.

4.6.1 Computer aids

NAV can lend out or give financial support for help with IT/computer devices. The terms are that the person has a considerable and lasting disability (more than two years), and that it is necessary and adequate that computer devices will better the degree of functioning. If, for example, a person is active in politics and needs to write a lot, this person can have the necessary support to buy a computer. A computer will make it possible for him/her to participate.

The claim for aid should be submitted to the municipality if the aid is needed to improve functional ability in everyday life, primary or secondary school (high school). The municipality is responsible for making an assessment of the need and to state the reasons. If the need is associated with higher education or occupational rehabilitation the application should be assessed by the school/place of study or by Aetat (Norwegian Public Employment Service). The application is then sent to the Centre for Assistive Information Technology for approval.

Computer aid means standard computer devices, IT tools, equipment to handle the computer and different kinds of communication aids.

Most usually, ordinary/standard computer devices are paid for by the user and any kind of adjustments by the National Insurance Scheme. There is a list of products with negotiated prices (national collection) that the users are supposed to choose from. In many cases when the user has severe and extensive impairments there will not be adequate products with negotiated prices available. In these cases they have to apply for an exemption to buy other specialised products, which are most often agreed to.

4.7 Closing remarks

When it comes to the use of ICT two different approaches or strategies to increase inclusion in society for disabled people can be identified. One is to emphasise universal design – i.e. to ensure that products and solutions, as far as possible, are usable by people with diverse disabilities. The other is to provide assistive aid to narrow the gap between the individuals' capabilities and the environment's demands regarding functioning. In Norway, traditionally, there has been most focus on assistive technology, but there has been a shift.

At policy level there have been several initiatives to promote universal design in Norway in recent years. It appears that one of the main problems is that there are no actual binding regulations and clear rules in the area of universal design and ICT. In several areas it is unclear what universal design within ICT means, what does it include and how is it achieved. The proposal for the discrimination and accessibility act that has been under review did not include universal design within ICT because services were not included in the provisions about universal design. As stated before, the government has proposed that all new ICT should be universal designed by 2011, and notified that this area will be covered in the new law on discrimination and accessibility. This proposal is restricted to all new ICT directed towards the public field of society, but do not include ICT systems for workplaces. Several of the consultative bodies to the arranged hearing have pointed out that this is a problem with the proposed regulation.

There is a system for gaining access to technological aids in the workplace. There are provisions in the Work Environmental Act. The new provisions in this act have led to new guidelines from the Norwegian Labour Inspector Authorities on work by computers emphasising universal design. There

have been major governmental initiatives to stimulate the work for open standards and open source. It remains to be seen whether this succeeds. One of the problems so far has been lack of regulations and authority behind the good intentions. The main challenges for inclusion in modern working life are access to the new technology so fundamental in almost all workplaces and compatibility between general ICT and assistive aid.

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5

CT Strategy, Disabled People and Employment in the UK 'State of the art' paper

By Sally Wilson, Nigel Meager and Darcy Hill

This paper focuses on the application of ICT (Information and Communications Technology)¹⁰ in helping disabled people enter and remain in employment in the UK, and in particular on the nature and extent of any national ICT and/or disability strategies in this area. It is prepared as the UK component of the first stage of an internationally comparative project (covering, in addition to the UK, Norway, Denmark and the Netherlands). The paper is based on a review of the limited academic literature and relevant policy documents available in this area, together with semi-structured expert interviews with a small number of key informants in the ICT field, in disability organisations and government.

It is not the intention in the paper to summarise all of the measures the UK government has put in place to facilitate access to the labour market for people with disabilities. Relevant legislation and employment policy have been described in some detail by the present authors in a recent paper prepared for a related multi-country research study on *Disabled, Working Life and Welfare State* (Meager and Hill 2006), and we refer, where relevant, to that earlier paper in what follows. Rather the approach of this present paper is:

- To provide an account of the UK government's vision of ICT as a growth area and its implications for workers with disabilities;
- To describe the 'on-the-ground' provision of ICT for disabled people in the UK for employment purposes;
- To attempt a preliminary assessment of the overall 'strategy' in relation to ICT provision for disabled people in the UK. A key difficulty faced in preparing the paper, and a key provisional 'finding' of the paper, is the apparent lack of any coherent national strategy in this area. This incoherence has been acknowledged within government (Prime Minister's Strategy Unit, 2005) and the cause has been taken up by several disability action groups which are currently lobbying for change.

The paper has the following structure: first we provide a brief summary of national disability policy in the UK, and an overview of disabled people's position in the UK labour market. We then turn to look at ICT policy, and the extent to which it emphasises the inclusion of disabled people in the labour market. Next we briefly discuss the approach of 'universal design' from a UK perspective, before going on to look in more detail at the role of ICT in supporting disabled people to enter and remain in

¹⁰ Note: for the purposes of this paper, we defined ICT products as technological interventions which enable person-to-person or person-to-machine communication in the exchange of data, ideas and information. This technology can deliver increased independence to people with mobility, sensory, cognitive and communication difficulties and enhance their employment opportunities. Examples of ICT used by disabled workers in the workplace include: voice recognition software which allows a visually impaired user to speak commands into the computer and dictate documents; speech synthesizers which can read out electronic documents; technology to enable hearing-impaired users to conduct telephone conversations; keyboards which allow control of a computer solely by eye/head movement (widely used by individuals with cerebral palsy); accessible website design. The sources referred to and cited in this paper refer to this type of equipment variously as Assistive Technology (AT), Communication Aids (CA) and in some cases Augmentative and Alternative Communication (AAC). Strictly speaking these terms are not interchangeable (for instance CA can refer to 'low-tech' solutions such as interpreters), but in order for this review to be inclusive of several key documents we have not restricted our search to sources that specifically refer to ICT.

the labour market, identifying the key legislation and public provision relevant to this area and the key actors and initiatives involved. We conclude with some brief remarks about future challenges for national policy.

5.1 National disability policy, and disabled people in the UK labour market

5.1.1 National disability policy: brief overview

As previously set out in Meager and Hill (2006), national disability policy in the UK, insofar as it impacts on disabled people's employment and their participation in the labour market, is heavily influenced by two important policy trends. These trends have developed in parallel with different, and sometimes even contradictory, implications for disabled people's labour market participation.

The first, described in Thornton and Lunt (1997), has been the growth of people with disabilities people's movement and the pressure for a civil-rights approach to public policy for disabled people, based on the social model of disability rather than the traditional medical model. The implementation of anti-discrimination legislation in 1996 through the Disability Discrimination Act 1995 (DDA) marked an important step in this direction.

The second, is the emergence of a 'welfare to work' approach to active labour market policy (ALMP)¹¹ which has had, in its more recent developments, major implications for policy towards disabled people and the labour market. Increasingly, welfare to work policy has focused on getting economically inactive groups, including disabled people, into the labour market. This policy emphasis has been driven by a number of factors, including:

- Government targets to **raise the overall employment rate** in the UK to 80%.
- A concern at government level with **reducing the level of public expenditure on social benefits** for inactive groups (expenditure on disability-related benefits has grown by a factor of three since the early 1990s to a current level of around GBP 12 billion per annum.
- An **ideological preoccupation** encapsulated by the slogan 'work first' and heavily influenced by the American approach dominated by this notion that employment is the single most important mechanism for reducing welfare dependency and social exclusion.

In line, in particular, with the 'welfare-to-work' strategy, key developments in UK labour market policy which affect disabled people include the following::

- An increasing emphasis on **supply side measures** (i.e. measures which focus on support or incentives for disabled people to enter work, rather than support or incentives for employers to recruit them).
- An emphasis on **'making work pay'**, through benefit reforms and tax credits.
- Increased level of **'activation'** in the implementation of policies, through a greater degree of compulsion and mandatory participation of disabled people and other workless groups in the various active labour market measures. Eligibility criteria for receipt of incapacity-related benefits

¹¹ For a broader account of the recent developments in UK active labour market policy, see Meager (2006).

have been progressively tightened, and under proposals produced in a recent welfare reform green paper (Department for Work and Pensions, 2006), the government plans to replace incapacity benefit with a new benefit (the *Employment Support Allowance*) and the rate of benefit, and the degree to which pressure will be exerted on the individual to seek work will depend on an assessment of the individual's capability to work.

- A greater degree of **individualisation** in support packages offered to disabled people through active measures, with services delivered by 'personal advisors' providing customised support, advice and guidance to disabled job seekers.
- A growing involvement of the **private and voluntary (NGO) sectors** in the delivery of active labour market measures for disabled people and other target groups. The latest welfare reform green paper (Department for Work and Pensions, 2006) envisages further extension of this trend in future initiatives.
- A growing emphasis on **early intervention and preventative measures**. Increasingly this concern is being translated into a policy focus on the 'inflow' into incapacity benefits, rather than the 'stock' of long-term benefit-dependent disabled people.

In line with the broad strategic trends described above, the current portfolio of national policy measures, initiatives and developments in the UK aimed at increasing disabled people's labour market participation has been described in detail in Meager and Hill (2006), but the key elements of policy can be described as follows (and the key measures under each item are summarised in Table 1 below):

- **Mainstream active labour market measures.** These are employment or training programmes, not specifically targeted at disabled people, but in which disabled people can participate, often on different or advantageous terms, compared with non-disabled people).
- Active labour market or support **measures targeted at disabled people.** These include measures offering: job search support and advice and guidance; medical rehabilitation and 'condition management'; financial incentives; supported (sheltered) employment (as well as supported placements in mainstream employment settings), and a range of other initiatives.
- **Employer-focused measures.** These include financial support to employers in making adjustments and adaptations for disabled people (through Access to Work, discussed in more detail in section 5.4.1 below), as well as a small wage subsidy scheme for employers recruiting disabled people.
- **Tax and benefit reforms** and incentives. Key reforms here involve the introduction of tax credits (in-work benefits) which aim to address the benefit traps faced by many disabled people on entering employment, as well as reforms to benefit regulations which aim to make it easier for disabled people to enter the labour market while alleviating their fears regarding loss of benefit entitlement.
- Anti-discrimination **legislation** and institutions. The key features here are the Disability Discrimination Act 1995 (DDA), which protects disabled people from discrimination in the field of employment (as well as a number of other spheres of day-to-day life), and the Disability Rights Commission (DRC), an independent statutory body set up to support the implementation of the DDA. The DDA and the DRC are further discussed in subsequent sections of this paper.

Table 1: The main UK policy measures aimed at disabled people's labour market participation

Mainstream active labour market measures	Active labour market or support measures targeted at disabled people	Employer-focused measures	Tax and benefit reforms and incentives	Anti-discrimination legislation and institutions
New Deal for Young People	New Deal for Disabled people	Access to Work	Working Tax Credit (with Disability Premium)	Disability Discrimination Act 1995
New Deal 25-plus	Pathways to Work	Job Introduction Scheme	Permitted Work Rules	Disability Rights Commission
New Deal 50-plus	WORKSTEP			
New Deal for Lone Parents	Disability Employment Advisers			
New Deal for Partners	Work Preparation			
Work-based training for Adults	Job Retention and Rehabilitation Pilot			
Work Trials				

5.1.2 The position of disabled people in the UK labour market

A paper prepared for the previous study *Disabled, Working Life and Welfare State* (Meager and Hill 2005) analysed the labour market situation of disabled people in the UK. In this section we briefly summarise some of the key features of that analysis.

While the degree of disadvantage depends very much on the definition of disability used, it is clear that disabled people are heavily disadvantaged in labour market terms. Under the definition of 'long-term disabled' used in official statistics, around 7 million working age people in the UK (or 19% of the total) are disabled, but only just under half of these (49.6%) are in work, and most of the remainder are outside the labour market (or 'economically inactive') altogether. Over a million inactive or unemployed disabled people would like to work, however. There has been little or no change in the proportion of disabled people in work in recent years, despite the implementation of the Disability Discrimination Act 1995, and the introduction of a number of active labour market measures aiming to (re-) integrate disabled people with the labour market.

In part, the labour market disadvantage of disabled people reflects the fact that they are much less well-qualified than non-disabled people. Thus, 26% of disabled people have no educational qualifications at all, compared with only 11% of non-disabled people. At the other end of the spectrum non-disabled people are twice as likely to have a university degree or equivalent as are disabled people. In part, the disadvantage of disabled people also reflects the fact that disabled people are, on average, much older than non-disabled people (43.5% of disabled people are in the 50–64 age range, compared with only 20.4% of non-disabled people). These differences in personal characteristics between disabled and non-disabled people only explain part of the labour market disadvantage, however, and this disadvantage persists once age, qualifications and other measurable characteristics are controlled for.

There is also a geographical dimension to the extent of disabled people's labour market disadvantage. Disabled people have worse employment chances than non-disabled people in all local labour markets in the UK, but the extent of difference (measured by the ratio of the employment rate of disabled

people to that of non-disabled people) is much less in economically thriving local areas (this may reflect a greater willingness of employers in such areas, often faced with labour shortage, to be more flexible and inclusive in their recruitment strategies, than employers in more depressed local economies).

'Disabled people' are a very heterogeneous group, and the degree of labour market disadvantage they experience varies dramatically with the nature of their impairment. In particular, people whose 'main impairment' is a learning disability or mental illness are much less likely than others to be in employment (25 and 20%, respectively).

Disabled people, who are in work, have a similar sectoral profile of employment as do non-disabled people (although they are slightly more likely to be employed in the public sector, than is true of non-disabled people). They are, however, much less likely than non-disabled people to be found in higher level managerial and professional occupations, they earn on average 10% less per hour than non-disabled workers, and they are less likely than average to receive work-related training. On the other hand, they are somewhat more likely than average to be found in part-time work and in self-employment and it is possible that these forms of work offer greater flexibility to some groups of disabled people than more conventional full-time employee jobs.

5.2 National ICT policy and its link to disabled people

5.2.1 National Technology Strategy and the Role of ICT

The Technology Strategy Board within the Department of Trade and Industry (DTI)¹² has identified ICT as one of seven Key Technology Areas where the UK has the potential to generate significant added value in global markets (Department of Trade and Industry, 2006). However the potential of ICT to increase workforce participation of disabled people is only loosely embedded in this vision. Neither disability nor assistive technology is explicitly mentioned in the department's strategy document on ICT (Department of Trade and Industry, 2006a). Nevertheless, the document does acknowledge that access to ICT '... determines the ability of an individual to derive benefits from public services and to operate effectively in society'.

A recent UK government strategy document which focuses on digital telecommunications (Prime Minister's Strategy Unit, 2005a) lists 'Improved accessibility for the digitally excluded and ease of use for people with disabilities' amongst its action points. Specific initiatives under this action include ensuring that disabled people can access all government websites and online services.

The government also sees a role for new technologies in addressing social exclusion, and helping socially excluded groups such as disabled people. The strategy document (Office of the Deputy Prime Minister, 2005) includes references to how technology can be used innovatively to gain access to the job market, claiming that:

ICT changes the nature of a considerable number of jobs, in a way that allows the development of a more inclusive labour market. It introduces opportunities for home working, more flexible working patterns, better engagement in the workforce of disabled people and a range of new jobs.

¹² DTI is the UK Ministry for Industry

The document does not go into the detail, however, of how ICT technology can or should be utilised by disabled people to get, or progress in, work.

5.2.2 Internet and website accessibility

The government has promoted improved website access as a key technology for improving access to key aspects of twenty-first century life, including work, for disabled people. While it is hard to discern a clear strategy in this area, the e-government Unit (part of the Cabinet Office) has published guidelines on accessibility in their *Guidelines for UK Government Websites*¹³. More generally, and going beyond government websites, the Disability Discrimination Act (DDA), requires employers and service providers to make ‘reasonable adjustments’ for disabled people, and an accessible website is given as an example of a reasonable adjustment in DDA Code of Practice. Despite this, a recent investigation by the UK Disability Rights Commission found that 81% of a representative sample of UK websites failed to satisfy the most basic of their web accessibility criteria (Disability Rights Commission, 2004)¹⁴.

5.2.3 Strategic initiatives in ‘telecare’ and related areas of ICT

On the general theme of health-related technological innovations, telecare is currently the subject of intense government interest. Here, the emphasis is on enabling home-based (as opposed to workplace) independence. This is principally targeted at an older age group who might otherwise be placed in care homes, or need hospitalisation, and is at the heart of national concerns about an ageing population, cuts in health and social care provision, and a shortage of hospital beds. This has resulted in the formation of an ‘Electronic Technologies Policy Collaborative (ETPC)’, which is a multi-ministerial working group, led by the Department of Health¹⁵. While it is doubtful that this strategy and this type of technology will be of direct benefit to the employment prospects and social participation of working-age people with disabilities, it is possible that there may be some beneficial spill-over effects due to investment in user-friendly ITC.

5.3 Universal Design

While the concept of ‘universal design’, developed in the USA (see Preiser and Ostroff, 2002), and the related concept of ‘design for all’, developed in Europe (similar in emphasis to universal design, but with a greater emphasis on social inclusion within a context of cultural diversity – see Benktzon, 1993) have been influential in the UK, that influence has not extended to the development of a national government-led strategy for universal design¹⁶, and such progress as has been made has been driven largely by the disability movement itself, and by non-governmental organisations concerned with art and design, notably the Royal College of Art (RCA), the Royal Society for the Encouragement of Arts, Manufactures and Commerce (RSA), and the Centre for Accessible Environments – CAE (www.cae.org.uk), none of which have an exclusive or particular emphasis on ICT.

¹³ <http://e-government.cabinetoffice.gov.uk/Resources/WebGuidelines/fs/en>

¹⁴ <http://www.drc.gov.uk/PDF/2.pdf>

¹⁵ See <http://www.innovation.gov.uk/innovationreport/index.asp?lv11=2&lv12=2&lv13=0&lv14=0>

¹⁶ Although the Department for Trade and Industry ‘Foresight’ programme did highlight the key role which could be played by universal design in increasing accessibility for **older people** (DTI, 2000)

In its UK variant, the universal design movement is typically called ‘inclusive design’, which its proponents argue (see Coleman, 1994) provides a less ‘prescriptive’ approach than universal design, with a focus on encouraging and supporting businesses in a rapidly changing marketplace to respond to needs highlighted by social and demographic change, including the needs of disabled and older people.

While it seems likely that the most recent provisions of the Disability Discrimination Act 1995 (which came into force in 2004, and places a legal requirement on the providers of goods, services and facilities to remove, alter or provide a reasonable means of avoiding a physical barrier which prevents disabled people accessing services) can be seen as providing a further indirect boost to the inclusive design movement, since they provide a strong legal incentive for manufacturers to incorporate inclusive design concepts into their products, the DDA itself does not stress the notion of inclusive design, and neither has it led to a national government strategy on inclusive design. In a good example of increasing official recognition of the concept, however, it is of interest to note that people with disabilities Persons’ Transport Advisory Committee (DPTAC) which is established to advise the government on transport access issues for disabled people, has recently been promoting inclusive/universal design (<http://www.dptac.gov.uk/fi/01.htm>).

Finally in this context, it is worth mentioning the Disability Rights Commission (DRC). The DRC¹⁷ operates as an independent statutory body serving to eliminate discrimination, promote equal opportunity and support the UK disability legislation. Relevant background on UK disability law and the role of the DRC is provided in Meager and Hill (2006) (from 2007 the DRC will be abolished and its role incorporated within a broader Commission for Equality and Human Rights which will also cover discrimination on grounds of gender, age, religion and sexual orientation, and eventually also race). The DRC is campaigning strongly on website accessibility, following the results of their investigation mentioned in section 5.2.2¹⁸ above.

5.4 ICT and accessibility for disabled people

The overall UK government strategy for increasing the participation of disabled people in the labour market, and its evolution over time, were described in some detail in Meager and Hill (2006), and summarised in section 5.1 above of the current paper. Neither of the two key strands of that strategy (the extension of civil rights and anti-discrimination legislation on the one hand, and welfare-to-work initiatives on the other) place any significant or explicit emphasis on the development of ICT as a key mechanism for enhancing the inclusion of disabled people in the labour market (although, as noted above in our discussion of inclusive design it is arguable that some of the recently implemented provisions of the DDA which concentrate on goods and services may provide an indirect boost to the development of inclusive technologies in general, if not ICT in particular).

To exemplify this lack of emphasis on ICT, we can note two key strategy documents with implications for disabled people’s employment, which have recently been published by the UK government, neither of which mention the potential of ICT to improve access to the labour market: Prime Minister’s Strategy Unit (2005) and Cabinet Office (2006). Although it makes no explicit reference to ICT, however, the latter of these documents discusses the ‘fragmentation of disabled peoples’ needs across different systems’ and concludes that there is ‘no integration in the support or equipment needed

¹⁷ See ‘Access to Assistive Technology in the EU’

¹⁸ http://www.drc-gb.org/Search_Results.aspx?txtSearchTerms=technology&butGo.x=15&butGo.y=17&

both in and out of the workplace, because of different budgets and delivery systems.’ This is a conclusion that applies to assistive technologies in general as well as to ICT in particular.

Similarly, the most recent welfare reform green paper (Department for Work and Pensions, 2006) which sets out a range of benefit and other reforms aiming to increase the employment rate of disabled people (as well as other groups, such as lone parents, with high rates of benefit dependency) is notable for its lack of references to assistive technologies as a key part of the overall strategy.

5.4.1 Legal regulations and government provision

A key legal framework which affects all aspects of disabled people’s lives in the UK is the Disability Discrimination Act 1995, which outlaws discrimination against disabled people in employment, the provision of goods and services and other areas of life. The DDA does not provide an entitlement to disabled people to specific aids and support, but it does place an obligation on employers and services providers to make ‘reasonable adjustments’ to ensure that disabled people are not at a disadvantage in employment or in access to goods and services. Depending on the circumstances, reasonable adjustments might include the provision of assistive technology including ICT. As noted above (section 5.3), the recent (2004) extension of the DDA to require service providers to remove physical barriers preventing access to services may provide an indirect boost to the universal design movement in the UK. Another recent development of the DDA (2006) has been the introduction of a new duty in the DDA, which goes beyond the duty not to discriminate and places positive obligation on all public bodies to ‘promote equality of opportunity for disabled people’; again, while this does not specify what kinds of aid and support might need to be provided to disabled people, it may also provide, over time, a further pressure for more widespread provision of adjustments for disabled people (ironically, however, the new obligations on the public sector may indirectly have a short-term impact in the opposite direction, due to the removal of Access to Work funding from parts of the public sector – see section 5.5 below).

Apart from the DDA, our review of the documentary evidence available suggests that the overall legislative framework and approach to state provision of ICT and other assistive technologies to improve disabled people’s labour market position is fragmented in the extreme, a conclusion which is perhaps unsurprising given the lack of a coherent overall national strategy noted in the previous sections. The fragmentation of provision of assistance for disabled people (in the labour market sphere as in other areas of social and economic life), the spread of responsibility across a large number of national and local government departments and agencies, and the diversity of legislative instruments which bear on this area are all noted in the chapter on the UK in an EU-wide review of access to assistive technology (Deloitte and Touche, 2003).

In practice, however (and at the risk of some simplification of the complex maze of state institutions involved in this area), legal regulation and provision of assistive technologies (including ICT) relevant or potentially relevant to disabled people’s labour market access falls into at least three broad streams:

- Technologies provided as part of an ‘independent living’ strategy, mainly through the Department of Health (DH) and local authorities.
- Provision through the Department for Work and Pensions¹⁹ (DWP) and the public employment service (*Jobcentre Plus*) explicitly focused on entry to and retention in employment.

¹⁹ The combined UK Ministry of Labour and Social Security.

- Provision through the Department for Education and Skills (DfES) for disabled people in the education and vocational training systems, which may indirectly be relevant to subsequent labour market entry.

We consider each of these areas briefly in turn.

5.4.1.1 Department of Health (and local authority) provision for independent living

The National Health Service and local authorities (municipalities) are required by a range of long-standing legislation (including the National Assistance Act 1948, the Chronically Sick and Disabled Persons Act 1970, people with disabilities Persons (Services Consultation and Representation Act) 1986, and the NHS and Community Care Act 1990 and the Health Act 1999), to make assessments of need and provide services to meet the needs of disabled people (which may include the provision of special equipment or technology).

In 2000 the Audit Commission (Audit Commission, 2000), and in a follow-up report (Audit Commission, 2002), criticised community equipment services supplied through the NHS or local authorities to older or disabled people, for being badly organised in many areas of the country and concluded:

It is clear that the UK lacks a national focus on services which are designed to assist independence, such as is available in Scandinavia and the USA.....[...]the way that equipment services are organised remains fragmented rather than being a modern integrated service fit for the 21st century

In similar vein, and with a specific focus on assistive technologies, Deloitte and Touche (2003) pointed out that financial cutbacks within the UK National Health Service (NHS) have impacted on provision of all types of equipment which assist independent living, and noted that:

The market for supply of Assistive Technology in the United Kingdom is generally qualified as being in a poor state. Profitability is low; therefore expenditures in research and development are almost negligible, leading to very little innovation..... The National Health Service's forceful cost reduction strategy is often mentioned as the underlying cause. Hence choice for people with disabilities is almost inexistent, and they are supplied essentially with basic and standardised equipment.

Partly in response to critiques of this kind, the Department of Health set up the Integrating Community Equipment Services (ICES) initiative to modernise services and overcome fragmentation in provision²⁰. This appears, to date, to have had limited impact on overall provision of ICT; thus when surveyed in 2004, 81% of ICES had not integrated the provision of communication aids and support into their service²¹.

In addition to ICES there is a range of provision through the Department of Health and local authorities, aimed at supporting, in different ways, the independent living of disabled people (and also the Independent Living Funds funded by the Department for Work and Pensions – described further below). This provision and the associated funding is, however, of relatively little relevance to the current study as it tends not to focus on workplace issues, and it is not generally oriented to supporting assistive technologies and related interventions (indeed, in some cases, such support is explicitly excluded). For completeness, however, it is worth briefly mentioning the main mechanisms:

²⁰ <http://www.icesdoh.org/about.asp>

²¹ www.fastuk.org/fastdocuments/Options%20review%20v4.doc

- **Local authority-provided social care services**, insofar as they make provision for disabled people are not focused on assistive technologies, rather they tend to fund home visits and provide financial support to disability information centres²². Some local information centres loan equipment or sell it to disabled people, but such items tend to be ‘low-tech’ and not specifically employment-oriented. It is possible, nevertheless, that some local centres will be providing or funding ICT support to disabled people (and it is possible that some of this might be of labour market relevance). There is no central source of information on the range of services provided in this way at local level, however, so it has not been able to confirm this during the present study²³.
- Disabled Peoples *Grant*²⁴ is a funding mechanism administered by local authorities, to finance adaptations in disabled people’s homes in order to enable them to continue living in the community rather than in residential care. The grants (up to a maximum of £25,000) are means-tested (and available only to people with low levels of income and savings), and tend to be focused mainly on physical adaptations to houses (e.g. wider doors, ramps, lifts), although some adaptations which might involve an ICT component might also be funded (e.g. adaptations to heating or lighting controls). Such grants are given by local councils under Part I of the Housing Grants, Construction and Regeneration Act 1996.
- *Supporting People*²⁵ (funded by a number of government departments and co-ordinated by the Department for Communities and Local Government, the national government ministry with responsibility for local government) provides ‘housing-related support’ through local authorities and other social housing providers to a range of ‘vulnerable’ groups, including disabled people, aimed at supporting ‘independent living’. The services funded seem to relate to personal assistance and help rather than ICT solutions.

5.4.1.2 Department of Work and Pensions provision

Access to Work

Disabled workers are, in principle, able to access the necessary and appropriate assistive technology for their jobs via Access to Work (AtW)²⁶, under the administration of *Jobcentre Plus*, an agency of the Department of Work and Pensions (DWP), formed by the merger of the public employment service and agency responsible for the delivery of social security benefits. As described in Meager and Hill (2006), AtW is for disabled people who need extra practical support to do a job. It covers both people taking up a new job, as well as people in existing jobs (as a job-retention measure). It helps employers and self-employed people, through a system of financial grants, with the costs of special aids and workplace equipment, as well as adaptations to workplace premises and equipment. *Jobcentre Plus* subsidises the full cost of the adaptations in cases where disabled people is newly entering work; in cases where disabled people person is already employed, the employer must also

²² As an example of the support provided by local authorities see Leeds City Council

http://www.leeds.gov.uk/Health_and_social_care/Disabilities/page.aspx

²³ Again, taking Leeds as an example, the Leeds Centre for Deaf and Blind People is a voluntary organisation (NGO) largely funded by the social services department of Leeds City Council. It provides, for example, equipment for daily living to people with hearing impairment. This includes amplified and flashing light doorbells and telephones, vibrating clocks and loop systems for use within the home to amplify conversation, TV, etc. Advice can also be given on other equipment such as smoke alarms, Text TVs and video caption recorders.

²⁴ http://www.direct.gov.uk/en/DisabledPeople/HomeAndHousingOptions/YourHome/DG_4000642

²⁵ See: <http://www.spkweb.org.uk/NR/rdonlyres/06E6FD41-4804-4B78-BDD9-343EC58117A2/4165/WhatisSuppPeopleLP.pdf>

²⁶ For further details of Access to Work, and evidence from a qualitative evaluation of the service, see Thornton et al. 2001, and Thornton and Corden 2002.

make a contribution. The range of support which is funded can include alteration to work equipment, adaptations to premises, payment for travel-to-work costs, payments for a support worker, or the provision of a communicator or interpreter.

In the financial year 2003/04, some 34,800 disabled people were supported through Access to Work, at a total programme cost (excluding administration costs) of £55.8 million (National Audit Office, 2005). Although there has been no controlled impact study of access to work, surveys of users' views (Thornton et al., 2001) and qualitative evaluations (Thornton and Corden, 2002) suggest that the main impact of the programme has been to support the continued employment of disabled people already in a job when they applied for assistance – over 90% of Access to Work users were already established in work, rather than being new recruits or job applicants, which suggests that the impact of the programme on the inflow into work of disabled people is likely to be small. There is some evidence of deadweight, although the scheme attracts generally positive views from users (both individuals and employers), and it is clear that in many cases it does make a difference to the chances of individuals remaining in work. Disproportionately, participants are in professional occupations, and people with sensory impairments are significantly over-represented among beneficiaries of the scheme.

Special Aids and Equipment (SAE) Support is the element of AtW which can be used to provide people with an in-work disability need with ICT for employment purposes. No published information is available on the share of the total AtW budget which goes to SAE support. However, we have been provided, by Jobcentre Plus officials with internal data of the total expenditure on SAE support under AtW, which shows that, for the last three financial years, the expenditure was as follows: 2003/04 £14.72m; 2004/05 £13.19m; 2005/06 £12.05m. It is noticeable that this suggests a slight downwards trend in expenditure over time, and it indicates, when combined with the overall data on AtW expenditure, that just over a quarter of AtW expenditure is devoted to Special Aids and Equipment. To date, we have been unable to secure precise data on the number of individuals supported through the SAE element of Access to Work, but if we assume that the average expenditure per individual is similar for SAE support as for other kinds of SAE support (and this may be a strong assumption), then this would suggest that around 8000 to 9000 individuals per year receive such support. Clearly this support also includes some which is not ICT-related support and unfortunately, according to expert interviews with Jobcentre Plus officials undertaken for the present study, no data are collected on the type of assistive technologies that are supplied or used via SAE support, which effectively makes it impossible to assess the proportion of SAE funding which is devoted to ICT support, or the number of individuals who receive such support in a given year.

Drawing on information provided in expert interviews and official documentation for the current study it seems that, typically a disabled employee (or potential employee) with an ICT requirement would contact an AtW call centre and complete a form setting out their requirements. Subsequently, an AtW advisor would contact them directly, or a technical consultant would be called in to make an assessment. ICT assessments are provided by agreed contractors, of which AbilityNet (described further in section 5.4.3 below) is one²⁷.

In practice, evaluations suggest there is relatively low awareness of AtW among the target population (both disabled people and employers). This view was reinforced by the expert interviewees contacted for the present study, who suggested that those obtaining ICT through Special Aids and Equipment Support tend to be workers who are IT literate, more assertive and know how to 'work the system'. Note that major changes in the coverage of AtW currently are being implemented. This may have

²⁷ <http://www.abilitynet.org.uk/>

significant implications for provision of assistive technology within the public sector in particular (see section 5.5 below).

Other DWP/Jobcentre Plus programmes

While Access to Work, discussed above, is the main route through which ICT and other assistive technologies relevant to the workplace are channelled to disabled people, there are (as noted in Meager and Hill, 2006) a number of other mechanisms and initiatives through which DWP and Jobcentre Plus provide support for disabled employees and potential employees, and which may occasionally involve some workplace adjustments or assistive technologies. Thus, a key element of the frontline services for disabled people, provided by the Jobcentre Plus is the network of Disability Employment Advisers (DEAs) based in local areas, which provide a range of support, advice and information to disabled job-seekers, including the provision of information and referrals to other government programmes and schemes, the arrangement of assessment and employment rehabilitation. In particular, in the case of people with severe disabilities, they can offer a route to the WORKSTEP programme of supported employment. This programme (see Purvis et al., 2006) is a development of the previous Supported Employment Programme, targeted at people with more severe impairments or facing more complex barriers to entering employment. While the main mechanisms through which WORKSTEP provides a transition to mainstream employment for severely disabled people, involve supported work placements and there is no specific focus on workplace adaptations, we were informed by DWP officials in expert interviews for the current study that WORKSTEP funding is also sometimes used for workplace adaptations including assistive technologies.

Independent Living Funds (ILF)

The Independent Living Funds are discretionary trusts created and funded by the Department for Work and Pensions, operating at arms length from Government. They are financed by cash limited grants-in-aid and managed by a Board of Trustees appointed by the Secretary of State for Work and Pensions. The Trustees have discretion about whom they help within the framework of the Trust Deeds. The Funds were set up as a national resource dedicated to the financial support of disabled people to enable them to choose to live in the community rather than in residential care. Awards are in the form of regular four-weekly payments to individuals, which are used to buy personal care in the community. Recipients may use care agencies or employ personal assistants, but it is not permitted to use the funds to pay for items of equipment or adaptation.

Department for Education and Skills (DfES) provision

At present, it is argued by disability organisations in the field in the UK²⁸, that school-age provision for individuals with disability-related ICT requirements is significantly better than that for adults. This can largely be attributed to the £21 million (Euro 30 million) provided by the DfES to fund the Communication Aids Project (CAP) which ran between 2002 and the early part of 2006²⁹. This has had a significant impact on the supply of ICT equipment, assessment and training in schools in England.

The subsequent curtailment of CAP is a contentious topical issue and has provoked vigorous campaigning by disability action groups and fierce debate within both Houses of Parliament^{30,31}. The

²⁸ See: www.fastuk.org/fastdocuments/Options%20review%20v4.doc

²⁹ <http://cap.becta.org.uk/about.php>

³⁰ <http://www.theyworkforyou.com/lords/?id=2006-03-27a.537.0&s=speaker%3A13368>

³¹ <http://news.bbc.co.uk/1/hi/education/4701230.stm>

government has argued that CAP funding was never intended to replace local authority and school funding for equipment and resources, and that local provision will remain.

Irrespective of the level of provision for school-age disabled people, however, there is a long-standing set of problems (also well-documented and highlighted by disability organisations) which relate to the point of transition between the education system (schools and colleges) and the labour market. In many cases, equipment is retained by the educational establishment, and not by user who thereby loses not only the equipment, but associated IT support and assessment (this issue of transition was heavily emphasised in expert interviews for the current study).

5.4.2 Financial arrangements (who pays?)

As can be seen from the discussion of legislation and government provision in section 5.4.1 above, there is a wide range of mechanisms through which national and local government may fund support of various kinds for disabled people. Some of these funding mechanisms come from particular ministries/departments directly, some are 'cross-departmental' funds which draw on several ministries/departments, and some are delivered through local authorities (municipality). For the individual disabled person looking to obtain funding for support to assist them in daily life or in the workplace, the picture is a very complex and fragmented one (an important experiment with 'individualised budgets' is, however, attempting to simplify this fragmentation and this is discussed further in section 5.5 below). The picture is further complicated by the fact that the different funding streams have different and sometimes overlapping uses to which they can be put. In particular:

- Several of the funding sources focus at a very general level on providing support to disabled people for 'independent living', and do not have a particular workplace emphasis.
- Some funding sources emphasise personal support or housing support, and cannot or cannot easily be used to provide support for equipment or assistive technology.
- Even where funding sources can be used for equipment/assistive technology, and where they can be used for support in the workplace, there is no specific government funding source specifically focused on providing *ICT support* in the workplace, although Access to Work in particular may be used for these purposes.

Table 2 summarises the main funding streams and initiatives for supporting disabled people in daily life and in the workplace, and it can be seen that despite the overall complexity and fragmented nature of the funding arrangements, there is only one key funding stream, Access to Work, which is both specifically focused on the workplace, and which includes funding which is designed to support workplace adjustments and assistive technology (ICT).

Table 2: Key government funding streams for support for disabled people in daily life/employment

Initiative/funding stream	Source of funding	general/personal support for independent living/housing, etc	can be used for equipment/assistive technology (incl ICT)	can be used for workplace support
Local authority social care services	Local authority	✓	?	
Disabled Facilities Grant	Local authority		?	
Supporting People	Cross-departmental fund (co-ordinated by DCLG)	✓		
Independent Living Fund	Department for Work & Pensions	✓		
Integrated Community Equipment Services	Department of Health + Local authorities		✓	?
Communications Aids Project (<i>stopped in 2006</i>)	Department for Education & Skills		✓	?
Access to Work	Department for Work & Pensions (Jobcentre Plus)		✓	✓
Disability Employment Advisers/WORKSTEP	Department for Work & Pensions (Jobcentre Plus)		?	✓

5.4.3 Non-government provision – the role of NGOs and employers

As can be seen from this document, access to ICT for workers with disabilities is hampered by fragmentation of provision, funding issues and low awareness. On the positive side, and partly reflecting the widespread critique of state provision, there is significant activity at grass-roots level to raise the profile of these issues and campaign for change. A plethora of voluntary organisations and multi-organisation and multi-sector partnerships also serves to help users navigate government systems of provision (mainly through their websites) and raise awareness of the various types of statutory funding and support within the current system.

5.4.3.1 *Foundation for Assistive Technology*

The Foundation for Assistive Technology³² (FAST) exists to promote research into ICT and other assistive technologies, to ensure that product development reflects user needs, and to build partnerships between users, manufacturers and service providers. The FAST website is reporting that a number of factors limit the uptake of new assistive technologies in the UK. These include:

- A lack of collaboration and information sharing among researchers and developers.
- Limited consultation with users of assistive technology, manufacturers and service providers during the development process.

³² <http://www.fastuk.org/aboutus.php>

The FAST website argues that:

There is anecdotal evidence that, due to the lack of clear funding routes within many local areas, a proportion of funding currently being spent on Augmentative and Alternative Communication (AAC) services and communication aid provision is 'unofficial' or unaccounted for. Planning and commissioning services is made difficult due to the lack of evidence of the cost-effectiveness of providing equipment or the level of need. Funding lacks strategic planning with higher levels of funding targeted at people in Higher Education with little available in many local areas.

At present FAST resources are primarily focused on the 'lack of education and training for all practitioners working with AT across sectors and disciplines' and are working in collaboration with skills bodies to promote professional development in assistive technology and develop a nationally recognised competency framework³³.

5.4.3.2 AbilityNet

AbilityNet³⁴ is a charity providing free information and advice, individual assessment of technology needs, and consultancy for employers on system and workstation adaptations and web accessibility. Some income is generated from assessments they complete as a contractor for private clients and statutory bodies. This income is used to assess the needs of individual ICT users with disabilities, to deliver free IT support and source value-for-money equipment.

5.4.3.3 Mainstream disability NGOs

In addition to those NGOs discussed above which specifically focus on issues related to assistive technology, there are many hundreds of charities and voluntary organisations of and for disabled people in the UK, many of which specialise in working with people with a specific type of impairment, and many of which offer services and support, including assistive technologies. It would not be possible to summarise adequately the activities of these organisations in a paper of this length, so we simply give a few examples, to illustrate the kind and range of provision offered by such NGOs.

*Royal National Institution for the Blind (RNIB)*³⁵

RNIB is the UK's leading charity dedicated to helping anyone with a sight problem. The organisation exists to help remove the barriers blind and partially sighted individuals face through campaign work and provision of expertise and support services. They offer a range of ICT-related services which include:

- The RNIB Technology Information Service³⁶ provides advice and information sheets about the types of technology that are used in the workplace.
- RNIB Regional Centres³⁷: These provide local support to help people with sight problems get the best education and employment opportunities. Some ICT training is available at the centres but it is not provided for free.

³³ <http://www.fastuk.org/atforum-education.php>

³⁴ <http://www.abilitynet.org.uk/>

³⁵ <http://www.rnib.org.uk/xpedio/groups/public/documents/code/InternetHome.hcsp>

³⁶ http://www.rnib.org.uk/xpedio/groups/public/documents/publicwebsite/public_rnib003084.hcsp

³⁷ http://www.rnib.org.uk/xpedio/groups/public/documents/PublicWebsite/public_eecentres.hcsp#P2_301

- RNIB have recently updated their 'See it Right' guidelines document³⁸. This includes guidance on creating accessible websites for people with sight problems. It also provides information about the use of Braille and audio information in technology and how common software packages, such as Word and Excel can be used by the visually impaired.
- RNIB also runs the Web Access Centre³⁹, a commercial consultancy service, which carries out website accessibility audits for organisations.
- RNIB and Net-Guide⁴⁰, a search engine for the visually disabled, have recently joined forces in promoting awareness of web accessibility issues.

Ongoing financial problems since 2001 have led RNIB to make significant budget reductions over three consecutive years and they are increasingly reliant on their commercial services for income⁴¹.

Royal National Institution for Deaf People (RNID)

RNID is the largest charity representing the nine million deaf and hard of hearing people in the UK. As well as raising awareness of hearing disability issues through campaigning and lobbying, they provide information on many aspects of living with deafness, hearing loss and tinnitus.

RNID actively seeks to ensure that the needs of deaf and hard of hearing people are included in the development process for new products and technologies. They aim to facilitate technology transfer and have worked with business and public-sector partners, such as Vodafone, T-mobile, the BBC, Carphone Warehouse, the Department of Trade and Industry and a wide range of manufacturers⁴². The RNID Product Evaluation Centre⁴³ houses a team of dedicated experts who can review and carry out detailed tests on products that may offer benefits to people with a hearing loss. The Centre has expertise in electronics, IT, consumer ergonomics and product design and offers input and advice to help companies develop products that can be used by deaf and hard of hearing people. In general these R&D partnerships do not appear to distinguish between work and home-based applications of technology.

Similar to RNIB, RNID also provides advice and guidance in relation to employment and workplace access.

- The Employment Training and Skills Service⁴⁴ helps employers make their business more accessible to deaf and hard of hearing people. RNID can provide accessibility audits⁴⁵ for organisations but these are not specifically focused on ICT provision or training.
- The Employment Service for Deaf People⁴⁶ provides employment programmes to help deaf people into work delivered through a national network of employment advisers. Again, this service is not specifically ICT focused.

³⁸http://www.rnib.org.uk/xpedio/groups/public/documents/publicwebsite/public_seeitright.hcsp

³⁹http://www.rnib.org.uk/xpedio/groups/public/documents/code/public_rnib008789.hcsp

⁴⁰<http://www.net-guide.co.uk/content/about.htm>

⁴¹http://www.rnib.org.uk/xpedio/groups/public/documents/PublicWebsite/public_stratdir.hcsp

⁴²http://www.rnid.org.uk/howwehelp/research_and_technology/research_and_technology_partners/

⁴³http://www.rnid.org.uk/information_resources/productsandequipment/evaluationcentre/

⁴⁴http://www.rnid.org.uk/information_resources/employment/

⁴⁵http://www.rnid.org.uk/howwehelp/our_services/employment_advice_deaf_awareness_training_courses/advice_for_employers/our_consultancy_service/what_we_can_offer/

SCOPE

SCOPE, the UK charity which represents children and adults with cerebral palsy, is a vociferous critic of government policy on communication aids. A survey carried out by the organisation in 2000 showed that fewer than half of all respondents had been able to obtain equipment through statutory sources⁴⁷. SCOPE manages a long-running ‘Speak for Yourself’ campaign which aims to establish a statutory right to communication aids and support services across all age groups. The campaign is widely supported by other disability organisations and pressure groups⁴⁸.

5.4.3.4 Voluntary sector and public sector partnership

The AAC Task Force⁴⁹ comprises representatives from a number of charities and public sector organisations (including FAST, SCOPE, the DRC, DH and DfES) which are working together to address the general consensus that

*Current AAC services across the UK are inadequate particularly with regard to the provision of communication aids and technology to support communication*⁵⁰.

Within recent months, meetings have been held to discuss shortfalls in ICT provision and services and to examine models of service provision which can be taken forward by government stakeholders.

5.4.3.5 Voluntary sector and industry partnership

An e-Inclusion Charter⁵¹ backed by disability charities and large UK companies such as BT (the former state telecommunications provider, and the dominant telecommunications company in the UK) was launched in June 2006, as a new initiative which encourages high-technology firms to take usability more seriously. It features a strategy for inclusion and provides practical recommendations for overcoming barriers that prevent disabled people accessing technology. Companies which have signed up to the Charter include BT, Cisco Systems UK, IBM UK, Intel UK & Ireland, Microsoft UK and T-Mobile.

Margaret Hodge, Minister of State for Industry and the Regions also backed the Charter, in a recent speech, referring to the EU as a whole, in which the Minister acknowledged:

*... a current inability to integrate excluded groups into the ICT revolution.....[].....E-accessibility will enable groups like disabled people to access goods and services they cannot access at present thus supporting their inclusion (...) and...enable those who have previously been locked into economic inactivity to take part in work*⁵².

⁴⁶http://www.rnid.org.uk/howwehelp/our_services/employment_advice_deaf_awareness_training_courses/advice_for_individuals/1_to_1/

⁴⁷ <http://www.scope.org.uk/issues/communication.shtml>

⁴⁸ www.timetogetequal.org.uk/downloads/sfy_briefing_170706.doc

⁴⁹ www.fastuk.org/Meeting%2022-06-06%20minutes.doc

⁵⁰ www.fastuk.org/fastdocuments/Options%20review%20v4.doc

⁵¹ http://www.techdis.ac.uk/index.php?p=5_1_1&id=195

⁵² Margaret Hodge, Minister of State for Industry and the Regions 12/06/06

‘e-Accessibility – An Opportunity not a Problem’ http://www.dti.gov.uk/pressroom/Speeches/page30183_print.html

5.5 The future: challenges facing UK policy in this area

As noted above, the limited available evidence on this question in the UK suggests that there is clearly a need for ICT provision for disabled people in the UK to be more co-ordinated across the health, social care, education and employment services. The dominant impression is one of fragmentation, inadequacy and inaccessibility, and the requirements embodied in the Disability Discrimination Act on the providers of goods, facilities and services appear yet to have made a major impact on the provision of ICT and other assistive technologies to disabled people. There is widespread recognition that new infrastructure and models of service delivery must be implemented to address the current shortfall in provision and to streamline delivery.

There is general agreement that two key issues need to be tackled if provision is to be improved in this area:

- One relates to **simplification** – the fragmentation and complexity of the system is clear from the previous sections of this paper. A more streamlined, user-responsive system is required, in order to increase access to, and take up of assistive technologies in general, and ICT applications in particular.
- The second relates to **mainstreaming** – a key underlying principle of the social model of disability when applied to policy, and a key underlying principle of the civil rights, anti-discrimination approach of the DDA, is that support for disabled people in employment should not be part of some special ‘programme’, but should be a normal part of the day-to-day activities of an employer.

Some developments are underway on both of these fronts in the UK

As far as simplification is concerned, in an important new development, which begins to address the fragmentation of provision, the government is currently piloting ‘individual budgets’ in 13 UK local authority areas which bring together resources from six different funding streams discussed in previous sections of this paper⁵³, and allow disabled users to access a single fund to spend on services and equipment as they wish. The results of the pilot are due in 2008 and will determine whether this model of individual budgets will be rolled out on a national level⁵⁴. According to the AAC Task Force, there is no evidence available at present on the use of individual budgets to purchase ICT⁵⁵, although early indications suggest that the overall effect of this initiative will be to empower disabled users to make their own choices regarding how the funds they are entitled to are spent⁵⁶.

Turning to mainstreaming, another recent development has been the removal of Access to Work support for employees of national government departments (and the government has also raised the possibility that this may also be extended to the wider public sector, including the health service and local government). This change was introduced in late 2006, at the same time as the introduction of the public sector duty to promote disability equality (discussed above), although the two developments are not directly related. The intention of the government is not to reduce the overall volume of resources available through Access to Work, but to concentrate them on private sector employers,

⁵³ The funding streams involved are: local authority-provided social care services; Independent Living Fund; Supporting People; Disabled Facilities Grant; Integrated Community Equipment Services; and Access To Work

⁵⁴ http://www.cabinetoffice.gov.uk/social_exclusion_task_force/reaching_out/

⁵⁵ <http://66.102.9.104/search?q=cache:vxRiN2uN4ugJ:www.fastuk.org/Options%2520review%2520v4.doc+scope+becta+fast&hl=en&gl=uk&ct=clnk&cd=1>

⁵⁶ http://www.cabinetoffice.gov.uk/social_exclusion_task_force/reaching_out

especially small- and medium-sized enterprises. It was argued that, alongside their obligations under the DDA, government departments should be seen as

...exemplar employers of disabled people, willing to make provision and adjustments from within departmental expenditure

The argument is, that provisions of aid and assistance to disabled employees should be a normal activity for government departments, in line with the DDA obligations to make ‘reasonable adjustments’ and that any special funding should instead be concentrated on smaller employers with fewer resources, and less awareness of disability issues. It is too early to say what effect the withdrawal of AtW funding from government departments has had, although trade unions and disability organisations (including the Disability Rights Commission), while expressing support for the principles of mainstreaming, have raised concerns that the change will, in practice, lead to a reduction of support for disabled employees in a funding-constrained environment.

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6

ICT in the Netherlands: enabling and disabling?

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6.1 Overview Dutch disability policy

Being a member of the EU the Dutch government follows the policies from Brussels such as the 2003 agreement on social inclusion for people with disability.

According to this agreement employment is seen as key to social inclusion, but the Dutch legislation relating to people with disability is complex. In this chapter we present a short overview so that there can be a better understanding of the specific projects and initiatives for people with disabilities.

6.1.1 General policies to support people with disabilities

On 1 January 2007 the Social Support Act (Wet maatschappelijke ondersteuning, WMO) was introduced in all municipalities in the Netherlands. Under the Act, policy responsibility for setting up social support will lie with the municipalities, which will be accountable to the citizens in the execution of this responsibility. The introduction of the WMO offers an opportunity to improve the service provision to citizens and clients.

The WMO is the result of the emphasis on the individual responsibility in health care, both on the insurance side as well as the provision of care side. Within this concept a new basic health insurance scheme for the entire population is established. The WMO is part of this reform and introduces a new scheme for all Dutch citizens covering care and support in cases of protracted illness, invalidity or geriatric diseases. The aim of the Social Support Act is participation of all citizens from all facets of society, whether or not with help from friends, family or acquaintances; the perspective is a coherent policy in the field of social support and related areas.

The WMO will put an end to various rules and regulations for handicapped people and the elderly. It encompasses the Services for people with disabilities Act (WVG), the Social Welfare Act and parts of the Exceptional Medical Expenses Act (AWBZ).

The Ministry of Health, Welfare and Sport defines the framework in which each municipality can make its own policy, based on the composition and demands of its inhabitants.

In the Social Support Act no references are made to the role of ICT in supporting people with disabilities, only the use of ICT to improve the administration of the WMO and to improve services to clients.

6.1.2 Social security and return to work policies in the Netherlands

In 1967 the Work Incapacity Act (WAO) came into force arranging disability pensions for employees who have become permanently disabled and cannot work. No difference is made in this act between 'risqué professional' and 'risqué social', which means that all employees who became disabled for work could apply for a disability pension. Since 1967 a large number of employees had applied for a disability pension. In the 1990s this led to major changes in the social security legislation, including the introduction of a bonus/malus system, limitation of the duration and level of the disability pension, tightening of the admission criteria and privatisation of the Sickness Insurance Act (ZW, in 1996).

Improvement of the Gatekeeper

The employer became responsible for the reintegration of employees in the first year of sickness absence; since January 2004 this period has been extended to the first two years of sickness absence. After this period the responsibility shifted to the public sector. To ensure that this transition flowed smoothly, the 'Gatekeeper model' was introduced.

However, this model did not function well, which led to the introduction of the Gatekeeper Improvement Act (WVP) in 2002. The main aims of WVP are to stimulate reintegration in the first year of sickness absence, to strengthen the responsibility of both employer and employee, and to improve the cooperation between the private and the public sector. Within the WVP system, the occupational health service (OHS) or the occupational physician (OP) has to draw up a problem analysis within six weeks of the employee reporting ill. Subsequently, the employer and employee have to formulate an action plan to return to work. The employer, employee and OHS or OP keep in regular contact in order to monitor the return to work process. At the end of the first year (since 2004, the end of the second year) the employee can apply for a disability pension.

WAO becomes WIA

Because of the high percentage of people receiving a disability pension (until 2002!) a new work incapacity law was prepared and introduced in January 2006: the Act on Work and Income Bases on Work Capacity (WIA). The WIA introduces a more stringent system for granting disability pensions in order to further reduce the number of people with a disability pension. Only employees who are fully and permanent disabled will be able to apply for a full disability pension. Employees who are partially disabled for work are encouraged to return to work according to their ability. If they work to their full capacity they will receive a higher level of benefits than if working less. In this way the government hopes that employee will choose work instead of receiving low disability benefits.

OHS

Since the 1990s there have also been major developments in the occupational health and safety care systems. The assistance of employees on sickness absence by an OHS provider became obligatory. The government allowed the establishment of commercial OHSs. In 2005 the five largest OHSs were responsible for the occupational health care of almost 90% of all employees in the Netherlands. Owing to the changes in the legislation as a whole, in July 2005 the obligation for employers to contract an OHS changed too: a contract with an occupational physician (OP) is still obligatory, but employers no longer need a 'minimum' contract with a certified OH service provider. Occupational health legislation in the Netherlands sets out a role for professionals in prevention and return to work. This covers both medical and vocational interventions.

Conclusion

Participation in work of people with disabilities in the Netherlands is not high and is still declining. With the new, stringent scheme for granting disability pensions according to WIA in 2006, more people with disabilities will be looking for an appropriate job in the near future. On the other hand, the labour force is not growing and is also ageing: more workers are needed and more (old) workers will need adaptation of the workplace. Thus in view of long-term labour market policies creating jobs for people that are (partially) disabled for work is gaining importance. More than ever, employers and employees will have to cooperate to enlarge labour participation and to create opportunities for work for people with disabilities.

None of the national acts and policies for the social inclusion, in general, and, more specifically, inclusion in the labour market for people with disability, refers explicitly to the use of ICT to improve the employment of people with disabilities.

6.2 National ICT policy

6.2.1 Introduction

In this chapter we describe the Dutch strategies on ICT in general. First, we present the national strategies as formulated in governmental statements and reports and then the strategy statements on ICT from several Dutch ministries.

6.2.2 General ICT policies

It can be seen that ICT is the hidden power behind all kinds of daily routines, societal practices, such as public administration, health care, education, transport and security. The impact of ICT is growing and the growth of the national economies depends largely on the growth of the impact of ICT.

After the Lisbon conference (2000) the Dutch government formulated the ambition to belong to the most dynamic knowledge economies in the world. This ambition is elaborated in the Governmental ICT agenda (called 'De rijksbrede ICT-Agenda, beter presteren met ICT' – The nationwide ICT agenda: 'score better with ICT', 2004, followed by the ICT agenda for 2005–2006). The purpose of the policy described in this 'agenda' is to renew ICT policies in order to solve social and economic problems by means of ICT. This agenda considers seven key issues directed at Dutch citizens, firms and institutions. These are:

1. providing information to civil services only once (www.e-overheid.nl);
2. electronic identification (DigiD for citizens and firms);
3. faster on the Internet (directed to promote faster broadband networks);
4. safety and confidence (of ICT provisions and Internet);
5. standards (to enlighten information exchange between civilian and governmental departments);
6. consumer policy (the consumer of ICT services is well informed, has an optimal freedom of choice and his rights are protected);
7. ICT in the (semi) public domain (to resolve broad and sensitive society problems, as for example in health care).

Regarding the scope of this paper we will elaborate more on the last topic in the next paragraph.

In the ICT agenda stipulations are described in order to reach the intended goals. One of the goals was to establish a National Régie organisation for research and innovation (at the Ministry of Education and the Ministry of Economic Affairs) (www.ictregie.nl). 'ICTRegie' has been established by the Dutch government to stimulate the innovative powers of the Netherlands by means of ICT research. The goal of the authority is to develop a national ICT research and innovation strategy that is aimed at strengthening the ICT knowledge infrastructure of the Netherlands and maximising the benefits for society and the economy.

Overall, one can state that there are two major topics concerning the national ICT policies:

- economic profits (productivity and competition);
- social profits (accessibility of information and services).

This national policy has led to all kinds of initiatives across several ministries (see next paragraphs). Concerning the social profits the Dutch government has set the goal to improve the accessibility of government information, in particular on the Internet.

6.2.3 Elaboration of national policies at departmental level

Regarding the topic of this paper we now elaborate further on ICT in the public domain to resolve broad and sensitive society problems. To expand the general policies on ICT the Dutch government has launched an ‘action programme’ concerning specific issues on:

- ICT in education (Min OCW)
- ICT in health care (Min VWS)
- ICT in mobility (Min V&W)
- ICT and safety (Min BZK)
- ICT in economics (Min EZ)

The aim of the action programme is ‘To help to solve social problems in the sectors mobility, education, safety and health care, by means of removing impediments for developing and implementing innovative ICT applications and – services’.

The content of the action programme is:

1. Education: Scholars, students and teachers can use new and attractive ways of ‘learning’ with the use of ICT. This leads to better utilisation in education and contributes to a healthy base for the knowledge economy.
2. Health care: Patients, clients and health care workers utilise the ICT possibilities for new ways of online health services, such as ‘chaincare’, telecare and (broadband) teleconsultancy. This has to result in less waiting time, more client-directed care, more efficient use of professionals and lower costs.
3. Mobility: By means of actual information transporters can make choices between, for example modalities or times of the day at which they travel. This leads to a more efficient and safer utilisation of the physical infrastructure.
4. Safety: ICT applications can diminish (feelings of) insecurity and lead to more efficient prevention and actions on this theme, more efficient use of sensors for safety and crime control.

The action programme runs from 2005 until 2009.

Policies of ministry of social affairs and employment (min SZW)

In 2001 the Ministry of Social Affairs and Employment presented a report called ‘Sociaal Digitaal’ (Social Digital), which was an inspection of ICT policy topics within the ministry. The challenges that vulnerable people met and prevention and return to work were the topics of this report that related to people with disabilities (See chapter 3 for a more detailed description). Unfortunately, no follow-up on this report can be found on the ministry’s website. No figures are available to what extent ICT indeed enhances labour participation of disabled people.

Policies of the Ministry of Health Welfare and Culture (VWS)

The Dutch government recognises the potential of ICT to improve the social integration of vulnerable groups described in an action programme called ‘social quality and ICT’. This action plan considers four actions:

- to establish so-called digital breeding grounds in order to stimulate the development of several ICT initiatives in city districts;
- to establish a knowledge network ‘social quality and ICT’;
- to develop a “one stop shop” for health and welfare;
- to process support in supplying broadband to city districts that need attention.

However this programme does not formulate a specific policy for enhancing the employability of people with disabilities.

The ministry is involved in projects for improving the accessibility of ICT for the chronically ill and disabled people (e.g. computer accessibility for blind people or people with impairments in the project ‘away with barriers’ (drempels weg)). Recently, the ministry strongly encouraged the use of ICT in the health care setting. Since 2002, the National ICT Institute for Healthcare (NICTIZ) has been working with – and for – the various parties involved to achieve a breakthrough in the use of ICT in the health care setting. In the first place it was decided to focus on digital communication between health care institutes, a domain in which there are many possible benefits. There have been a large number of initiatives, but these have been fragmented. What is needed, according to NICTIZ is coordination and upscaling. There are three primary objectives towards which NICTIZ is working with other parties in the field: to implement a national electronic medication record, to have an operational electronic out of hours locum information service for all out-of-hours medical posts , and to implement a fully electronic claims procedure – all by 2006.

6.2.4 Conclusions

The role of ICT in the labour participation of people with disabilities can be seen in different contexts:

1. in job creation in the ICT sector or in other jobs for people with disabilities;
2. ICT as an aid in the societal participation of people with disabilities in general (in living, being independent, social participation, education and training);
3. the accessibility to ordinary ICT (Internet, mobile phones) fundamental to participating in modern working life;
4. as a means to compensate for disabilities allowing people to enter or to keep employment (as occupational aid, assistive technology, support).

What have we found so far about these roles in national ICT policies?

The national ICT policies are focused on the economic profits of ICT developments and on the social profits of the accessibility of information and services, especially those of the government itself. These national policies lead to specific programmes at ministry level, such as the action programme across five ministries. In this action programme, however, no attention is paid to accessibility for people with disabilities or to ICT as a means to gain access to the labour market.

The Ministry of Social Affairs and Employment (SZW) and the Ministry of Health, Welfare and Sports (VWS) do pay special attention to ICT for people with disabilities. SZW gives recommendations on design for all, on teleworking and on the development of assistive technology. VWS is involved in projects for improving the accessibility of ICT for the chronically ill and disabled people. Nevertheless, we might conclude that there is no consistent government ICT policy focused on the social inclusion of people with disabilities.

In general, we see that ICT policy programmes deal with the overall development of the application of ICT. The development of ICT is a policy topic of the government, of social partners and of interest groups for people with disabilities. Most of these programmes focus on the accessibility of the Internet, on the application of ICT in health care, in administrative processes and the accessibility of public information. No programmes can be found on the needs or requirements of ICT of people with disabilities themselves: what role do they see for ICT? Are there chances to create jobs in the ICT sector for people with disabilities? What ICT requirements are needed in return to work activities? What chances are there to get a job with the help of ICT solutions? No specific policies or strategies can be found on (the improvement of) the role of ICT in gaining employment or in keeping jobs for people with disabilities.

6.3 ICT and accessibility for disabled people

6.3.1 Introduction

In this chapter we will focus on the accessibility of ICT techniques and applications for disabled people in order to enhance social inclusion. We shall cast light on some initiatives by the government and by organisations for disabled people.

6.3.2 Governmental involvement

In 2001 the Ministry of Social Affairs and Employment presented a report called ‘Sociaal Digitaal’ (Social Digital). Two of the topics from this report relate to ICT and accessibility for disabled people.

- The challenges of certain vulnerable groups in society: Non-participation in the knowledge economy of certain groups in society is more or less due to so-called digital inequality. This inequality concerns the physical accessibility of ICT products and digital skills in order to use modern ICT equipment and products. Age and education are mentioned as possible determinants of inequality, however, physical impairment, for example blindness is not mentioned as such.
- Prevention and return to work; One of the core tasks of the Ministry of Social Affairs and Employment is to stimulate labour participation. It is recognised by the ministry that applicability of ICT makes it possible to help people in a better and faster way towards modified work. One can think about modification with respect to hardware and software, and also teleworking. Through ICT work becomes less dependent on time and place, which means that teleworking can be an important instrument in stimulating labour participation of people with a disability.

Campaigns and Communication strategies

Next to legislation to increase the social participation of people with disabilities the Dutch Government invests in campaigns and public communication strategies to raise attention for this issue. This is often done with the help of several committees such as:

- Taskforce Handicap and Society (www.handicapensamenleving.nl) (2004). The aim of the Taskforce is to realise a mentality shift in society to treat disabled people equally and to promote the active involvement of social partners in realising accessibility to that society for disabled people.
- For the theme ‘labour’ there is a special National Committee, Committee ‘The Working Perspective (CWP)(2003). This Commission (CWP) is a joint initiative of the Ministry of Social Affairs and Employment and the Ministry of Health, Welfare and Sport. The Commission undertakes initiatives to create a better perspective on work for people with a vocational (or

employment) disability. The commission is aimed particularly at employers who want to help more people to work and help to keep them in work, at people with or without disabilities in the workplace, at people who are sitting at home and would like to get (back) to work and at people who are engaged professionally in (re)integration into employment.

- Recently, the Dutch government together with the social partners, the CWP and the social security agency launched a campaign around the image of people with disability, ‘Suitable for the right job’ (www.geknijptvoordejuistebaan.nl). Through introduction of the new and more robust legislation on compensation when disabled (WIA act), many partly disabled people look to get back to the labour market. Negative imaging can be a drawback in bringing these people back to work or to keep them at work. The joining of the Ministry of Social Welfare and Employment and the social partners are therefore starting a campaign to improve the image of people with a disability, for example, with the use of ‘best practices’ for disabled people getting back to or starting to work successfully.

An important inter-departmental policy to enhance social inclusion of handicapped people is the so-called ‘inclusive policy’. We shall elaborate on this policy in chapter 4.

6.3.3 Organisations for people with disabilities

Besides recognising the vision of the Dutch government, its ministries and the social partners on impact of ICT on society, it is worthwhile to note how specific organisations for the chronically ill and disabled people attach importance to ICT and accessibility. We will address a few major patient organisations in the Netherlands.

There are several organisations or advocacy groups for people with disabilities in the Netherlands. Most of them receive a subsidy from the Ministry of Health. There are some umbrella organisations which represent many specific organisations for specific disabilities or chronic illnesses. The priorities of these organisations are focused on health care issues, insurance, living conditions and transport. Although social inclusion in general is a major policy topic of the organisations, employment is just one of many topics (so not a top priority). We give an overview of the most important organisations and the topics they are working on.

- The Council of chronic ill and disabled people in the Netherlands (Cg-raad): they are the formal Dutch representative in the European Forum on Disability. The council is an umbrella organisation for several organisations of people with a chronic disease or handicap. All activities are directed towards creating a society in which people with a chronic disorder or handicap can take part as citizens of full value, based on equal rights, equal changes and equal duties. Two major tasks of this council are serving collective interests and giving support and services to member organisations. The collective interests considered are:
 - Work, social security and income
 - Health, welfare, sport and recreation
 - Mobility and accessibility
 - Education
 - Emancipation, empowerment and non-discrimination
 - Provision of information and imaging

Their major concern about ICT relating to disability is the accessibility of Internet sites. The council has launched an interactive forum on the Internet that, among other things, describe appliances and

technology, such as glasses with hearing aids, or apparatus for speech recognition, etc. (www.leefwijzer.nl).

- The Dutch Federation of Patients and Consumer organisations (NPCF). The NPCF aims at enforcement of the position of patients and consumers in health care. The needs and demands of patients and consumers are the start of the process of providing care. The federation concentrates its activities in three programmes:
 - Choice and transparency: development and implementation of information systems for patients; ICT in health care, for example the electronic patient dossier.
 - Quality of care and innovation: sampling data on best practices and giving patients access to this system; implementing patients' rights; to introduce patients' perspectives into guidelines for doctors and nurses.
 - Structure and financing system of health care: access to health care for all; solidarity in health care and assurances; to strengthen the position of patients and consumers in a new system of health care that will be developed in the coming few years and be implemented in 2006.

ICT is seen as improving the efficacy of the processes in health care. No specific role of ICT in enhancing the employment of people with a disability is given.

- The Federation of people with visual impairments is very active in the field of ICT. The accessibility of Internet sites is one of their core targets. The aim of the federation is to facilitate people with visual impairments with ICT tools to gain independency in a modern society based on information technology. The federation is involved in a European network of advocacy groups that aims to create a legal and regulated accessibility of ICT for people with visual impairments. The federation runs several projects focused on ICT opportunities, such as the project '[Visueel gehandicapten massaal digitaal](#)' (people with visual impairments going digital). Every month a group of people with disabilities (and elderly people) tests a series of websites on their accessibility. The federation is also testing all kinds of ICT-driven machines used in people's daily routines (for example kitchen machines, washing machines, security systems) on 'Design For All' criteria.
- Dovenschap, or in English: Dutch Deafship, is a national and independent organisation of and for deaf people in the Netherlands. The organisation is financially supported by the Dutch government to represent the interests of deaf people in the Netherlands in all aspects of life. The organisation is actively involved in actions to improve the social participation of people with hearing impairments. According to their website their goals are:
 - the accessibility of television for deaf people (subtitling, a TV programme for deaf people);
 - the accessibility of telecommunication (text-telephones),
 - the recognition and training of interpreters for deaf people, and last but not least
 - social work for and by deaf people.
- ANGO (the Dutch Society of the Disabled) run a well-visited website www.handicap.nl. This website contains all the information that could be important for those who are chronically ill or who have a disability. ANGO also has a national office that can be contacted for enquiries or

advice. The major goal of ANGO is to create equal opportunities for persons with disabilities. ANGO bases its activities on the practical experience of its members by enquiring, advising, and promoting both the individual and collective interests of its members. On their website we found a number of examples of ICT solutions to enlarge the opportunities for people with disabilities to participate in society. Participation in employment is not a major topic on this site, but on the other hand, some of the presented solutions or tools might help the chances of employment.

On their website ANGO states: 'Every disabled person has a right to a decent income, to services, special aids and care. But it is sometimes very hard to find out how to claim these entitlements. ANGO tackles the problems, raises the alarm when persons with disabilities face difficulties, both locally and nationally. This could involve effective medical care or help, better transport facilities, and appropriate employment. The right to full and equal participation in society'. ANGO is one of the member organisations in the CG-council mentioned above.

- The Breed Platform Verzekerden & Werk (BPV&W: translated in English: the Platform on Insurance and Work) is an advocacy platform – subsidised by the government to create access to social security and work for all. One of the target groups for the platform are people with disabilities. The platform runs a well-attended help desk and executes several studies on social security, health and work. ICT is not a topic the platform is working on.

6.3.4 Conclusions

In general, the involvement of the government is directed towards realising a mentality shift in society for treating disabled people equally and to promote the active involvement of social partners in realising the accessibility of society for disabled people. Moreover, they also draw attention to the measures for recruiting people with disabilities. However, no specific arguments or policies are provided to initiate ICT technology as a means for enhancing the employability of disabled people.

The organisations for disabled people are more or less directed to enhance quality of life by means of ICT applications and to reinforce the accessibility of these applications.

6.4 Universal design

6.4.1 Introduction

In chapter 2 we focused on the accessibility of ICT techniques and applications for disabled people in order to enhance social inclusion. Universal design cannot easily be dissociated from accessibility, hence both chapters are closely related. However, some specific remarks can be made about universal design. In this chapter we lay out the governmental involvement in Design4All principles by their 'inclusive policy'. Furthermore, we describe some specific programmes on ICT and disability that are related to Design4All.

6.4.2 Governmental involvement

'Inclusive policy'

On the initiative of the Ministry of Health (VWS) the Dutch government translated the European statements on social inclusion into the Dutch model for social inclusion. This inclusive policy from 'Action plan equal treatment in daily practice' (2003) implies no specific policy for people with disability, but the inclusion of their interest in every policy plan and activity. Hence, including the interest and accessibility of activities for people with disabilities is the responsibility of every

department and every organisation or institution. Possible bottlenecks in these areas should be resolved by the responsible organisation (see the brochure 'Aan iedereen gedacht?' Min VWS, 2006). Accessibility is a key issue in the establishment of 'inclusive policy' in all phases of the policy-making cycle, thus the differences between people with or without impairments need to be considered.

This inclusive policy is not yet monitored, so no information is available on the impact and successes of this policy. As the only reference to this policy can be found on the website of the Ministry of Health (so not in any other governmental decree or statement, nor in official reports of the government) we might conclude that the implementation of this inclusive policies is not yet fulfilled.

Other initiatives

Searching for the link on ICT and people with disabilities in recent publications from the ministry we found three references:

1. Some recent studies on Design for All executed on behalf of the Ministry (ref. Building blocks with D4All, SZW). In this study examples of good practices are presented and recommendations are given to designers, employers and policy-makers to change the attention from design for a specific group of users towards universal design. Explicitly mentioned in these studies are the opportunities for employment of people with disabilities. The presented design for all principles is, nevertheless, not recognised as an official governmental policy.
2. The stimulans programme Technology and society (see paragraph 4.3) coordinated by the Ministry of Economic Affairs
3. References to ICT facilities to improve the administration of the social security services (see also chapter 2).

6.4.3 Specific programmes on ICT and disability

Beside the mainstream activities mentioned above there are some particular, public-financed initiatives on the role of ICT in the inclusion in the labour market of people with disabilities:

- Program Technology and Society (1999–2003); an initiative of the Ministry of Economic Affairs, SZW and VWS; one of the subprogrammes was about (re)integration of work-disabled people. The areas of interest in this programme were:
 - Optimisation of the individual workplace.
 - Support of perception, learning and cognition.
 - Improving the attainability, accessibility and usefulness of the workplace.Examples of projects that were granted by this programme are:
 - Better services to deaf people and those hard of hearing. The objective of this project is to train mediums that work with a text telephone in order to improve the independency of the deaf worker in use of the telephone.
 - Ergonomic computer-working table. Workers with disability due to low back pain or whiplash are given a specially developed computer-working table in order to regain work activities or to be able to remain at work
 - Sign language by image telephone. By using sign language by image telephone it is possible to translate a conversation between a deaf and non-deaf person without the physical presence of the translator.
- National Accessibility Agency (Landelijk Bureau Toegankelijkheid). This agency wants to awaken society to the importance of integral accessibility and to stimulate government, institutions and enterprises to make infrastructure, buildings, products and services, the Internet and

information accessible to everyone. One of the projects they initiated was 'Drempels weg'. Drempels Weg (literally 'take the thresholds away'), aspires to an Internet that is accessible to everyone. The agency works on awareness rising of website builders, companies and organisations on the barriers they – often not intended – erect. Organisations are stimulated in a positive manner to improve the accessibility of their website according to the internationally accepted guidelines from the World Wide Web Consortium (W3C). In many cases, only a limited number of actions are needed to achieve compliance with priority 1 of the W3C guidelines. As well as inspiring organisations to make their websites more accessible, 'Drempels Weg' also encourages more disabled people to use the Internet. Drempels Weg was founded in 2001 as an initiative of the Ministry of VWS. Initially, four national ambassadors took on the task of making organisations aware of the barriers thrown up by inaccessible websites. After the National Accessibility Agency was given charge of the project in 2002, the approach shifted from a national to a regional focus. Approximately every two months, the campaign targets a different province. In that province, regional ambassadors and volunteers with a disability and Internet experience generate as much publicity as possible for Drempels Weg. They do this by giving interviews to the press and by visiting companies and organisations, to show and explain which barriers to surfing the net they have created.

- Expert centre Xidis, ICT and Handicap (february 2002) (www.icthandicap.nl) is run by the Institute for Rehabilitation Research (iRv). IRV aims to improve participation and quality of life of people with a disability through the use of applied research and an active transfer of knowledge and information. Participation encompasses all relevant processes and events of social life. The ultimate objective of the institute is for people with a disability to be able to lead a life equal to any other person's life. iRv promotes the development of knowledge, seeking solutions to problems identified in disabled people, and transferring these solutions into applications in daily practice. To this end, iRv brings together the necessary expertise from, among others, scientists, medical doctors, paramedical staff, psychologists, engineers and specialists in the field of ICT and knowledge management. In February 2002 the expert centre Xidis, ICT and Handicap was established by the iRv and Xidis. This expert centre sees ICT as a phenomenon in society, and handles issues like awareness, availability, cost-effectiveness, usefulness and accessibility of common ICT provisions. The expert centre also considers ICT as a tool: a tool to compensate or neutralise problems that people with a disability encounter. The objective of this application of ICT is to improve participation within different aspects of life such as living, education, work, etc.
- Roessingh Service Group (RDGkompagne) (refr. www.rdgkompagne.nl). This company is part of the rehabilitation centre Roessingh and is specialised in developing and manufacturing all kinds of appliances in the area of:
 - Computer modification (e.g. Braille readinglines, eye-steering, etc.)
 - Remote control of the environment (e.g. remote controls, special equipment)
 - Supporting communication (e.g. figure systems, speech syntheses, visual aids. etc)
 - Speech recognition

RDGkompagne advises individuals, enterprises and institutions in selecting computers, modifications and communication aids for people with a disability. They also guide them by implementing these aids in daily practice. As well, the RDGkompagne takes part in several national and international research projects.

As well as these public-financed initiatives we found one initiative funded by the ICT sector itself: Microsoft invested in a study of TNO (ref 'Remaining in business by accessible technology', in Dutch,

2004) on the accessibility of ICT for people with disabilities. In this study it is recognised that ICT can improve the accessibility of the workplace and the productivity of the (disabled) worker.

Several ICT applications are described that aim to enhance the employability of the disabled worker, such as:

- Accessibility applications for people with visual impairments
- Specific apparatus and software for people with visual impairments
- Accessibility applications for people with hearing impairments
- Specific apparatus, software and services for people with visual or hearing impairments.

The report describes four cases in which one or more applications are used. Furthermore a five-step implementation plan is given for an accessible technology strategy, i.e.:

1. Define the accessible technology strategy
2. Identify the constraints
3. Design, develop the technology
4. Implement the technology with concomitant education
5. Maintain the technology and keep learning.

The development of ICT technology links up with Design4All principles, i.e. the aim not to exclude anyone to make use of ICT applications or shortly, 'e-inclusion'.

6.4.4 Conclusions

Based on the equal treatment act the ministry of Social Affairs and Employment launched the 'inclusive policy', implying that in all phases of the policy-making cycles the differences between people with or without impairments need to be considered. Although all governmental departments and public organisations should take this into account in their policy-making, in practice this is still rarely done.

A few specific programmes and initiatives have been established to improve the labour integration of people with disabilities with the help of ICT. Those initiatives are mostly public financed and are initiated from rehabilitation centres or institutes closely linked to those centres.

6.5 ICT and the labour market

6.5.1 Introduction

In this chapter several aspects regarding ICT as a tool for improving the labour participation of disabled people will be described. It is inevitable that some aspects have already been described in previous chapters, as we tried to find a link between ICT policies, accessibility and enhancing labour participation throughout the text. We will refer to the particular paragraphs or chapters when necessary.

6.5.2 Legal regulations

In paragraph 1.2 of chapter 1 we gave a brief outline of the Dutch social security legislation. Most important were the Gatekeeper Act and the Act on Work and Income Bases on Work Capacity (WIA). There is no specific legislation that is related to ICT and the labour market.

Other legislation supporting people with disabilities to find employment are the Law on Medical Examination (WMK, last adapted in 2002) and the Equal Treatment Act, last adapted in 2003).

- The law on equal treatment on the grounds of disability or chronic illness act (WGBH/CZ) (December 2003): This act prohibits unequal treatment because of disability or chronic illness. In other words: it is prohibited to discriminate against people because they are disabled or chronically ill. The law applies in three areas: work, vocational and professional education, and public transport. The government wants people with a disability or chronic illness to be able to participate fully in society. All physical, mental and psychological limitations are covered by the law. The law is also intended for people who are discriminated against because someone thinks they have a disability or chronic illness.
- For the latter, the Dutch government established the Medical Examination Act (2002). This act should prevent selection by employers on the basis of risk. An important rule that can be applied to an employer is, that if an employee needs an adjustment to be able to work, then in principle you are obliged to effect the adjustment. This can be done with the help of an occupational health and safety service.

6.5.3 Financial measures

Since 1998 (REA law for example) specific financial measures have been introduced to make it easier to recruit an employee with disabilities.

The most important are:

- The employer does not have to pay sickness absence for the first five years of an (newly recruited) employee with a disability.
- A trial period of three months to start to work again is possible. The Social Security Institute pays the salary during these three months.
- The employer pays less Social Security premiums if he/she recruits people with disabilities. In the case of a young person with disability this reduction in premium is even larger.
- In the case where a recruited employee with a disability is older than 50 years, the employer does not have to pay the disability premium for this employee.
- If the productivity of the disabled worker is declining, due to this disability, the employer might receive financial compensation for this loss of productivity.
- Special arrangements or adaptations on the workplace can be compensated for.

Since 2005, under the new legislation around the WIA (see chapter 1) the REA act is abandoned and the above-mentioned topics are included in the new legislation on WIA, or WAJONG. Hence, measures for recruiting people with disabilities are no longer centralised in one act but spread about several acts in the legislation around (work) disabled people.

Measures for individual arrangements and self-employment

Starting their own enterprise could offer some people with a disability a good (or the only) opportunity to work. 'Becoming your own employer' means making your own decisions and creating your own working conditions. In general, self-employment will enable someone to decide when and how to work at what hours. For some activities it also gives the chance to work at home (so no transport problems), to work part-time (the hours someone has sufficient energy) and to arrange the specific support that is needed.

The government created regulations and support for the self-employment of people with disabilities. Support is given by special labour consultants (at local offices for Work and Income) and by consultants of the social security Institute.

We mention three governmental instruments to help individuals with disabilities to create their own job:

1. IRO: An individual return-to-work agreement: A person can choose this individual path in which an own reintegration service provider is selected. Within 2 years return to work should be achieved and the Social Security Institute should approve of the chosen path. If the person is able to start his/her own enterprise and works for at least 50% of the working capacity for this enterprise the service provider will be paid for their services by the Social Security Institute. The path has to be successful within 2 years.
2. The PRB, the Personal Reintegration Budget gives a person more freedom in choosing a reintegration service provider or an education or coaching institute. The person should write his or her own return to work plan.
3. The starter's credit: This is an interest-bearing loan and can be requested from the Social Security Institute to start your own enterprise. A business plan must be made and approved of by the Social Security Institute on medical and labour ability grounds. When the enterprise is making profits, the disability benefit is ended. After (maximum) three years a review is undertaken of the vocational disability and working capacity. In case the enterprise is not successful (and stops) the disability benefit is continued. Although the legislative instruments are, in theory, very helpful in starting an enterprise with a disability benefit, the practice proves something different. Research has shown that the professionals at the Social Security Institute prefer people to return to jobs in more regular salaried employment. Most of them would not promote self-employment, and the specific arrangements the legislation offers are not well known among these professionals. Because of a 'no cure – less pay' structure the reintegration service providers would also not encourage the start of a new enterprise for persons with disabilities. In most cases the emphasis on salaried employment is justifiable, the costs are less high and starting a new enterprise takes quite a long time. However, for a small and specific group of people with disabilities the start of their own enterprise is a good and permanent way to return to work. The number of people with disabilities that started their own enterprise is not known, but the literature indicates a growing number of people with disabilities with ambitions to start their own enterprise. The major arguments for it are the flexibility and autonomy.

Arrangement for provisions and compensations

The Social Security Agency in the Netherlands (UWV) has an arrangement for provisions and compensations for disabled people.

The conditions to make use of this arrangement are:

- The illness or handicap has to be expected to last for at least one year
- The provision is necessary to regain work activities
- The provision is specific for the illness or handicap
- The costs of the provision have to exceed a certain standard fee (in 2006 this was set at € 109)

The requested provisions or compensations can be:

- compensations for transport costs

- compensations in the costs for childcare
- provisions supporting the employment or job seeking

Provisions mentioned in the brochure of the Social Security Agency are:

- probation (experimental job) for three months
- provisions in the workplace, such as special shoes, chairs, communication aids for reading, writing and hearing
- compensation for assistants (for example a deaf interpreter)
- compensation for a job coach (during the recruitment phase, while starting to work)

Thus the provisions for disabled people may be an ICT provision (like a PC or a specific cell phone), but there are no special provisions focused on ICT. In 2004 in total 32,978 provisions were requested (UWV, informatie sociale verzekeringen naar sectoren 2004); details are lacking about the number of requested ICT provisions.

6.5.4 Employer's responsibility

Within the Gatekeeper Improvement Act the employer faces a two-year wage payment period for their sicklisted employees. Employer and employee have – with help of an OHS – a mutual responsibility towards early return to work activities. After these two years the financial consequences and responsibility for reintegration is shifted towards the public sector (see also chapter 1).

Furthermore, the employer has to keep pace with the Equal Treatment Act and the Medical Examination Act (see paragraph 5.1) when recruiting new personnel.

6.5.5 NGO

Non-governmental organisations (NGOs) such as patient organisations are mostly involved in activities to enhance quality of life and social inclusion in general (see paragraph 3.2 of chapter 3). Participating in work activities is just one of the topics in their programme. No special policies are formulated on participation of disabled people in the labour market.

6.5.6 ICT policies of social partners

Known as the Dutch 'polder model', the social partners are closely involved in the policy making of the Dutch government, e.g. they are gathered in the Social Economic Council. Therefore it would be worthwhile to see whether the social partners have a specific ICT policy and in particular a policy towards ICT as a means to improve the employment of people with disabilities.

Unions

There are three major unions in the Netherlands: the FNV, CNV and the Unie. Their major considerations with ICT are:

- conducting labour agreement negotiations for workers in the ICT sector
- the influence of outsourcing or offshoring of ICT activities on employment on the Dutch labour market.
- the concern of RSI as occupational disorder due to growing use of ICT

No specific policy is formulated considering ICT as a possible tool to improve the labour participation of people with disabilities (or in general: to make jobs in the sector more accessible for specific target groups).

Small- and medium-sized enterprises

The employers' organisation of small- and medium-sized enterprises (MKB Nederland) initiated some studies on ICT, for instance a ICT monitor by which they regularly monitor the economic impact and perspectives of the ICT sector in the Netherlands. They also initiated a study about ICT in the health care sector (refr. ICT zorg en Welzijn).

Purposes of the survey are to gain insight into:

- ICT for the technical management of the tasks in the primary process (improve the quality of the care process itself) (for example home-monitoring to improve the quality of living)
- ICT around provision of information, directly linked to the care activities in the primary process (for example the development of an electronic patient dossier)
- ICT in the modernisation of the traditional office (financial and administrative processes).

Accessibility of ICT for specific groups (i.e. people with disabilities) is not a topic in this study.

Employers' organisations

The Dutch employers are organised in several business and sector organisations. VNO/NCW is the 'umbrella' organisation for several sector organisations.

In their ICT policy statement (refr. ICT policy statement 'junction Holland') VNO/NCW describes ICT as an important driving force for growth in the industry and service sectors. Assuming that the government keeps providing for steady and appropriate (and sometimes improved) additional peripheral conditions that are timely and in step with what is happening on an international scale, enterprises probably remain in a position to absorb the continuing changes that make this ICT growth possible. In order for small- and medium-sized enterprises to achieve this objective, the acquisition of knowledge in this field, in combination with receiving guidance, is an absolute necessity.

Hence, stimulating economic growth and diminishing the administrative burden by using ICT facilities have priority for the Dutch employers' organisations. These priorities are addressed in committees such as Connected Holland (refr. ICT Nederland in verbinding) and as a spin-off of the governmental ICT agenda (as mentioned earlier in this chapter) in the establishment of a strategic ICT deliberation (initiated from industry, i.e. an economic incentive), the latter, in cooperation with the Ministry of Education Culture and Science, Ministry of Internal Affairs and the Ministry of Economical Affairs (BZK and EZ). These committees emphasise the powerful stimulus resulting from creative industries connected with ICT for new services and applications.

However, as for the unions, the employers' organisations did not formulate a specific policy considering ICT as a possible tool to improve the labour participation of disabled people.

The ICT sector

In the first part of the project 'Disabled, Working Life and Welfare State' for the Norwegian Research Council, AIAS reported on the employment in the Dutch ICT sector. A brief summary of this sector according to the study from Marc van der Meer (2006) is:

'The ICT-sector in the Netherlands can be defined in several ways, either in a broader or a narrower sense. ICT is only partially an independent sector; it is for the most part interwoven with and embedded in all other sectors. In 1999, the Dutch Ministry of Economic Affairs initiated a Taskforce ('*Werken aan ICT*') to study the problems in the sector. In its report an insightful panorama is drawn, distinguishing between five categories of firms: users, services, standard software, embedded

software, and telecommunication - each with their own characteristics and dynamic. ICT jobs show an enormous diversity.'

In the last years we have seen many ICT professionals starting their own enterprise; these 'self-employed' workers very often work at home. Teleworking makes ICT jobs attractive to people with mobility problems and for people that – due to their health condition or energy level – are not able to work at fixed hours in an office. However, on the other hand:

'Workload and work stress are the main ingredients of work in IT, impacting on health, sickness absence and disability. According to the Dutch labour inspectorate, there are three main problems: RSI, work pressure, and irregular working time. These problems are registered using the RIE criteria (Risk Inventory and Evaluation). In 54% of companies investigated by the labour inspectorate, there was a violation with respect to one of these; in 15% for both RSI and work pressure (Arbeidsinspectie 2004).'

In the Dutch ICT sector there is no tradition of institutionalised cooperation between employers and trade unions. On the contrary, individual employment relations prevail and only in some cases do collective agreements exist, and then usually only at firm level. The system of secondment means that many employees hold permanent employment relations with their employer.

In most ICT companies, flexible working hours and heavy work loads lead to occupational risks, above all RSI, work pressure and working overtime. The Labour Inspectorate has concluded that structural attention to the overall working conditions in the ICT sector is needed. In one out of four ICT companies such attention is lacking. Owing to media attention there has been, in the past few years, a call for preventative measures against RSI (good advice, good ergonomic conditions) in the ICT sector. Nevertheless, the research of the Labour Inspectorate has shown that in one out of seven companies there are insufficient measures in place (van der Meer, 2006).

This outline of the ICT sector makes it clear that working within the ICT is not without health risks. It also makes clear that for many job-seekers with disabilities finding an appropriate job in this sector is not self-evident.

6.5.7 Conclusions

In general, it can be stated that ICT is not in a direct way regarded to be a tool to improve the employability of people with disabilities. Striving for equal treatment for the handicapped worker is more directed by specific legislation (financial) compensations and specific provisions.

6.6 Conclusions on the Dutch policies

For this state of the art paper we reviewed Dutch literature and Internet data. With the help of these sources we could answer most of the initial questions.

2. *Is there a national ICT policy?*

Yes, there is a national Dutch ICT policy. This policy is targeted at enlarging the role of ICT in society. There is a governmental ICT agenda directed towards:

- Increasing social participation and accessibility (especially of the Internet).
- Economic revenues.
- Applicability of ICT in the health sector (to improve efficacy in the care process).

There is no specific national policy in order to improve employability of people with disabilities by means of ICT.

3. *To what extent do the national policies on ICT take into account the inclusion of people with disabilities in the labour market?*

People with disabilities and accessibility are not explicitly part of the national ICT policy. Accessibility of information is important in the national policy, but is not focused on the accessibility of information for specific target groups. Based on the Equal Treatment Act everyone is the same and merits the same opportunities in society. In the Netherlands inclusive policy is introduced by the Ministry of Health. The policy is focused on all ministries. In their policy-making the ministries have to take into account that it must suit all citizens, including those with a disability. This should include the employment policies and the ICT policies. However, the applicability of the inclusive policy in general policy-making is not well known and – presumably – often not carried out.

4. *To what extent do the national policies for participation of people with disabilities take into account employment strategies?*

As we see in chapter 5, the Law on Equal treatment includes people with disabilities and includes employment. Next to this there is the Medical Examination Act. Both the law and this act prevent selection by employers on the basis of risk. An important rule that can be applied to an employer is, that if an employee needs an adjustment to be able to work, then in principle the employer is obliged to effect the adjustment.

5. *How do the ICT strategies towards disabled people from several stakeholders look like?*

As stakeholders in the Dutch situation we recognised the unions (representatives of the employees), the employers' organisations, and the ICT sector in general and the organisations that serve the interests of people with disabilities.

Neither of the social partners formulates specific policies considering ICT as a possible tool to improve the labour participation of disabled people. The attention of the organisation for people with disabilities is directed to awareness, availability, financing, usefulness and accessibility of common ICT provisions. ICT is not in a direct way regarded to be a tool to improve the employability of people with disabilities.

With regard to the relationship of ICT and disability, most organisations of people with disabilities merely focus on the accessibility of Internet sites. The federation of people with a visual handicap explicitly screens changes and bottle-necks of ICT technology for the visually handicapped also in relation to finding employment in work with a strong ICT component.

6. *What examples are there of initiatives to stimulate employers/job-seekers to use ICT as a means for inclusion of disabled people in the workforce?*

Only specific rehabilitation centres are engaged with improving the employability by means of ICT technology, such as Roessingh (RDG), Bartimeus and Hoensbroek (iRv). Until 2003 the government had a special programme Technology and Society in which a subprogramme was directed at (re)integration of chronic work disabled people. Several techno-features (such as text telephone and specially equipped computer desk for people in a wheelchair) were developed as tool to enhance the employability of a disabled worker.

7. *Are the mainstream ICT strategies based on segregated solutions or on principles of universal design and accessibility for everyone?*

Although the principles of universal design and accessibility for everyone are recognised as important by the national government (or by one of the ministries), we found in the literature no evidence of these principles being implemented in practice. Although the accessibility of the Internet for everyone is a major topic for all the stakeholders, the mainstream ICT strategies are – as far as we were able to detect in this study – often (still) based on segregated solutions.

However, it is recognised that, with the help of ICT work gets less dependent on time and place. Thus teleworking can be an important instrument in stimulating labour participation of people with a disability. ICT offers many opportunities to work in new ways, ways that might be more appropriate for (some) people with disabilities, but research in this field is lacking.

8. *What is known of the effects of the ICT policies? What kind of research has been done in this field (evaluation research)?*

We found no evaluation studies on the effects of the ICT policies or action programmes. In the Dutch literature we found no evaluation research with regard to ICT as a tool to improve the employability of disabled workers, other than the research considering RSI complaints and how to deal with them in the workplace.

6.6.1 Challenges attached to the Dutch policy

Although there are ICT policies formulated in the public and private domain, neither emphasise the role of ICT in the improvement of employment of people with disabilities. ‘Access to ICT for all’ is the key words, but this access is not specified or operated in employment strategies. But do we need this specification? And do we need governmental policies to improve the accessibility and usefulness of ICT for the employment inclusion of people with disabilities?

Mainstreaming or not?

A central question is whether we should develop special programmes and policies for disabled people rather than mainstreaming focusing on employment with the help of ICT developments. Of course, one should take the specific type of disability into account but this discussion revolves around non-discrimination and equal opportunities. Participation in non-mainstreaming programmes can be seen as stigmatisation. Not only might the employer conclude that the capabilities of a person in a specially designed programme are limited, but also the disabled person him/herself since more emphasis is placed on the limitations, rather than the capabilities. Design for All, not only for products but also for policy? What effects can be achieved by the inclusive policy, including all policy strategies and all inhabitants?

6.6.2 Recommendations for next steps in the project

The information we collected by the literature study was insufficient to answer all the research questions adequately.

We would like to interview several stakeholders who can provide information on the following topics for the Dutch situation:

- The implementation of the Inclusive policy initiated by the Ministry of VWS
- The way the Equal Treatment Act facilitates ICT investment by the employers to enhance the employability of their workers with disabilities or to be able to give employment to a qualified worker
- The existing discrepancy between policy-making and policy practice (e.g. the inclusive policy is not common business in the other departments; although ‘equal treatment’ is a hot topic nowadays, the daily practice is refractory)
- The way the unions actively encourage or facilitated the use of ICT to enhance employability of disabled people
- The way the national council for chronically ill people facilitates the use of ICT to enhance employability of disabled people
- The specific experience of the rehabilitation centres, such as Roessingh service group and iRv-Hoensbroek who do take notice of the possibilities of ICT technology to enhance the employability of disabled people.

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