Thematic Study to Analyse Policy Measures to Promote Access to Information Technologies as a Means of Combating Social Exclusion

Final Report

February 2006

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Bonn, February 2006

Executive summary

Brief of the study

The development towards a Knowledge Society, involving the widespread application of Information and Communication Technologies (ICTs) is expected to create new societal risks but also to open up new opportunities, not least in relation to social cohesion. To understand these developments is an urgent priority, if policies and programmes are to be set in place minimising the risks that new patterns of social exclusion develop, and to enable those groups already at risk to find new opportunities for full integration into society.

This is the background against which this study was commissioned by the Employment, Social Affairs and Equal Opportunities Directorate-General of the European Commission. Its specific objectives are threefold, namely:

- to identify risks and opportunities in relation to poverty and social inclusion that come with the rapid maturing of the Knowledge Society;
- to identify policy measures and programmes that are successful in addressing these risks and opportunities;
- to outline the key elements necessary for the development of more coherent, strategic and integrated approaches which ensure that policies in relation to ICT reinforce other policies to promote social inclusion.

Methodological approach

As set out in the terms of reference, a multi-method approach was adopted for the purposes of this study including the following methodological steps:

- a synthesis of two distinct literatures – the first concerning poverty and social inclusion and the second concerning the Knowledge Society, eInclusion and the digital divide;
- the gathering of information in 12 selected countries on national policies and programmes in place (both those developed by national authorities and by social partners or NGOs) which appear to be successful at removing barriers to access and increasing participation of those at risk of poverty and social exclusion in the Knowledge Society;
- the gathering of information in 12 selected countries on policies and programmes in place (both those developed by national authorities and by social partners or NGOs) which appear to be successful in exploiting the information society's potential for increasing social inclusion of those individuals and communities particularly at risk of poverty and social exclusion, such as people with disabilities, people living in isolated or remote communities, immigrants or ethnic minorities or young people leaving school early;
- a synthesis of the outcomes of the previous work steps outlining the key elements necessary for the development of more coherent, strategic and integrated approaches which ensure that policies in relation to ICT reinforce

other policies to promote social inclusion, particularly in the context of developing National Action Plans to promote social inclusion.

Risks and opportunities associated with ICT developments

Though the terms 'poverty' and 'social exclusion' are often used in social science, media and policy discussions, their meaning and relationship to each other and to wider concepts of social cohesion and inclusion is not always clear. For the purposes of this study, a multi-dimensional concept of social exclusion was adopted bringing the following aspects to the fore:

- the importance of adopting a *multi-dimensional* notion of resources,
- the assumption that people's living conditions depend not just on their personal and household resources but also on the material and cultural *collective* resources to which they have access, for example within their local and occupational communities,
- a focused attention on the relational as much as the distributional dimensions of stratification, recognising that relationships are themselves a component of human well-being, and that their breakdown or absence can therefore be a deprivation,
- the need for tracking the changes in the population at risk of deprivation over time, and the *dynamic processes and trajectories* involved.

Various lines of intersection between this notion of social exclusion and the concept of the Knowledge Society - and the associated concept of eInclusion – are identified in the report. Today, growing parts of the population live and work in digitally 'networked' environments and engage in new forms of ICT-mediated communication, collaboration, production and consumption. Doing things with the help of ICT is no longer limited to specialists, and many day-to-day activities are undergoing quite fundamental changes. The deployment of computers, the Internet and mobile communication in all aspects of the economy, services and everyday life is progressing apace. In view of increasing pervasiveness of ICTs three dimensions to social inclusion warrant particular attention, namely (a) the practicalities of access to income, employment, and goods and services; (b) a person's opportunities for and extent of social participation and civic engagement and influence; and (c) the more collective aspects of mobilisation of communities of interest, community development and wider social cohesion.

When it comes to policy intervention, both the risks and the opportunities that ICTs present in relation to these themes need to be addressed. Risks include the possibility to fall further behind (because of first and second order digital divides that reinforce existing lines of socio-economic fracture) and to experience new exclusions because of the increasing role of the Internet and online services in key aspects of everyday life. Opportunities include those presented by ICTs for individuals in their own lives and those that can support collective activities through the better networking and other capabilities offered by ICTs.

Public interventions directed towards eInclusion

When it comes to eInclusion-related public interventions, there is currently a considerable amount of activity that has relevance for various aspects of the social

inclusion agenda. Relevant measures can be found at the EU, Member State, regional and local community levels. They address a broad range of objectives through a wide array of approaches and measures. As summarised in the table below, five generic themes can be discerned as follows:

- removing barriers to accessing the tools and services of the knowledge society, e.g. for people who cannot afford the costs, people with functional restrictions or those who lack required skills;
- avoiding new forms of exclusion that can be directly traced to ICT, e.g. the risk of social and/or economic deprivation of involuntary/voluntary ICT non-users if more and more day to day activities "go online";
- exploiting practical opportunities offered by ICT in order to support social inclusion of at-risk groups, e.g. in terms of better access to education and employment;
- exploiting ICT for the purpose of empowering at-risk individuals to take their own steps to improve their situation, e.g. in terms of networking with others who are in a similar situation;
- exploiting ICT to improve the situation of communities at risk of social exclusion, e.g. by utilising ICT for building up social capital in deprived communities.

Thematic structuring of current eInclusion-related interventions

eInclusion perspective	Main issue	Sub-issue	Practical eInclusion measures/approach
Combating eExclusion	Removal of existing barriers	Awareness / motivation	Demand side measures aiming to raise awareness and encourage interest amongst late adopters
		Availability / affordability	Demand / supply side measures aiming to remove tangible, practical barriers
		Digital literacy	Demand side measures aiming to provide eSkills
		eAccessibility	Supply side measures to ensure that people with disabilities and others with functional difficulties can access ICTs
		eService usability	Supply side measures to ensure that all groups, especially at-risk groups, can use online services
	Avoidance of new risks	Alternative modes of access	Supply side measures to ensure that important services remain available to those who are not online
		Avoiding social isolation	Measures to ensure that increasing virtualisation does not lead to social isolation of vulnerable persons
		Avoiding second order divides	Demand side awareness-raising and eSkills measures to help people get real benefits from online opportunities once they are online

Thematic structuring of current eInclusion-related interventions (continuation)

eInclusion perspective	Main issue	Sub-issue	Practical eInclusion measures/approach
Exploiting ICT opportunities	Practical opportunities	Access to employment	Demand and supply side measures to give at-risk groups better opportunities in employment
		Distance bridging	Demand and supply side measures to exploit the inherent properties of ICTs to bridge constraints of distance (and time)
		Relevant content / services	Supply side measures to develop content and services that is really relevant to the needs of those at-risk of exclusion; includes services that support independent living (e.g. telecare) for older and disabled people
	Empowerment	Networking	Measures to exploit the networking capabilities of ICTs to empower at-risk groups to address their own needs
		eDemocracy	Measures to facilitate more engagement and more effective engagement / influence of at-risk groups in all aspects of politics and governance
		eLearning	Measures to facilitate self-directed personal development and lifelong learning for at-risk groups
		Content creation	Measures to facilitate at-risk groups to become content creators, not just consumers of content created by others
		NGO support	Measures to help NGOs exploit ICT in support of their work with at-risk groups
	Community / society oriented	Online communities	Measures to encourage the deployment and utilisation of ICT amongst at-risk communities
		Cohesion oriented	Wider initiatives aiming to use ICT to spread knowledge, appreciation of and interaction between different groups across society

Towards a more coherent, strategic policy response

Although most of the initiatives that were identified appear to have significant merit in their own right, the overall impression is one of a lack of a real strategic articulation of and integration of the eInclusion theme within the broader social inclusion agenda. What is needed is a clear, strategic analysis of how eInclusion issues (and the measures that are suited to addressing these) feed into the wider social inclusion agenda and, on the basis of this, a focused effort to resource and promote the types of eInclusion measure that can contribute most to social inclusion. It is hoped that the analysis presented in the report will provide a useful starting point for this.

A second issue concerns the need to ensure that the most appropriate measures are used in tackling the respective eInclusion / social inclusion issues. Some issues, such as affordability of access to personal computers and the Internet, now basic tools of everyday life, need to be addressed in a centralised, universal manner and should not be left to the vagaries of the marketplace or voluntary initiative and effort. Other issues of more local or sectoral interest may be better left to initiative at local / sectoral level, even if central support through funding or other mechanisms may often

be needed and appropriate. This is an important consideration in relation to the role of the EU in the eInclusion / social inclusion area. Some EU instruments have a key role to play in underpinning universally applicable measures across Europe; others have a role to play in providing the funding and other supports that are needed to encourage local / sectoral initiatives to flourish.

A third issue and one that is partly connected to the previous one is the need for efforts to ensure consistency of approach and quality across Europe for those thematic measures where this is appropriate and warranted. Whilst respect for subsidiarity must be maintained and bottom-up activity has a central role and legitimacy in many aspects of eInclusion and social inclusion, there is also an important need for EU-driven measures (e.g. within OMC processes) to encourage consistency and quality in key fields, such as digital literacy and equality of access to and usability of services of public interest.

Another issue concerns the importance of increased attention to targeting those most at-risk when publicly-funded measures to address eInclusion are being introduced. The evidence presented in this report suggests that whilst there are quite a few examples of well-targeted efforts at both Member State and local level, the bulk of activity and funding in the eInclusion area seems so far to have been more generally oriented and distributed. At the EU level, there has so far been relatively little attention given to the question of how Community instruments can be used to target specific at-risk groups in this area.

Finally, there has not yet been much effort given to monitoring and evaluation in this area. This applies both to eInclusion initiatives in themselves as well as to the more difficult question of how eInclusion measures are contributing to wider social inclusion. There are a number of levels at which more and better monitoring and evaluation is needed. At the EU level, there is a need for more assessment of the extent to which Community instruments (e.g. the structural funds), OMC efforts (e.g. eInclusion measures in the framework of eEurope, or ICT-related measures in the NAPs/employment context) and national implementations of Community Directives (such as the Universal Service Directive) are actually reaching and having socially inclusive benefits for those who are most at risk of social exclusion.

Such monitoring and evaluation can build upon the social inclusion indicators agreed at the Laeken Summit at the end of 2001. However, none of the current indicators address the eInclusion theme. In addition, although Member States were encouraged to use a variety of tertiary indicators, chosen at the national level to supplement these common indicators, only in a few cases do these make reference to eInclusion or e-exclusion. On the other hand, the Joint Reports on Social Inclusion do highlight the new opportunities and risks associated with the new information technologies and gather together such data as the individual NAPs provide on measures in this area. Indicators of eInclusion and e-exclusion would therefore seem obvious elements for further elaboration within the future development of the NAPs. A variety of possible indicators are already available and some are already included in EU benchmarking, for example, the eEurope indicators 2005. Annex IV reviews the literature dealing with these indicators of eInclusion or eExclusion and offers a menu of possibilities that are consistent with the analysis of social exclusion presented in this report.

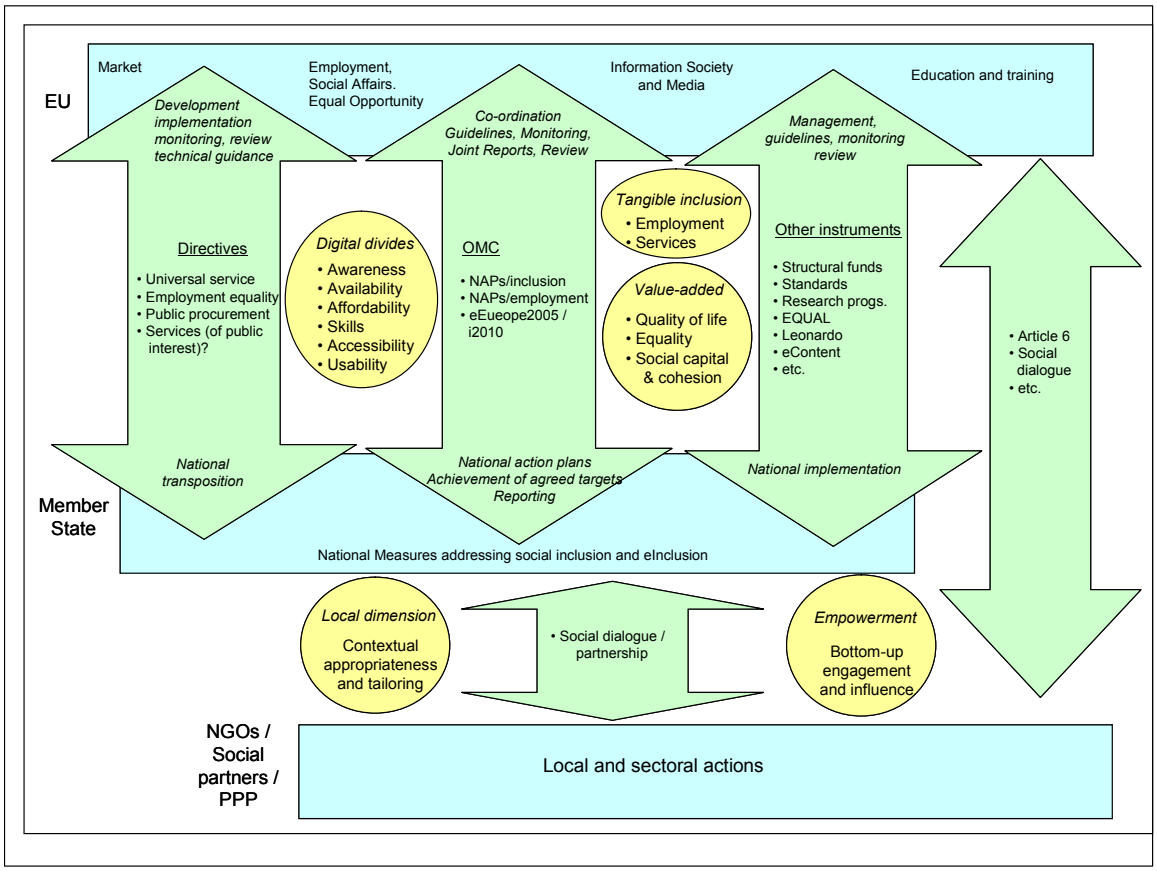
Apart from the EU level, there is a need for a similar monitoring as well as for an increased emphasis on evaluation of effectiveness and outcomes of measures that have been implemented at national and local level. At all levels there is a need for a lot more effort to assess outcomes in an ongoing, follow-up manner to see whether

and how the acquisition of ICTs and / or of digital literacy has social inclusion impacts over time.

The role of the European Union

At the EU level, perhaps the biggest challenge at present is to develop a coherent approach that clearly identifies the ways that eInclusion is expected to contribute to social inclusion and optimally taps the different competencies and instruments that are available to the EU institutions to support the realisation of this contribution. As graphically presented below, there are various instruments and measures available to the EU in the framework of leveraging the potential contribution of eInclusion to social inclusion objectives.

Figure 5.2 Overview of EU competencies and instruments, and of EU targets in this field



Source: the authors

These include various **EU Directives** that have important potential to foster eInclusion in the service of social inclusion throughout the EU. The *Universal Service Directive* provides scope for action in relation to affordability of telecommunications. Here, attention needs to be given not just to access to and costs of fixed telephony services but also to issues of affordability in relation to mobile telephony and Internet access and usage. The fact that the Internet is now becoming an essential tool in many aspects of daily life (for example, searching for health information) indicates that the time has come for consideration to be given to including the Internet within the scope of universal service provisions.

The *Employment Equality Directive* provides scope for action in relation to ICTs in the workplace, for example, in ensuring that ICTs do not present barriers for people with disabilities or older people, and that the positive opportunities of assistive technologies are exploited. The extent to which these aspects of eInclusion are being addressed within the context of the "reasonable accommodation" and indirect discrimination provisions of the Directive needs to be examined and the European Commission should consider providing guidance to Member States in relation to this.

The *Public Procurement Directives* now encourage attention to eAccessibility in public procurements of ICTs. As in the case of employment equality, however, there is a need for an examination of the extent to which this aspect is actually being addressed in public procurements in the Member States. In addition, the European institutions can take the lead through the incorporation of eAccessibility in their own procurements and through the inclusion of eAccessibility in the requirements placed on expenditure of the structural funds.

Finally, a Directive on protection of *services of public interest* would provide an opportunity for an EU-driven effort to ensure that at-risk groups are not disadvantaged by the increasing provision of key public services in online mode. This could address both the importance of maintaining more traditional ways of accessing key services as well as ensuring that online offerings are usable and accessible.

In all cases, the challenge for the EU (and the Member States) is to optimally use the leverage that these Directives provide. This means *strong transpositions of the Directives at national level in ways that target eInclusion and social inclusion issues*, monitoring of the transpositions at EU level and regular assessment of their impacts, as well as EU-level provision of technical or other guidance, and regular review in the light of changing social and economic circumstances and technologies.

Another powerful opportunity for EU-wide measures is provided through the **Open Method of Co-ordination**, currently being applied in a number of areas of EU policy. There is scope for more attention to eInclusion and social inclusion issues in these various OMC contexts, particularly as regards targeted attention to and monitoring of progress in terms of reach to and benefits for those who are most at risk. Opportunities for reinforcing the eInclusion element in the NAPS/inclusion concern not only the objective of preventing the risks of social exclusion – as it is reflected in the current NAPs/JIMs – but the other objectives stated there as well.

Further opportunities arise in the context of **eEurope 2005 and its successor, the i2010 initiative,** that is currently being formulated. It will be important that this gives due prominence and attention to eInclusion measures that target the social inclusion concerns of at-risk groups.

The **NAPs/employment** also provide an important context. So far, however, only limited attention has been given to the ICT dimension for groups that are disadvantaged within the workforce or for those groups that are especially at-risk and currently outside the workforce. In addition, the Joint Employment Reports indicate that only limited progress is being made against the objective of giving every worker the opportunity to achieve digital literacy. There is a need to reinforce attention to ICT skills and other aspects of the exploitation of ICTs in support of increasing access to quality employment and equality of opportunities for all in this field.

Finally, there are a number of **other instruments** that also have relevance for promoting eInclusion at the service of social inclusion. These also warrant more attention and reinforcing in the context of a co-ordinated and coherent EU approach. The *EU Structural Funds* provide one set of instruments and there is scope for more

targeted requirements and guidelines that address eInclusion for social inclusion and that ensure that public monies proportionately reach and benefit those most at risk. *Standards* provide opportunities to introduce more harmony and consistency across Europe in important technical areas, such as eAccessibility. The major *research programmes*, especially the Framework Programmes, already have an eInclusion dimension and this needs to be reinforced and carefully targeted for the next phase (FP7). The *eContent programme*, amongst other things, promotes linguistic diversity in the information society. Finally, programmes such as *EQUAL and Leonardo* already address aspects of eInclusion in the service of social inclusion, as do some activities in the context of EU support for the NGO sector. These provide important opportunities to support local level and bottom-up initiatives addressing the eInclusion dimension of social inclusion, and this aspect warrants enhanced attention and reinforcement.

Finally, although it is clearly not the role of the authors of this report to propose how the EU institutions manage their own affairs it is nevertheless useful to point to some **core institutional units and activities** that could be expected to play a pivotal role in managing the development of a more co-ordinated approach. In this regard, DG Employment, Social Affairs and Equal Opportunities and DG Information Society and Media can be seen as having important and complementary contributions to make, supported by Eurostat and other statistical/benchmarking services.

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1 Introduction

Brief of the study

The development of a knowledge society, involving the widespread application of Information and Communication Technology (ICT), is expected to create new risks but also to open new opportunities, not least in relation to social cohesion. To understand these developments is an urgent priority, if policies and programmes are to be set in place which will minimise the risks that new patterns of social exclusion could develop, and to enable those groups already at risk to find new opportunities for full integration into society.

This is the background against which this study was commissioned by the Employment, Social Affairs and Equal Opportunities Directorate-General of the European Commission. Its specific objectives are threefold, namely:

- to identify risks and opportunities in relation to poverty and social inclusion that come with the rapid maturing of the information society and the widespread application of ICT,
- to identify policy measures and programmes that are successful in addressing these risks and opportunities, particular in relation to those who are at high risk,
- to outline the key elements necessary for the development of more coherent, strategic and integrated approaches which ensure that policies in relation to ICT reinforce other policies to promote social inclusion, particularly in the context of developing National Action Plans in the field of social inclusion.

Methodological approach

As set out in the terms of reference, the brief of this study required a multi-method approach to be adopted. This approach included the following methodological steps:

- a synthesis of two distinct literatures – the first concerning poverty and social inclusion and the second concerning the knowledge society, eInclusion and the digital divide - outlining the most pertinent risks and opportunities in relation to social exclusion arising from the rapid growth of the information society and ICTs, and identifying those most at risk in this regard,
- the gathering of information in 12 selected countries on national policies and programmes in place (both those developed by national authorities and by social partners or NGOs) which appear to be successful at removing barriers to access and increasing participation of those at risk of poverty and social exclusion in the information society,
- the gathering of information in 12 selected countries on policies and programmes in place (both those developed by national authorities and by social partners or NGOs) which appear to be successful in exploiting the information society's potential for increasing social inclusion of those individuals and communities particularly at risk of poverty and social exclusion, such as people with disabilities, people living in isolated or remote

communities, immigrants or ethnic minorities or young people leaving school early,

- a synthesis of the outcomes of the previous work steps outlining the key elements necessary for the development of more coherent, strategic and integrated approaches which ensure that policies in relation to ICT reinforce other policies to promote social inclusion, particularly in the context of developing National Action Plans to promote social inclusion.

Report outline

The report follows these research strands in its structure. Chapter 2 overviews literature and evidence concerning social exclusion (and inclusion) and poverty to enable an assessment of the risks and opportunities that ICT-related developments hold in relation to poverty and social exclusion.

Chapter 3 overviews literature concerning the development of the Information Society, including the debate on the so-called digital divide. Again, risks and opportunities emerging from this literature in relation to social inclusion are identified, as well as strategies for eInclusion.

Chapter 4 reports on the research undertaken in 12 selected Member States. It analyses and assesses identified eInclusion measures with potential to contribute to social inclusion. Adopting a theme-by-theme approach, selected policy measures and programmes are presented and assessed in relation to impacts and success factors, and a profile of the panorama of measures across the Member States that address specific themes is provided.

Chapter 5 then takes stock of the current situation in relation to eInclusion policies in the service of social inclusion and identifies some areas where improvements would be helpful. Further, it discusses the possibilities for developing a more coherent approach that maximises a targeted leverage of EU instruments. Then it briefly addresses the issue of tailoring approaches and measures that are most appropriate to the specifics of different Member States, in terms of their national contexts and local circumstances. Finally, it is discussed how the NAPs/inclusion process can be reinforced in terms of how the eInclusion aspect of social inclusion is addressed.

2 Social inclusion and ICT - theory and evidence

This chapter overviews literature and evidence concerning social exclusion and poverty to enable an assessment of the risks and opportunities ICT-related developments may hold in relation to social exclusion.

This starts with an outline of areas of clarity and uncertainty surrounding the definition and measurement of poverty and social exclusion. Based on this analysis, a multi-dimensional concept of social exclusion is outlined. Then it is discussed what risks and opportunities ICTs may theoretically hold in relation to this concept. Finally, current cross-national concerns on poverty and social exclusion - as they come to the fore in the context of the European Union's move to co-ordinate policy learning and transfer across the member states - are outlined.

2.1 Social inclusion, poverty and social exclusion

Conceptualisation of poverty and social exclusion

What are poverty and social exclusion? Though the terms are often used in social science, media and policy discussions, their meaning and relationship to each other and to wider concepts of social cohesion and inclusion is not always clear. This section outlines the current conceptualisation of poverty and social exclusion and gives some recent profiles and trends across the EU. The section then goes on to link the underlying causes of social exclusion to the European Commission's co-ordination of policy sharing and development in this field through the set of National Action Plans for Social Inclusion for existing Member States and the Joint Inclusion Memoranda for the New Member States that joined the EU in May 2004.

Poverty

At its simplest, a poverty approach attempts to measure how far individuals (usually based in) households have resources sufficient to satisfy their needs. Resources are measured to be above or below a pre-set level of need satisfaction or "poverty line". Those with resources below the poverty line have a "poverty gap" and are thus "poor" with the size of their gap indicative of the depth of their poverty. Those with resources above the poverty line are usually not considered to be poor, even if their level of poverty clearance is small.

The main developments in the conceptualisation of poverty since the 1960s have centred on how to identify and measure relative poverty in order to reflect contemporary living standards. It is most common to measure resources in monetary terms using either income or expenditure. Wealth in the form of assets and savings is far less commonly used. Income and expenditure are taken as proxies for a wider concern about individual welfare and thus it is the translation of levels of income or consumption into living standards and participation in society that is seen as important.

The debate about poverty standards has been largely one between *absolute* measures, which try and define a minimum set of needs and to anchor poverty into a measure of experienced disadvantage, and *relative* measures, where individual needs as socially determined and related to overall social distribution of needs and consumption. It is now almost universally accepted that poverty in economically

developed nations is to be seen in relative terms – "*exclusion from the minimum acceptable way of life in one's own society because of inadequate resources*" (UNICEF 2000 p.6). There is inherent in the relative poverty approach consideration of input (resources) and outcomes (living standards and behaviour). "*Poverty is not just any limited social functioning, but specifically isolation that stems from the lack of economic resources*" (Kangas and Ritakallio 1998, p 175).

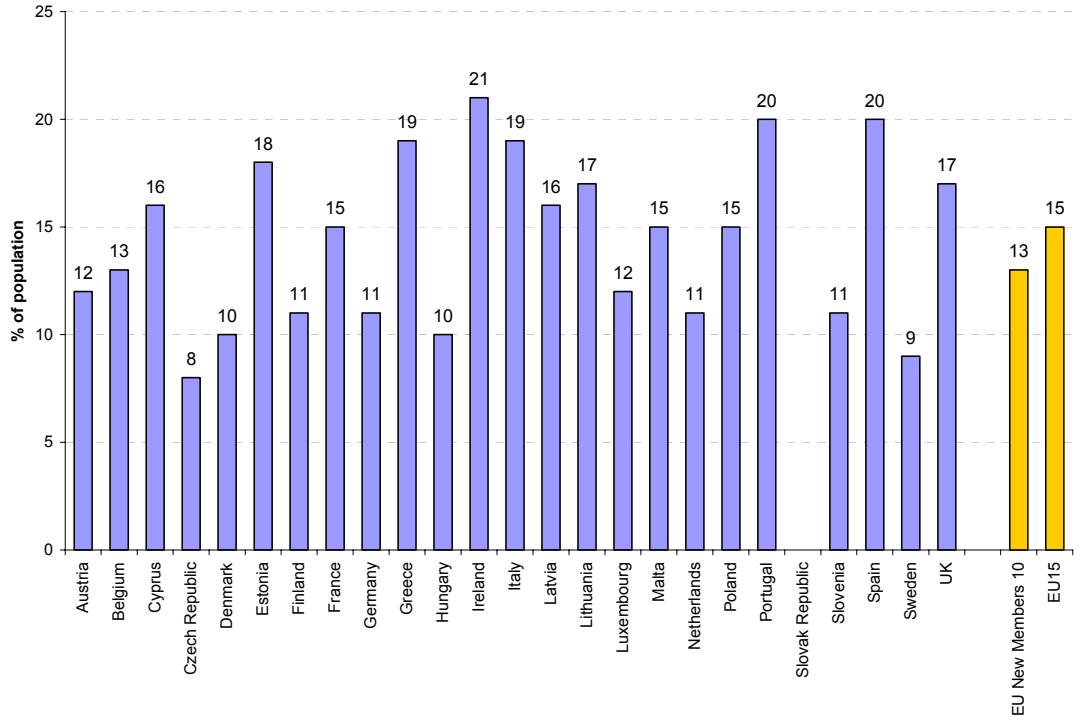
Townsend's approach has been seminal and his definition is still one of the best reference points for discussions of poverty. "*Individuals, families and groups in the population can be said to be in poverty when they lack the resources to obtain the type of diet, participate in the activities and have the living conditions and amenities which are customary, or at least widely encouraged, or approved, in the societies to which they belong. Their resources are so seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary patterns, customs and activities*" (Townsend 1979 p 31).

Measuring poverty imposes great demands on data and most approaches use national household budget survey data. Such data provides details of economic and financial resources which can establish a relative poverty line using a variety of methods. Setting the poverty line is thus the main focus for such studies and a number of approaches are followed: budget standards, food or necessity ratios (the proportion of income that is spent on such necessities), a social definition of minimum income (set by focus group or other methodology), or by consensual or "subjective" methods using individual survey data can all establish a poverty line. However, approaches that require more than income data to set the poverty line are less used because of the widespread availability of household budget survey data. Indeed, the existence of such data across countries and over time makes comparative analysis of poverty trends possible. A consistent poverty line over time and between countries with different levels of nominal incomes is usually set according to the national income distributions. The most common poverty lines are set as a proportion (some would argue, an arbitrary proportion) of average income (either the median or mean). EU standards for poverty measurement use such a method, based on 60 per cent of median income, although this is seen as a "risk of poverty" measure as well as an indicator of poverty.

Figure 2-1 overleaf shows the poverty rates (headcounts) across the EU using the 60% of median income poverty line. Figure 2-1 shows a wide range of poverty between Member States. Across the fifteen pre-enlargement Member States poverty levels are, on average 15%[1] with countries with high poverty levels (of 17% and over) being the UK (17%), Italy and Greece (19%), Spain and Portugal (20%), and Ireland (21%). The countries with the lowest poverty rates in the EU15 are Sweden (9%), Denmark (10%) and Finland, Netherlands and Germany (11%). Looking at the 10 new Member States, the average poverty rate at 13% is lower than the EU15. This is a profile that fits awkwardly with what is known about standards of living in many of the new members and on profiles of per-capita GDP. There is, quite simply, more deprivation in many of the New Member States than in the original EU15. Why does this not translate into higher relative poverty measures?

1 Unweighted crude average of national rates

Figure 2-1: Risk of Poverty Rates in European Union 1999



Notes: Definition uses poverty threshold taken as 60% of the median equivalised income.

Sources: Joint Report by the Commission and Council on Social Inclusion, March 2004 Social Inclusion in the New Member States: A Synthesis of the Joint Memoranda on Social Inclusion, SEC(2004)848, June 2004.

The reason is that the level of income associated with 60 per cent of median income has no direct relationship with living standards. It may be less than that needed to purchase a minimum basket of essential goods in many countries outside of economically developed Western Europe. In countries where a very large proportion of the population have very low incomes there is a possibility that using a relative poverty line based on a proportion of average income may well understate levels of absolute poverty and deprivation. This is indeed the case in some New Member States of the EU and in states going through the accession procedure such as Romania, Bulgaria and Turkey. We can illustrate this by using The World Bank's $2 per person per day measure, used as world wide measure of poverty across the developed and developing world and comparing it to EU relative standards using the 60% of median figures. Table 2-1 takes a selection of new member and accession countries and shows how this $2 a day level compares to the EU standard.

Table 2-1 shows that $2 a day in Romania and Bulgaria in 1999 was 208% and 124% of the 60% relative poverty line for a single person. For families with children, then the differences between the $2 a day and relative line are greater and six countries in the 13 new member and accession states had lower relative lines than $2 a day poverty lines. This means that great care has to be taken when using relative poverty lines that they do not assume any necessary link to adequate living standards. They firstly do not necessarily indicate income levels that are adequate to cover a set of basic needs. In countries where this is the case, the policy implication of accepting an EU type relative poverty line (based on a percentage of average income) is that anti-poverty programmes will struggle to meet minimum living

standards if they try to close poverty gaps based on a line that is set too low to cover such minimum standards.

Table 2-1: World Bank $2 a day Poverty Line as a Percentage of EU 60% of Median Income Poverty Line

%	1 adult household	Household with 2 adults& 2 dependent children
Romania 1999	208	397
Bulgaria 1999	124	236
Latvia 1999	77	146
Lithuania 1999	75	143
Estonia 2000	64	122
Poland 1999	54	103

Source: adapted from European Commission (2003)[2]

A second approach to measuring poverty is to use subjective evidence, usually based on survey respondents' assessments of their income and/or living standards, or views on the income or consumption needs of others in general. Van den Bosch (2001) has recently overviewed such approaches. Van Praag, for instance, conducted a range of surveys addressed to a sample of the general population and investigating 'what income do you need to make ends meet?' (van Praag et al. 1980). His study analysed the link between such subjectively defined level of necessary income and the income levels of the respondent and put forward the point at which they equated as a poverty line implicitly defined by the *vox populi*. Deleeck then developed a range of subjective as well as objective measures of income poverty, which were piloted through Eurostat during the later part of the 1980s (Deleeck 1989). Recent analysis of British social attitudes has also found some correspondence between attitudes to the amount of income that is "enough to live on" and a relative poverty measures based on 60 per cent of median income (Hills 2004).

In general, recent discussions of the experience and meaning of poverty (and not just finding a poverty line) have expanded to take into account both adult and children's subjective evidence (Shropshire and Middleton 1999; Ridge T 2003 and Narayan et al. 2000). A recent study of Eurobarometer data also provides subjective views of social integration and exclusion across Europe (Alber and Fahy 2004).

The third approach to measuring poverty focuses on outcomes rather than on resource inputs and this approach can help clarify and resolve some of the difficulties in interpretation of relative measures of poverty that rely solely on points in the income distribution. The approach attempts to directly measure living standards and living conditions through focusing on consumption of goods and services, participation in important social processes and ownership of items and of activities. Such studies thus find levels of deprivation that arise from not having certain required consumption, items or participating in an activity. The underlying assumption of most studies is that such deprivation derives directly from constraints of low income rather than preferences. However, some studies additionally ascertain whether lacking any item is from choice or financial constraint (Mack and Lansley 1985 for instance).

2 Note that the table headings in the original are wrongly labelled and have been corrected here.

One of the most pressing questions for poverty analysis and for policy makers is how to reconcile the differences between poverty estimates made by these first and third approaches. There is very often a mismatch, with a portion of those identified as below a relative poverty line not experiencing deprivation and, *vice versa*.

There are many obvious reasons for such mismatches. First, the issue of relying on cross-sectional rather than longitudinal income profiles. Cross-sectional profiles of current income may not match current living standards because the two take time to adjust to each other – so that those who recently entered poverty may have stocks of items that reflect their previous income and those that have recently left poverty may still not have gained the opportunity to stock up on larger more expensive items. They may also reflect adaptive preferences so that a period of being poor reduces the set of preferences and these then take time to adjust when income rises. Second, those with savings or other capital resources may draw from them to maintain living conditions when income levels fall and thus maintain living standards on a lower income level. Third, there is the problem of accurately measuring income, with some sources of income and inter-personal transfers especially difficult to identify, and with well known measurement difficulties at the bottom of the income distribution.

Recent research using consistent cross-EU data from the European Community Household Panel (ECHP) has enabled data to be produced that compare deprivation based poverty and poverty based on percentages of median income across a number of EU Member States (the EU15 only) in 1994 and 1995. Table 2-2 shows these figures. Column A shows the proportion of the populations with income below 60% of median. Column B shows the proportion of those in A that are also below the deprivation-based threshold (the so-called overlap) and Column C shows the percentage of the total population that are poor by both definitions. The overlap between those identified as poor using the 60% of median income measure and those that are found to be materially deprived ranges from 52% in Portugal to 17% in Denmark. However, Denmark looks an outlier for several reasons and other overlaps of 39-33% probably indicate a better lower range of such overlap. The relative income poor and the materially deprived are thus not the same population. Indeed, when we identify the population that is both relatively income poor and deprived then such populations are far smaller – ranging from 12% of the population in Portugal to only 4% in the Netherlands (and only 1.4% in Denmark – again a likely outlier).

The idea of deprivation-based or outcome measures of poverty also fits more closely with some governments use of a notional “basket of goods” measure to set national poverty lines or to set levels of adequacy for social assistance and other anti-poverty transfers. This approach also links more directly to the idea of affordability being a primary determinant in consumption of and use of ICT for those on low incomes, a point that is discussed later in this chapter. There are thus interesting questions concerning the measurement of deprivation and both how far expert or official determinations of budget standards have adapted and how far normative determination of social minimum standards have adapted to include ICT? In other words, do the majority of the population view consumption of and participation in ICT as a necessary requirement for normal social participation?

Table 2-2: Deprivation and Poverty in EU countries compared in 1994

Country (ranked by column A)	A % of below 60% median threshold	B % of A that are also identified as deprived (overlap)	C % of population identified as poor by both measures
Portugal	23.6	52.2	12.3
Greece	22.1	45.7	10.1
U.K.	20.8	47.2	9.8
Spain	20.1	46.1	9.2
Italy	18.8	42.2	7.9
Belgium	17.1	33.3	5.7
Ireland	17.1	44.3	7.6
Germany	15.9	31.9	5.1
France	15.0	39.3	5.9
Netherlands	10.3	39.2	4.0
Denmark	8.3	17.0	1.4

Source: Layte et al. 2001

More recent research on deprivation across the enlarged EU have actually included ICT (European Foundation for the Improvement of Living and Working Conditions 2004)[3] but there is no specific or separable analysis of ICT consumption within a larger set of deprivation measures used in these studies. Figure 2-2 overleaf shows figures from this research on average measures of deprivation (based on a seven item scale that includes not having a personal computer in the household) across the EU25 and additionally including the three accession countries of Romania, Bulgaria and Turkey.

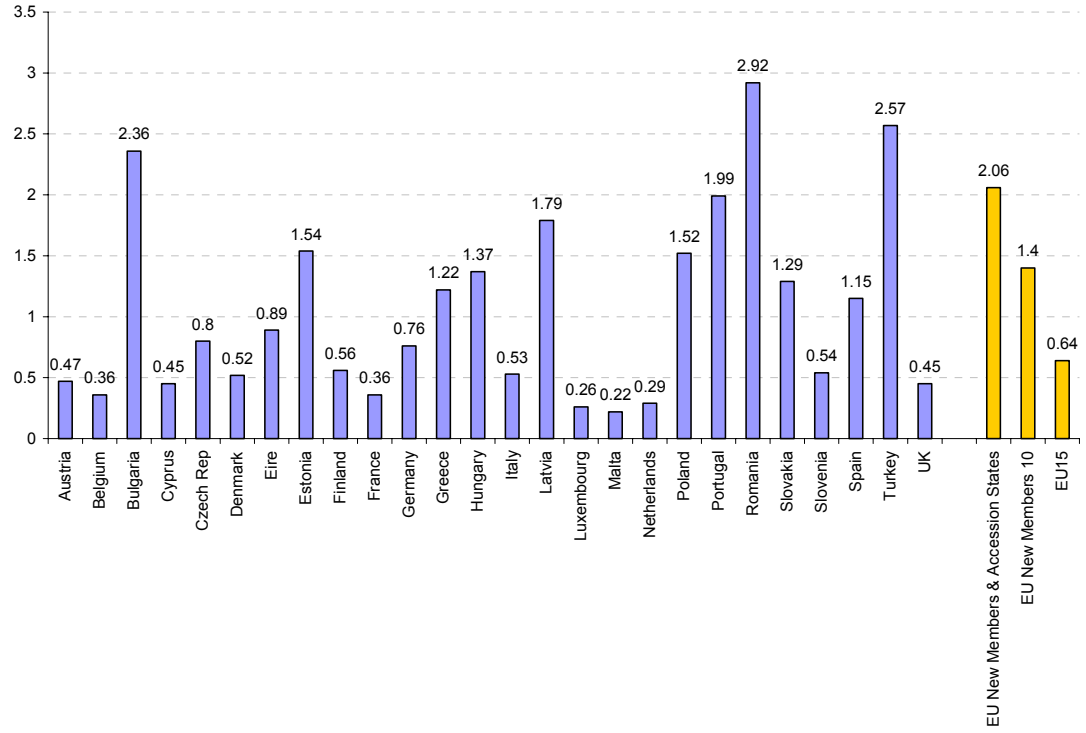
Figure 2-2 clearly shows that the New Member States are on average much more deprived than the original EU15. The differences in deprivation are even more stark when the comparison is between the EU15 and the ten new members alongside the three accession countries. These results are a direct contrast to those shown in Figure 2-1.

But, there are several caveats that should be highlighted at this point for later discussion of overlaps between deprivation and e-exclusion. First, not having a PC in the household does not necessarily relate to not having access to e-services as there may be greater use of internet cafés or similar services in countries with low levels of home PC ownership . This makes measures of eInclusion that focus too much on household PC ownership biased towards those countries that have high levels of ownership of household based white goods and away from those with higher usage of extra-household ICT facilities. Second, even where it can be shown that low income/poverty are causally associated with a failure to consume or participate, (either ICT or for other items of consumption) there is a further question about how far this is about sub-group customs and/or personal choice. In many studies of deprivation there are questions that ascertain whether failure to consume an item is through preference and choice or through income constraint (Mack and Lansley 1985 and in the ECHP for instance). This argument is essential for assessing ICT as an

3 PCs were included alongside eight other household white goods and a car.

element of low income and poverty profiles where there could be a high association with non-take-up and a particular population sub-group, for instance the elderly population who may not have encountered elements of ICT in their working lives and have not developed their leisure use and may actively choose not to.

Figure 2-2: Mean Deprivation (on 7-item scale) Across EU and Accession States



Note: Sweden not included.

Source:
Russell and Whelan (2004), Low Income and Deprivation in an Enlarged Europe, Luxembourg: Office for Official Publications of the European Communities

Social exclusion

Mainstream discussions of poverty during the 1970s and 1980s moved not only to define it in terms relative to the living standards customary in the society concerned but also to acknowledge the resources required for *social participation*. The European Community anti-poverty programmes' operated with a similar notion of poverty broadly indebted to this approach and to writers such as Townsend (1979). The conception of poverty thus became more multi-dimensional in both outcomes and inputs and less directly concerned with income alone. However, studies of poverty continued to emphasise income – partly due to the wider availability of internationally comparable data mentioned in the previous section. Over time, poverty became concerned more with the processes underlying the generation of poverty, especially with the discovery of so-called "New-poverty" in the 1980s and 1990s that resulted from macro-economic changes in employment, particularly long-term unemployment and from demographic and family change. These concepts, which recognised social dynamics and social processes as partly causing and reinforcing poverty, were part- way towards an approach of social exclusion.

The concept of social exclusion predates its adoption by the EU. It was originally used in France to describe those who fell outside of the safety net provided by categorical schemes of social assistance (Lenoir 1989). Over time its usage grew in recognition of the limitations of solely capturing a state of having low income to exploring the processes that create and surround it.

Social exclusion attempts to capture numerous dimensions and domains of disadvantage. There is no complete consensus on what such dimensions and domains are and much depends on national and sub-national contexts. Paugam states, "*il ne oeut exister de definitions absolues d'exlcusion social. Cette notion est relative, variable selon les époques et les lieux. I test déraisonable de pretender trouver une definition juste, objective – et distincte du dêbats social – sans tomber dans le piège de la categorisation de populations spécifiques done on sait due les frontiers qi les distinguent des autres groupes sociaux sont jamais claires* ' (Pauam 1996 p 565). The flexibility of the concept was also useful as a rhetorically inexact policy term that helped when some EU members (particularly the UK in the 1980s and early 1990s) were adverse to the poverty concept. The flexibility allows a consensus around very different national views and profiles.

There are thus three sources of difference in defining social exclusion: the theoretical the policy based and the empirical measurement problem. We take these in turn.

Theoretical differences

Often definitions of social exclusion are framed in order to highlight their difference from definitions of poverty. The notion of poverty, as previously stated, is primarily focused upon distribution issues: the lack of resources at the disposal of an individual or a household. In contrast, social exclusion focuses primarily on relational issues: in other words, inadequate social participation, lack of social integration and lack of power. The differences in concepts of poverty and exclusion can be related to the different intellectual traditions from which they derive. Research into poverty, in its modern scientific form, is primarily an Anglo-Saxon - more specifically a British - product of the 19th century (Rowntree, 1901; Townsend, 1979), while social exclusion is based in a Continental - and perhaps more particularly a French - tradition of social analysis. Society is seen by intellectual and political elites as a status hierarchy or as a number of collectives, bound together by sets of mutual rights and obligations which are rooted in some broader moral order. Social exclusion is the process of becoming detached from this moral order (Castels, 1995). The task of social policy is to reinsert or reintegrate people into society.

Overviews of poverty and social exclusion tend to thus emphasise the key differences between the concepts. Atkinson (1998) talks of three distinguishing features: relativity (the importance of contemporary and social context rather than fixed absolute references), agency (the constraints on individual action and control over events and thus the notion of active excluding processes) and dynamics (that processes occur over time with potentially amplifying consequences). This and other definitions tend to emphasise the dynamic and multi-dimensional nature of exclusion.

There are also two views of those who experience social exclusion:

a) as a *sub-set of deprived* who have multiple dimensions of disadvantage that cumulate to form an exclusionary process – for instance, the street homeless, young people who are not participating in education, employment or official "unemployed" status, those who live in deprived neighbourhoods. This approach emphasises a "rupture" of social ties in social exclusion. Ideologically there can

also be an overlap for some between social exclusion as a sub-group of the poor and the idea of an "underclass".

b) *a wider set of people who may or may not be monetary poor but who are undergoing exclusionary processes*. A useful concept employed across the board is one of "precarité" (Paugam, S. 1995) which captures the situation of risk of exclusion for those who are at the margins of poverty. This often refers to low-waged or other flexible workers who have high risks of unemployment or other events that will lead to poverty (Gallie, D. and Paugam, S. (2002) Social precarity and social integration, Report for the European Commission based on Eurobarometer 56.1, 2002). However, "precarité" can also be applied where there is a high probability of exclusion or poverty for a wide number of risk events that have not occurred.

This second approach places exclusion as part of wider concerns about social cohesion. For instance, Hills in his summary of UK's approach says *".. indicators used cover not only low income but also educational attainment, mortality rates, smoking, teenage conceptions, employment, housing standards, rough sleeping, drug use, pension scheme membership, fear of crime, burglary rates and fuel poverty. Some of these are measured at the individual or household level, others across deprived areas*" (2004 p. 53). This also shows that there is also a theoretical acceptance of a layered approach for many commentators – so that individuals, households, communities or geographical areas can be "excluded", and thus individuals can be nested in layers of reinforcing processes through households and community, for instance.

There is a notable absence of concern in recent social exclusion literature on an absence of or insufficient levels of social rights, the original conception of exclusion in Lenoir. However, looking across both developing and developed countries, de Haan and Maxwell (1998) are an exception, and put forward three main factors from an overview of national literatures: Rights, human, social and civil; Resources, including human and social capital, income sources, state, market and communal provision; and Relationships, meaning familial and wider sets of support and voluntary networks. Similarly, Commins (1993) looking at Ireland identified lack of Civic Integration (a failure of democratic and legal systems) as one factor in social exclusion alongside the Labour Market, Welfare State and Family and Community.

Institutional differences

One reason for the lower profile of discussion on social and other rights is that the definitions of social exclusion have become institutionalised through the policy process. Identifying gaps, and thus the need to increase provision levels and coverage, has become less important than identifying constraints and implementation issues. This means that policy pragmatism takes a strong hand and, for instance, if we look at the UK's definition of social exclusion, *".. short hand for what can happen when individuals or areas suffer from a concentration of linked problems such as unemployment, poor skills, poor housing, high crime, bad health and family breakdown"* (SEU 1997), it springs partly from an institutional analysis of underlying reasons for policy failure – that policy implementation is not joined up sufficiently to help those most at risk who have needs that cross the so called "silos" of policy intervention through government ministries and local-central devolution of competence.

Such differences in institutional approach and national interpretation mean that it is most sensible to base EU-wide analysis on an approach to social exclusion that comes from the European Commission, and we do so later in this section.

Empirical measurement differences

While national level differences of interpretation can be a hindrance to a consistent measurement there have been a growing range of cross-national profiles of social exclusion across the EU using ECHP data (on the EU15); Muffels et al. (2003), Apospori (2003) Barnes et al. (2002) for instance and more recently on the enlarged EU, using Eurobarometer and Quality of Life surveys, such as Alber and Fahey (2004).

Atkinson et al. have also devised a set of multi-dimensional indicators to capture national profiles of social exclusion or cohesion that were largely adopted at the EU level at the Laeken summit (the so-called Laeken indicators). The full set of indicators contain ten “first level” indicators with other “second level” indicators and the ability to develop more nationally sensitive and contextualised “third level”.

Table 2-3 gives an overview of seven of the first level indicators for the EU15 for the period 2001 to 2003. In their recent up-dating and review of the indicators and their use and potential to take forward EU level social inclusion, Atkinson et al. (2005) demonstrate the ways in which policy aims, indicators, policy performance and National Action Plan reporting can be improved to become more strategic and more empirically informed. It is noteworthy that no element of eInclusion is given or argued for in this up-dating of indicators and strategy.

Table 2-3: EU15 Social Cohesion Indicators

Countries ranked by measure[a]	At risk of poverty[a]	Persistent Poverty[b]	Income Inequality[c]	Children in workless households[d]	Adults in workless households[e]	Long-term unemployment[f]	Early School Leavers[g]
Ireland	21	13	4.5	10.8	9.6	1.3	12.1
Portugal	20	15	6.5	5.1	5.3	1.8	41.1
Greece	20	14	5.7	4.5	9.0	5.1	15.3
Italy	19	13	4.8	7.0	9.7	5.3	24.6
Spain	19	10	5.5	6.1	7.2	3.9	29.8
UK	17	10	4.9	17.0	10.9	1.1	16.7
France	15	9	4.0	9.3	10.4	2.8	13.3
Belgium	13	7	4.0	13.8	14.2	3.5	12.4
Luxembourg	12	9	3.8	2.8	6.3	0.8	17.0
Austria	12	7	3.5	4.4	7.5	0.8	9.5
Germany	11	6	3.6	9.3	10.0	4.0	12.6
Finland	11	6	n/a	n/a	n/a	2.3	9.9
Denmark	11	5	3.1	n/a	n/a	0.9	10.0
Netherlands	11	5	3.8	7.2	8.1	0.7	15.0
Sweden	10	n/a	3.4	n/a	n/a	1.0	9.0
EU15	**15**	**9**	**4.4**	**9.8**	**9.6**	**3.0**	**18.1**

Source: Hills 2004; Table 3.7

Notes: a (2001) measured as % of population living below 60% national median equivalised income
b (2001) individuals in poverty as measured by a) who were additionally poor by that measure in two or three of the proceeding three years
c (2001) quintile share ratio – equivalised disposable income
d (2003) share of population aged less than 18 living households where there is no one working
e (2003) share of 18-59 population living in households were there is no one working
f (2002) Unemployed for over 12 months as % of total active labour force
g (2003) Proportion of 18-24 year old population with lower 2ndry education who are not in full-time education or training.

Links between social exclusion and ICT from the social exclusion perspective

The preceding discussion shows clearly how the concept of social exclusion can differ in interpretation. With this in mind, we adopt a single definition of exclusion from Room (1999) and then discuss potential theoretical overlaps between exclusion and the ICT. Room's definition of social exclusion saw the following factors as paramount:

- the importance of adopting a *multi-dimensional* notion of resources,
- people's living conditions depended not just on their personal and household resources but also on the material and cultural *collective* resources to which they had access, for example within their local and occupational communities,
- it focused attention on the relational as much as the distributional dimensions of stratification, recognising that relationships are themselves a component of human well-being, and that their breakdown or absence can therefore be a deprivation (see also for example Paugam, 1995, 1996),
- it acknowledged that much existing research involved a 'snapshot' of the poor at a given moment of time: what however was needed was to track the changes in the population at risk of deprivation between one time period, and the *dynamic processes and trajectories* involved (see also Leisering and Walker, 1998; Goodin et al., 1999).

Multi-dimensional resources

Moving from income to include other resources allows a more rounded comparison of peoples' potential and constraints – following on in many ways from Sen's concept of function and capacity (Sen, 1999) that appreciates physical and intellectual capacity, education and skills alongside the economic and social constraints at household, community and wider level. Such an approach thus allows incorporation of ICT resources as both potential resource enhancers and as modifiers of constraints. ICT can, for instance, assist in overcoming disadvantage arising from physical disability for instance, the associated concept of eAccessibility. But in a knowledge based economy human capital, especially education and skills, become key components of resources at the individual level, and thus then links directly to the ability to be involved in the workplace that is being transformed through ICT and is a crucial influence on employability. "*Internet access and digital literacy are a must for maintaining employability and adaptability, and for taking economic and social advantage of on-line contents and services*" (European Commission, E-inclusion, the information society's potential for social exclusion in Europe, p.4). "*There is a danger that those without access to ICT skills and knowledge will fall further behind as technology advances, with whole social groups becoming less able to participate in society"* (Room et al. 2004, p.156.) This means that ICT is theoretically seen as a key influence as both a risk factor and an opportunity factor at the individual level.

Community resources

There are several elements to community resources. Some elements of social capital can be seen as locally held resources – such as civic and social trust and levels of crime. Additionally, some communities and areas receive lower levels or lower standards of market and state based services – with poor access to ICT and supermarkets being an example of market led resources and poor performance of local hospitals, GPs or local government services being an example of such state based services. Thirdly, social exclusion may additionally stem in part from living within communities with high concentrations of low-

income and this argument is often put forward as a second order effect – the effect of neighbourhood. The empirical importance of neighbourhood effects, independent of other effects, is contested in the literature (Durlauf 2004).

Again, theoretically, the potential for ICT in this regard can be seen both as a risk and opportunity. There are risks of differential infrastructure coverage and in communities where individual or household level consumption of ICT services are not possible, there is the issue of how communal services can be provided to ensure access. However, the potential opportunities for ICT to overcome disadvantage are also considerable in theory, *".. new digital opportunities for the inclusion of socially disadvantaged people and less-favoured areas. Information and communication technologies have the potential to overcome traditional barriers to mobility and geographic distance."*[4]

Relationships

The issue of relational exclusion is most usually discussed in terms of family and of social capital, and, in particular familial and social networks[5]. However, relational aspects of social exclusion also encompass power relationships and discrimination and as Atkinson has pointed out, the question of individual agency is thus crucial to social exclusion in any discussion of families and networks and participation in them. Exclusion can be, but is not necessarily a passive process but can involve active "excluders" as well as "the excluded".

Paugam (1995) additionally has explored the relationship between a person's detachment from the occupational community and their detachment from their extended family. Paugam shows that the two forms of detachment tend to go together, especially for men. For women, by contrast, their occupational integration weakens, but they seem to be able to maintain their family links to a much greater extent. Paugam in a subsequent study considers cross-national variations in the strength of these occupational and family relationships (Paugam, 1996). He shows, using national data sets – albeit imperfectly comparable – that his original analysis of French experience is mirrored in the other large urban-industrial societies of northern Europe, the United Kingdom and Germany. In Spain and Italy, however, as separation from the occupational community worsens, the extended family seems to play a stronger role.

An alternative analysis of relational exclusion (Perri, 1996) distinguishes two sorts of social bonds: those that link us to people in the same position as ourselves – our family members, people in the local neighbourhood, our immediate colleagues at work – and those that link us to people in very different positions from ourselves: especially those people who are in contact with opportunities which they can bring to our attention, but of which we are unlikely to be able to avail ourselves without their help.

One of the primary concerns for the overlap between eInclusion and social exclusion is how far ICT can worsen or ameliorate such processes. The argument for social exclusion occurring from ICT networks is one of both participation and of "in-group/out-group" distinctions. There are alleged second order or macro effects of maximising the size of the ICT networks, "*the greater the number of people using the system, the greater the economic benefits of the technology; exclusion from the New Economy reduce these advantages*" (Room et al., 2004, p. 156).

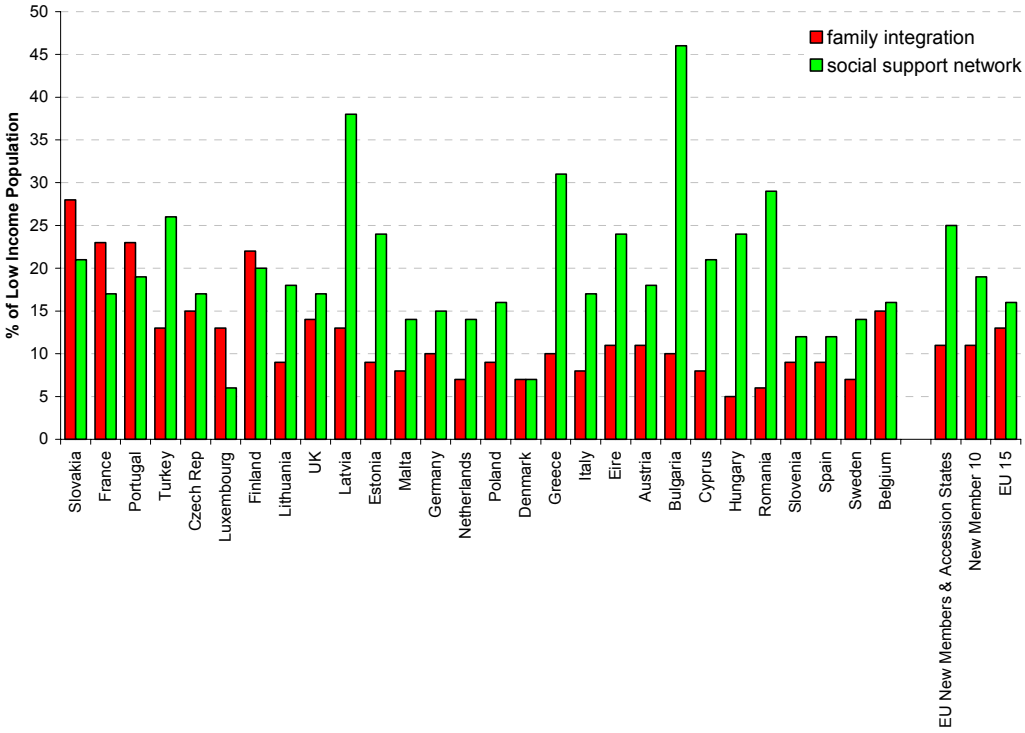
The in-group/out-group distinction gives rise, in part to the concept of a digital divide discussed in the next section. ICT in-groups have the ability to widen their economic and

4 European Commission *E-inclusion, the information society's potential for social exclusion in Europe*, p4).

5 There is little discussion of exclusionary effect of networks and much discussion of the opposite. This failure to recognise that some networks can represent "bad" social capital is a major theoretical weakness in current discussions. Members of criminal gangs have high social capital and strong networks but poor life expectancy and high likelihood of imprisonment

social distance from the out-group – giving rise to greater overall inequality. This arises in labour markets, where wage levels for skilled versus un-skilled work widen and in social networks.

Figure 2-3: % of Low Income Population with Relational Exclusion



Source: Böhnke, P., Perceptions of Social Integration and Exclusion in an Enlarged Europe, Luxembourg: Office for Official Publications of the European Communities.

Figure 2-3 shows separate measures of social support network and family integration for low income groups across the EU and accession countries. It shows that far smaller proportions of low income individuals have a lack of family integration than lack social network support across all countries but that old EU states have better scores for social network than the ten new members and thirteen accession countries. The opposite is true for family integration.

Dynamics

There are two main dynamic concerns for social exclusion, individual level dynamics (and related household and family dynamics) and the wider social dynamics of changes across the whole population. Individual dynamics are usually seen over either short-term or long-term (lifetime) perspective. Short-term concerns have tended to focus on events such as negative events, or shocks such as separation and divorce, unemployment and the onset of long-term illness, and other events such as the birth of children, retirement. Longitudinal study has shown that what are sometimes seen as single events are repeated and that the duration of periods of low income are important drivers of poverty and social exclusion. Longer term studies have tended to focus on lifetime consequences, in particular of the circumstances in childhood. Trans-EU evidence of short-term dynamics has arisen from a set of long-term panel studies in several Member States together with the more recent shorter-term EU-wide panel survey. Longer term birth cohort studies are nationally based studies dealing with differently specified birth cohorts and are not usually used in comparative studies of social exclusion due to large inconsistencies in measures used.

Social dynamics are usually concerned with larger social processes, of which the introduction and spread of ICT is an example that is taken up in the following Chapter 3. However, even if no external process was being observed underlying social dynamics would still exist due to demographic changes such as ageing, birth and migration. Thus any conceptualisation of social exclusion on a wider dynamic scale requires not only the mapping of social change that generates or springs from exclusionary behaviour but also how far such processes reflect real net changes or are just a reflection of underlying dynamics. Thus, for instance, longitudinal study of a disadvantaged community usually takes into account population change and migration because geographical location can be constant over time but people change. This raises empirical questions for both profiles of poverty and social exclusion and ICT coverage, which may in theory differ between two countries purely because of underlying differences in population composition, a point we return to later in this chapter.

2.2 Strategies against poverty and social exclusion

The preceding sections have outlined areas of clarity and uncertainty surrounding the definition and measurement of poverty and social exclusion and areas of theoretical overlap with eInclusion. At EU level, there has been a harmonisation and standardisation of measurement of inclusion through the adoption of common indicators and additionally a move to co-ordinate policy learning and transfer across Member States. In this final part of this section we outline the current cross-national concerns on poverty and social exclusion and the focus of policy co-ordination.

The Lisbon Summit highlighted social policy as a core element in Europe's strategy for becoming "*the most competitive and dynamic knowledge-based economy in the world, capable of sustained economic growth with better jobs and greater social cohesion.*" by 2010. The European Council of Lisbon in March 2000 recognised that the extent of poverty and social exclusion was unacceptable and that a more inclusive European Union was considered as an essential element in achieving this goal. The Lisbon Council agreed to adopt an overview of policies that combat social exclusion and promote inclusion through an Open Method of Coordination. More recently in 2002 the European Council's adoption of policies that will: "*facilitate employment for all and access by all to the resources, rights, goods and services; to prevent the risks of exclusion; to help the most vulnerable and mobilise all relevant bodies*.." to counter social exclusion (EC Common Objectives for the second round of National Action Plans 14164/1/02).

The result has been two series of National Action Plans from each of the old 15 EU member states and one set of Joint Inclusion Memoranda from the ten new members. The material in these documents, together with the independent commentaries of Non-governmental Expert Reports on the first set of 15 National Action Plans provide this review with a rich source of detail for policies on inclusion, including eInclusion.

The common objectives set out by the European Commission provide a series of underlying assumptions about the causes of social exclusion.

There are four major themes of emphasis in these objectives.

First, "*Employment is the best safeguard against social exclusion. In order to promote quality employment it is necessary to develop employability, in particular through policies to promote the acquisition of skills and life-long learning.*"

Second, "*Social protection systems also play a key role. In this context, the national social assistance and minimum income schemes are important instruments in social protection policy. It is vital, in the context of an active welfare state, to create modern systems of social protection which promote access to employment. Retirement pensions and access to health care also play an important role in the fight against social exclusion."*

Third, "*the new knowledge-based society offers great possibilities for reducing social exclusion, both by creating the economic conditions for greater prosperity and by opening up new ways of participating in society. The emergence of new information and communication technologies constitutes an exceptional opportunity, provided that the risk of creating an ever-widening gap between those who have access to the new knowledge and those who do not is avoided*."

Fourth, "*mainstreaming the promotion of inclusion in Member States' employment, education and training, health and housing policies; and developing priority actions in favour of specific target groups (for example, minorities, children, the elderly and disabled), with Member States choosing amongst those actions according to their particular situations*."

(European Commission Directorate of Employment and Social Affairs (2003) Fight against poverty and social exclusion– Definition of appropriate objectives, Brussels[6])

Employment and the labour market

Facilitating participation in employment is through promotion of access to all those who are capable of work. Employment is seen as "*stable and quality employment*". Access to employment is seen as ensuring that vulnerable groups can move into work adapting programmes and training policies to that end and by developing policies to reconcile work and family life, especially for child- and dependent care.

The prevention of exclusion from work is seen through increasing employability, improved human resource management and life-long learning.

Earnings represent the most important source of income in order to prevent poverty. There are thus two major ways in which access to and participation in labour markets cause low income: *non-participation* (unemployment, incapacity to work, periods out of work to perform household caring tasks, retirement) and *low quality participation* – where low pay or part-time work (or the combination of the two) provide insufficient income to meet needs. Such profiles are not only individual but also form household patterns of employment, while large numbers of older workless individuals live in workless households a significant proportion of younger workless individuals live in households where parents or other household members work. The presence of children or other family members who require care often constrains the work of women, who can have both periods of absence from the labour market and periods of working part-time to meet such constraints. Both these factors contribute to but do not explain gendered inequalities in wages. The reconciliation of work and family life is thus an important structural determinant of overall equality of employment opportunity.

Facilitating access to resources, rights, goods and services for all

This is seen as ensuring that social protection systems guarantee everyone has the resources necessary to live in accordance with human dignity but at the same time does not provide obstacles to employment. This latter element arises from programmes of activation and through in-work subsidies in particular.

Housing should provide decent and sanitary accommodation, as well as the basic services necessary to live normally having regard to local circumstances (electricity, water, heating etc.). Universal access to healthcare is seen as fundamental. More generally access to services of education, justice and other public and private services, such as culture, sport and leisure as fall within the scope of this theme.

6 http://europa.eu.int/comm/employment_social/soc-prot/soc-incl/approb_en.pdf

Preventing the risks of exclusion

One core aim relates to eAccessibility by exploitation of new information and communication technologies to ensure that no-one is excluded, taking particular account of the needs of people with disabilities. Another core aim is to have *preventative policies* which can avoid life events leading to social exclusion, such as indebtedness, exclusion from school and becoming homeless. The third core aim is the preservation of family solidarity in all its forms.

Helping the most vulnerable

Persistent poverty is seen as a particular vulnerability, for example due to disability or belong to a group experiencing particular integration problems, such as the Roma or other minority groups. Childhood is also seen as a vulnerable period in the lifetime to experience social exclusion and has developmental and other lifetime consequences. Spatial exclusion is also seen as vulnerability.

Mobilise all relevant bodies

This relates to both citizen involvement and in particular the participation and self-expression of people suffering exclusion, and to mobilising and co-ordinating both different tiers of government and the voluntary and private sectors. Implementation of programmes should ensure that administrative and social services are adapted to the needs of people suffering exclusion and that front-line staff are sensitive to these needs.

This supra-national EU level approach gives a flexible but consistent framework to consider poverty and social exclusion and can be supplemented by detailed questions concerning some of the more pressing empirical questions that have arisen from the earlier discussion. Additionally, eInclusion has been added to the National Action Plan reports from Member States, and there is now regular reporting on, and an overview of the content of such eInclusion reports as collated in Annex III.

3 eInclusion - social inclusion and the knowledge society

This chapter overviews literature concerning the development of the knowledge society and the associated concept of eInclusion. It mirrors the structure of the previous chapter 2 in that it starts by describing the key concepts - in this case that of the knowledge society and eInclusion (section 3.1), proceeds in outlining the major developments regarding exclusion from the knowledge society (sections 3.2 and 3.3). The chapter concludes by indicating the main strategies in use to support eInclusion (3.4.) as they emerge from the literature.

3.1 Conceptualisation of eInclusion

Information society, knowledge society, networked society, eSociety

The rapid diffusion of new media and applications based on them has been referred to by a myriad of labels. The core elements to all of them are easy to grasp: availability and usage of new technology in society. New technology mostly refers to personal computers and the internet, but also include mobile phones and the convergence between technologies (e.g. accessing the internet through television). There is no common understanding as to what the difference between the terms “information society” and “knowledge society” really refers to and mostly these concepts are interchangeable. Only the concept of networked society has a clear origin, in the work of Manuel Castells.

For the purposes of this study it seems fair to assume that growing parts of the population live and work in digitally ‘networked’ environments within which new forms of technology-mediated communication, collaboration, production and consumption emerge (cf. e.g. SIBIS 2003, eInclusion@EU 2004). Doing things with help of networked ICT no longer remains an issue for specialists, to the effect that many human activities undergo fundamental changes. A range of ICT-based applications, services and activities is emerging that go beyond “traditional” forms of computing and telephony, and these are going to affect growing parts of the population. For instance, provision of both commercial and public services via the Internet is gaining momentum: eGovernment, eHealth, eLearning and eCommerce applications are showing increasing maturity and acceptance by the population. In the working sphere, computers and new ICT-based tools are becoming widespread and increasingly impact the way people make their living. In the public sphere, touch screen information and self-service kiosks are becoming ubiquitous. Also, for an ever increasing part of the population, mobile telephony is becoming fully integrated in all aspects of daily life while enhanced capabilities such as emergency functionalities, localisation and multi-media features are beginning to transform the mobile phone from a mere communication tool into a multifunction device.

eInclusion

eInclusion refers to the idea that technology can be used to support and further increase social cohesion. Several definitions of eInclusion are available, e.g.*: “e-inclusion is a social movement whose goal is to end the digital divide, a term used to describe the fact that the world can be divided into people who do and people who don't have access to - and the capability to use - modern information technology (IT). According to advocates, e-inclusion*

has the power to: close the gap between developed and less developed countries; promote democracy and mutual understanding; and empower disadvantaged individuals, such as the poor, the disabled, and the unemployed " (from http://whatis.techtarget.com/).

From the very first beginnings of a policy debate on the knowledge society, new technology and improved communication has been linked to social progress on both sides of the Atlantic. When then vice-president Al Gore announced the National Information Infrastructure (NII) in September 1993, he linked technological progress to economic and social advantages. In the 1994 agenda for action, this is described as "*The benefits of the NII for the nation are immense. An advanced information infrastructure will enable U.S. firms to compete and win in the global economy, generating good jobs for the American people and economic growth for the nation. As importantly, the NII can transform the lives of the American people -- ameliorating the constraints of geography, disability, and economic status -- giving all Americans a fair opportunity to go as far as their talents and ambitions will take them*." (The White House, 1994)

Similar arguments for investing heavily in the building of the knowledge society can be found in European policy documents, such as those made by the Bangemann committee (1994) and the advisory bodies of the High Level Group of Experts and the Information Society Forum. The first annual report of the Information Society Forum (1996) is an example of this confidence: "*We are convinced that the Information Society can deliver more economic growth, more employment and more quality of life*."

In more recent years, these hopes have been restated and rephrased regularly by both public authorities and private companies: "*the* strategic challenge for e-Inclusion policies is twofold: *to fully exploit the ICT potential to overcome traditional forms of social exclusion, while ensuring that all citizens to benefit from the Information Society." (European Commission, 2001) and "'e-inclusion' is our vision of a future in which all people have access to the social and economic opportunities of the 21st century, and can use technology as a means to learn, work and thrive. Our efforts in e-inclusion seek to create new market opportunities, for ourselves and for the communities with which we engage, by forging new kinds of partnerships with private and public entities to close the gap between technology-empowered and technology-excluded communities*." (From Hewlett-Packard website, http://www.hp.com/e-inclusion/en/).

In section 2.1, we described the concepts of poverty and social exclusion and expanded the latter by identifying four conceptual components of social inclusion. In this section, we revisit each of these and outline how they relate to the emerging information society and eInclusion. We start from the perspective of poverty, which mainly relates to the digital divide. The more restrictive and simple poverty approach is then expanded to match the perspective of social exclusion and its four components.

3.2 Poverty of access – the first stage of the digital divide

A significant development during the last decade of the twentieth century has been the diffusion of new media. In Europe, the number of households having a connection to the internet was 43% in November 2002 (Eurobarometer Flash survey # 135), a closer look per country unveils discrepancies ranging from as low as 14% (Greece) to as high as 68% (the Netherlands). These results are supported by more recent research conducted in the context of the SIBIS project (SIBIS 2003). According to the SIBIS surveys, in 2003 home access to the internet varied between 72% in the Netherlands and 4% in Romania. Similar variations were observed in relation to mobile phone usage. Here, diffusion rates ranged between 24% in Romania and 83% in Finland (Annex I, Table 1-3).

However, although considerable disparities in ICT access and usage still exist a general trends towards accelerated uptake of online media seems to take effect in almost all European countries. Underlying developments can be summarised as follows:

- more households have access to internet at home, and that number is still increasing,
- the kind of connection is improving, from dial-in to ADSL to wireless, with fibre to the home or other ways of high capacity connections (WiMax, …) just behind the horizon,
- more people have mobile phones, and their functionality expands from making phone calls to sending text messages, taking pictures,
- the number of hours people spend using these new media is increasing,
- the number of applications is increasing, e.g. eBanking, eTourism, eCommerce, eGovernment, booking travels online, looking for health information.

Amidst hopes regarding the emancipatory power of the internet are equally strong worries about technology becoming the new faultline of social exclusion, of access to the internet dividing the information 'haves' from the information 'have nots'. The U.S. policy goals on the NII include "*Preserving and advancing universal service to avoid creating a society of information 'haves' and 'have nots*'. Likewise, many called for a 'European model of the information society' in which social and cultural aspects would not be dominated by economic forces. Not surprisingly, the final report of the High Level Group of Experts was entitled "Building the European Information Society for us all" (1997).

It is now almost a decade ago that the concept of 'digital divide' was launched into our vocabulary. A search into its origins on Benton's digital divide discussion list found traces back to 1995 when journalists Jonathan Webber and Amy Harmon of the L.A. Times started using it and to Al Gore using it in May 1996. The first scholarly use of the concept can be traced back to a 1997 publication (Katz and Philip, 1997).

The initial thinking on the digital divide focused on the differences across households and citizens in terms of having (home) access to the internet. A myriad of surveys, both commercial and scholarly, was conducted to monitor the diffusion of internet access. Some noteworthy initiatives include the Eurobarometer internet surveys and the North American 'Falling through the net' series (US Department of Commerce, 1995, 1998, 1999, 2000, 2002, 2004).

There are no less than seven noteworthy socio-demographic fault lines along which the availability of internet access varies. These include income, educational level, gender, age, employment status, ethnicity and type of household (e.g. single-parent). Access to the internet varies as can be expected: the higher the household income or the younger or the more Western ethnicity and so on, the more they have internet. One can be surprised by the fact that there is such little surprise that precisely these seven variables influence internet access. It has been used as an argument to state that the digital divide is not that digital, but another façade of social exclusion (De Haan and Rijken, 2002).

The divide along socio-demographic fault lines is equally in a permanent flux. Gender is one of the seven indicated fault lines and used to relate to a very strong divide. However, things have greatly improved in some countries and here gender is no longer a strong indicator for access to technology. In those countries man and women alike have similar levels of access to new media as mobile phones and internet connections. Having said that, there is still a relation between gender and the amount of time spent on the internet as well as regarding content preferences. [7]

7 Before translating the issue of a gender divide from access to usage and content, one should consider where the boundaries are between a divide (legitimizing societal concern and calling for governmental remedial investments) and an acceptable level of diversity in usage patterns. The old technology provides us with some

In some countries, there has been a considerable shift away from income and education level as prime factors in the digital divide towards age over the past years. Here, the digital divide is now in the first instance an age divide. For instance, survey data from the Netherlands[8] illustrate this relation between age and access to technology. Access is at high levels (90% at least one computer, 80 % access to internet) up to the age of 55, to drop significantly for older ages.

Table 3-1: Household Penetration of Computers by Age Groups

How many computers are present in your household ? (excluding game computers)									
		Age groups							
		to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 85	N = 1447
0	%	11,6%	4,4%	6,0%	6,6%	15,5%	35,33%	47,1%	N = 195
1	%	20,0%	49,7%	51,8%	44,6%	45,0%	51,9%	39,2%	N =669
2	%	13,7%	28,1%	32,5%	30,2%	27,0%	9,6%	13,7%	N = 367
3 or more	%	54,7%	17,8%	9,6%	18,6%	12,5%	3,2%	.0%	N = 216
Do you have access to the internet (at home or elsewhere) ?									
		Age groups							Total
		to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 85	N = 1503
No	%	6,3%	16,2%	13,0%	13,8%	29,8%	62,4%	71,7%	N = 390
Yes	%	93,7%	83,8%	87,0%	86,2%	70,2%	37,6%	28,3%	N = 1113

Source: Citizens' Survey of Eindhoven (cf. footnote no.8)

Interestingly, the reasons as to why one doesn't have a computer or internet access also change according to age. While young age groups indicate high costs and opportunities elsewhere (school and work) as a significant reason not to have home internet access, the older age groups refer to lack of interest and lack of digital skills. In addition, they lack labour market participation as an incentive to gain access to the technology and skills. They are also not embedded in a network of peers who can stimulate and support them in bridging the digital divide (Brabazon, 2005). Again, this raises the issue of drawing the line between diversity in internet access and a divide. If senior citizens are comfortable in using old media and see no interest in acquiring new media, should we still define this as a digital divide or as an informed choice?

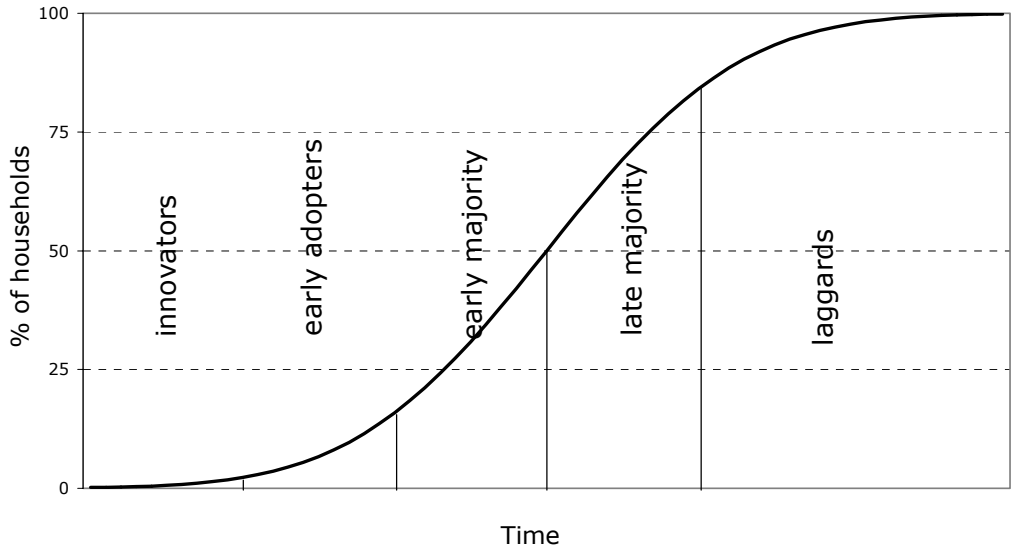
examples of highly diverse usage patterns, which are however not considered to be divides and consequently do not merit social action. In terms of the television, 98% of Western households have access to at least one television set and those who don't, do so as a free informed choice. Although there is consequently hardly variation regarding access, the time spend on watching television varies greatly, with older citizens and those with lower education watching far more than the average citizen. That is generally accepted as a 'normal' acceptable diversity. Similar, there has always been a great variety in number of telephone calls people make, with women making more regular and far more lengthy calls. Again, this is not perceived as a divide but as acceptable and not needing social interventions (although in the early history of the telephone, Bell did launch marketing campaigns to dissuade women from making long telephone calls) (Fischer, 1992).

8 Citizens' Survey of Eindhoven, data collection June 2004, cooperation between Fontys and statistical office of the city of Eindhoven

These observations of a shift from education and income to age as the main faultline of the digital divide are somewhat at variance with the findings of a 2005 Commission staff working document entitled *eInclusion revisited*. This document observes that "However, in general terms, higher Internet use seems to remain clearly and consistently related to higher educational level and occupational status" (Commission staff working document, 2005, p. 9). The difference between these findings mostly relates to the fact that the Netherlands is at a much higher level of internet penetration in households than the average European Union Member State. As such, a working hypothesis is that as countries move towards higher levels of overall internet availability, age rather than education and income become significant parameters of the digital divide (see Annex I). Such development must be taken into account when developing social policy interventions on the digital divide.

The theoretical framework underlying the majority of studies on the digital divide is derived from Rogers' work on diffusion of innovation (Rogers, 2003). Based on diffusion patterns of a great variety of innovations, Rogers described the diffusion process as an S-shaped curve and identified five adopter categories (Rogers, 2003, p. 272), labelled innovators, early adopters, early majority, late majority and laggards.

Figure 3-1: Roger's Diffusion of Innovation S-curve



Source: Rogers, 2003

But innovation is not constant over time and technology evolves. While surveys used to use the question 'do you have access to the internet at home?' as an indicator, the current variety in connections calls for differentiation and makes simple measures unlikely to capture widening differences in types and forms of access. To accurately measure access, one should be able to distinguish between quality and type of access, such as dial-in connections, ISDN, cable, DSL, fibre to the home, wireless, UMTS and other not yet commercially available technologies such as e.g. WiMax.

3.3 From access to multi-dimensional disadvantage – the evolution of the digital divide

The digital divide debate can develop into a consideration of more than access and allow it to include different characteristics of motivation, skills and usage. This development would mirror the changes in the conceptual changes from poverty to social exclusion that occurred to reflect a more complex measure than income alone.

Motivation

Somebody's motivation to gain access to technology and to make use of it results from an understanding of what it can do (for instance, do they know what sending an email is, of what internet search engines can do?), a trust in technology (for instance, 'the information found on internet is reliable' versus the perceived dangers of internet use such as e-fraud). Motivation for internet access and use is both a precondition to gaining access and making use, as well as the result of access/usage.

Skills

The spread of technological innovation makes demands on the skills of the citizens. Each technology innovation comes with new demands on skills[9]. In recent years, demands on people's skills have led to the creation of a range of educational establishments – from large nation-wide initiatives to PC introductory courses in the back room of local cafes. While the concept of "digital skills" is immediately recognisable and can be seen to be socially relevant, it is seldom researched or promoted through government policy. Overviews of the information society include such skills but rarely as a major theme or priority.

The following categorisation of digital skills has been developed to clarify the concept of digital skills by differentiating between three forms of skills: instrumental skills, structural skills and strategic skills (Steyaert, 2000):

- *Instrumental skills* refer to operational manipulation, dealing with the technology as such, the keyboard knowledge, other more simple basic actions (for instance, 'mouse up' means pushing the mouse away from you and not actually lifting it up as small children do to start off with), and more complex manipulations such as sending someone an email with an attached data base or downloading accessory software from the internet and installing it. Such instrumental skills can be considered as analogous to reading skills in printed media.
- *Structural skills* refer to the ability to use the (new) structure in which information is contained. The analogous set of skills in the traditional printed media are the use of the index in a book, or the use of the index system in a library. Changes in the structure of information can have major consequences. In new media the 'old' skills are complemented, for instance, by the skill to make use of hypertext (jumping via key words to other information sources), or looking for dynamic information (via discussion sites, rather than via static information on web sites). Sufficient knowledge of English can be considered to be another of these new skills.
- *Strategic skills*, refer to more strategic use of ICT and include the basic readiness to pre-actively look for information, the attitude of taking decisions based on available

9 At the start of the 20th century, the advent of the bicycle led to the setting up of cycling schools, later the emergence of the telephone to skill campaigns directed at users, the advent of the car to driving schools...

information and the continuous scanning of the environment for information that is relevant to work or personal life.

Any profile of such skills requires a dynamic view. It is likely that instrumental digital skills will spread more rapidly as new technology further penetrates society and the technology becomes more user-friendly. However, parallel to this development, the importance of strategic information skills will further increase. Although these skills are not specifically digital (because they are just as relevant in respect to the 'old' media), the recent technological developments ensure that there is an 'intensifying' of knowledge in society and, thus, an increasing importance of strategic information skills.

In the past years, the European Union (through the European Commission, Enterprise DG) launched several initiatives around e-skills, both where this relates to digital skills (e.g. the ICT Skills Monitoring Group established in 2001 or the European eSkills summit in 2002 or the European e-Skills forum) as well as where technology provides the gateway to acquiring other skills (e-learning, e.g. through the e-learning conference 'Towards a learning society' in May 2005). This work distinguishes between three types of e-skills:

- *ICT practitioner skills*: the capabilities required for researching, developing and designing, managing, producing, consulting, marketing and selling, the integrating, installing and administrating, the maintaining, supporting and service of ICT systems;
- *ICT user skills*: the capabilities required for effective application of ICT systems and devices by the individual. ICT users apply systems as tools in support of their own work, which is, in most cases, not ICT. User skills cover the utilisation of common generic software tools and the use of specialised tools supporting business functions within industries other than the ICT industry;
- *eBusiness skills*: the capabilities needed to exploit opportunities provided by ICT, notably the internet, to ensure more efficient and effective performance of different types of organisations, to explore possibilities for new ways of conducting business and organisational processes, and to establish new businesses." (European e-Skills Forum, 2004).

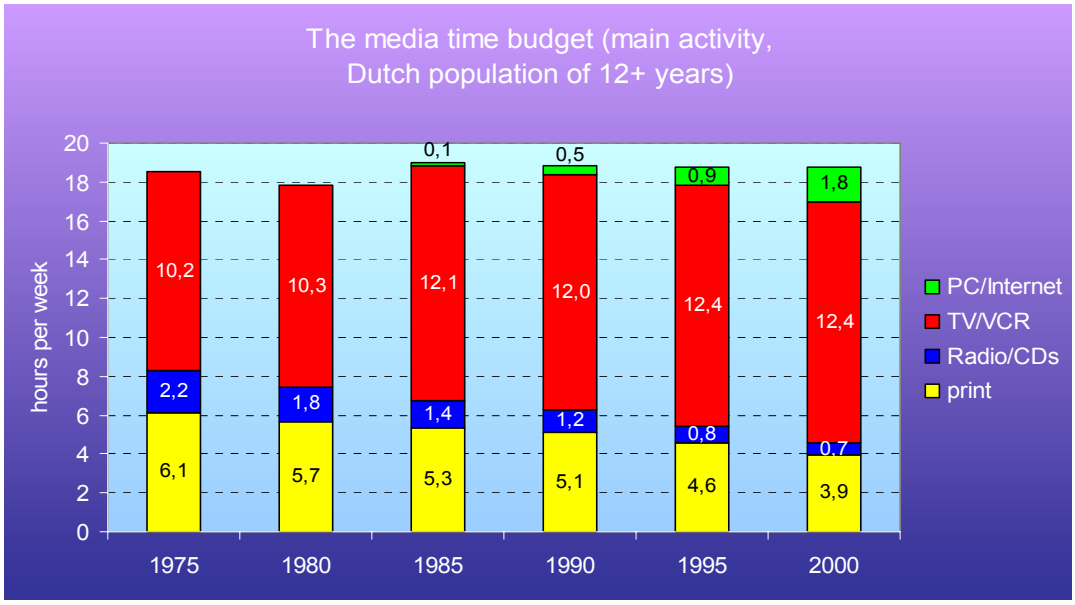
The report notes that especially low-income earners receive little ICT-training from employers. It observes enterprises and society are loosing out on a valuable resource. This should not only be seen as a missed economic opportunity, but also a missed social opportunity. The situation where low-income and low-educated citizens have less (opportunities to develop) e-skills could further diminish their labour market opportunities and reinforce or increase social exclusion.

Usage

As differences in levels of access diminish, differences in usage patterns expand. For example, some may use the internet for ten hours or more each day while others may limit usage to checking their mailbox once a month. Between such extremes lies a great variety in usage patterns that can only be researched by surveys on time usage. Some surveys have started including questions on frequency of usage, but essentially limit this to differentiating daily, weekly and monthly use rather then e.g. the number of hours online. The reliability of time use data is potentially problematic unless done using expensive time diary surveys. Additionally, one also increasingly needs to differentiate computer use between primary foreground usage (word-processing, searching for information,…) and secondary background usage (computer downloading music while user does other non-computer related activities, or computer on stand-by to accept telephone calls through Skype (internet telephone, voice-over-IP)).

The Netherlands have a long five-yearly time-series of time diary survey from 1975 with the latest data at the time of writing for 2000. Across these 25 years time spent on media (outside work) has remained relatively stable at almost 19 hours per week (Huysmans, de Haan & van den Broek, 2004). Within that time budget, printed media (newspapers, books, …) has lost out, television has won and internet is just emerging as a competitor for time. One has to bear in mind that the most recent data are from 2000, a time when internet still meant dial-in connections.

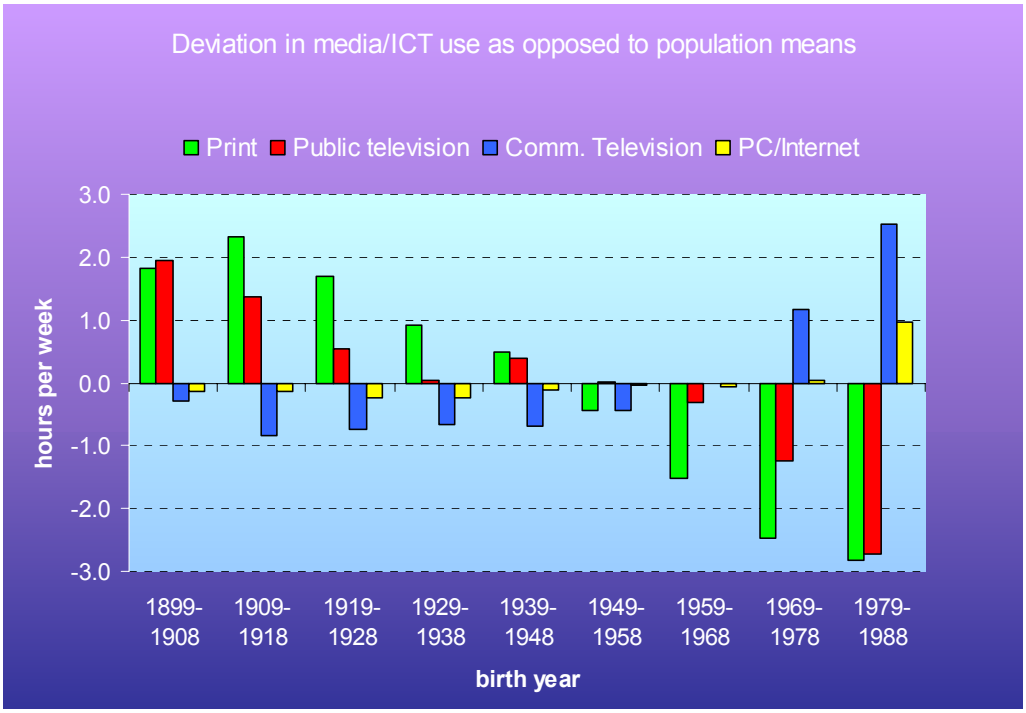
Figure 3-2: Media Time Budget Changes



Source: Huysmans, de Haan & van den Broek, 2004

However, the constant level of time use hides growing differences in underlying age cohort patterns of use. The older groups, born before 1938, spend much more time on printed media and public television than the average citizen. The younger generations, born after 1969, have a strong preference for commercial television and pc/internet. A difference that has been named between 'digital migrants' and 'digital natives' (Prensky, 2001).

Figure 3-3: Media Budget by Birth Cohort



Source: Huysmans, de Haan & van den Broek, 2004

Looking across the 25 years of technological diffusion, the data confirms the earlier conclusion made about changing profiles of access. Early surveys identified seven fault lines at the early stages of the diffusion curve of new media (income, education, age, gender, ethnicity, urban/rural, employment status), with income/education being the most powerful to explain who had access to new media and who did not. While continuing diffusion of the internet lowers those with no access, the lack of access can be seen as having a far bigger impact on one's life than a decade ago. Traditional technology and patterns of service provision are rapidly being replaced by new media based service provision (eBanking, eGovernment, for instance) and those without access are potentially facing a growing social disadvantage. Consequently, any policy on technology and social inclusion may need to address not only equality in access to new technology but also ensure that old technology continues until new technology has reached the same socially inclusive level of quality (Steyaert, 2004; Wilhelm, 2004).

Collective resources

How does the concept of community resources from the previous social exclusion discussion relate to ICT? There are at least two relationships between collective resources and eInclusion, the first being the quality and modernity of the infrastructure and the second being the equality of availability. These factors are usually determined above the individual and household level at the level of neighbourhoods, regions and member state.

The role of investment in improving a country's technological infrastructure is subject to argument. Investment in fibre networks down to the household level, rather than the nearest telephone hub, can make big differences for bandwidth. A relative advantage in such technology can attract a bigger share of the global economy compared to the rest of the world. *"The total labour effect of building and using a broadband network would total over 1.2 million new and permanent jobs. This would be an enormous boost to the current economy*" (Pociask, 2002). Reed Hundt, ex-chairman of the powerful American Federal

Communications Commission, compares the building of fibre networks to the building of road networks: "*A serious national broadband policy -- designed to bring 10 to 100 megabits of information per second to every home -- would be as crucial an economic-development and infrastructure tool as the roads of the previous century*" (the Mercury News, 9 July 2003).

A secondary argument is based on the increased social quality that results from having the best technological infrastructure. Although this is generally referred to in broad terms, one specific element of this argument refers to mobility and how better digital networks can solve the problems with physical movement through congested travel networks.

Innovation tends to spread in geographically uneven patterns across countries. As overall diffusion rates soared, it became clear that the digital divide could not be measured by simply asking citizens whether they have access to the internet at home. Geographical differences were embedded in the shift from metered to unmetered access and the cause of the digital divide shifted from citizens' characteristics to the policy of telecommunication operators. Citizens' access to unmetered access is largely determined by companies that give priority to investments in more cash-yielding regions. Some locations are, due to the overall socio-demographic characteristics of their population, 'sticky places' for private investments, others are 'slippery places' (Markusen, 1999).

There are also socio-economic reasons for uneven spread of innovation that are linked to underlying changes in market provision in telecommunications. In the days before the liberalisation of the telecommunication market, national telephone companies had a 'social agenda' outlined for them, which included providing public access points (public telephones) and lower subscription rates to low-income households. Since they lost their monopoly and have to compete with other companies operating in the same market, these universal access obligations have become a competitive disadvantage. In one instance (Belgium, Belgacom), the national telecom operator has explicitly refused to further grant lower subscription rates as a clear message to government that universal access cannot be the responsibility of a sole company when operating within the context of an open market.

Relationships

As described in section 2.1, a third component of social exclusion refers to relationships. How do such concerns relate to the emergence of ICT? That, while the communication network expands, social networks seem to shrink, is 'the internet paradox' (Kraut et al., 2002; Kraut et al., 1998). How can more communication result in less social contact? Is there a causal relationship between both developments, is social capital under pressure because we increasingly possess and make use of new media? Or is it the other way round, do we have more intensive information exchanges to escape our socially impoverished world?

In the early days of the internet, wild predictions were made about its future. Authors such as Howard Rheingold elaborated optimistic scenarios about local and regional virtual communities based on shared interest, such as his 'the Well' (Rheingold, 1993) and digital villages or neighbourhoods like the famous Blacksburg Electronic Village at http://www.bev.net (Cohill & Kavanaugh, 1997). Others voiced their concern about the effects of internet usage on social networks[10].

These utopian and dystopian visions have now largely been replaced by an ever-growing series of surveys, of which only one is European (Cole, 2003; Franzen, 2000; James Katz & Philip Aspden, 1997; Katz & Rice, 2002; Kraut et al., 2002; Kraut et al., 1998; Norman Nie, 2001; Rainie, 2000). The results of these surveys suggest that the status of the social

10 For instance, McClelland wrote in 1994, in the Guardian: *"Just as TV produces couch potatoes, so online culture creates mouse potatoes, people who hide from real life and spend their whole life goofing off in cyberspace."*

network before and without internet seems to play a crucial role, as well as the place and time of usage. These findings enable us to refine the original question regarding the responsibility of the internet for the erosion of social capital and to identify intermediary variables. Subsequent research and further analysis will have to address the question of whether effects differ between population groups (e.g. according to age, ethnicity, and educational level). Just as the telephone is used in substantially different ways by men and women, currently known usage patterns of the internet may well hide huge inequality in usage and effects.

An important indirect effect is related to time displacement and the issue of where time spent online comes from, and consequently which daily activities receive less time: "*The Internet may compete for time with other activities in an inelastic 24-hour day*" (Wellman, Quan Haase, Witte & Hampton, 2001). The underlying notion is that internet activity is causing a breakdown of physical encounters, and that these physical encounters are of higher relevance to social capital than technology mediated encounters (whether that be by telephone or internet).

A Eurobarometer survey in 2000 (Table 3-2) asked about internet usage and the way that time is spent. Respondents expressed the expectation that internet usage would above all result in less time spend on television and reading. Nevertheless, 11% and 13% indicated that there would also be less time available for friends and family. These data relate to people's perceived and/or expected time displacement and may not relate perfectly with real time displacements, which would only become apparent through a time diary survey (Gershuny, 2002a). Initial findings through the more complex time diary methodology suggest that internet time may not influence television time at all, but reduce time spent on reading printed material (newspapers, books) and social contacts (Breedveld & van den broek, 2001; Norman Nie & Hillygus, 2002a, 2002b).

Table 3-2: Purpose of Internet Utilisation

Time use of the internet								
Did use of internet result in less time for ….? EU 15 countries, population of 15 years and older, in % who agree with the statement								
	Television	Books	Newspapers	Radio	Friends	Family	Sport	N
Population 15+	6	4	3	3	2	2	2	15900
Population with internet access at home	34	22	16	14	11	13	13	2917

Source: Eurobarometer 53 (April-May 2000)

The impact of new technology on relationships is likely to increase with the wider use of existing and the advent of new social software applications. A lot of interaction can happen by using the standard tools for the internet, a web-browser and an email-client. In addition to these, there are specific applications that provide the digital equivalent of a hang-out (Steyaert, 2003). In chronological order, these include:

- Discussion lists: these are probably the oldest form of social software on the internet. They provide hang-outs for internet users who share some issue of common interest, whether that be a specific location, profound philosophical questions or subjects as esoteric as aroma therapy or the importance of monk seals in the Western Sahara.
- Virtual offices: discussion lists have been expanded with additional functions, such as a joint calendar, a photo and document repository, tools to organise a vote, … These

applications can be free of use, apart from the burden of a little advertisement, at e.g. yahoo groups or CommunityZero.

- Chat rooms: whereas discussion lists and virtual offices mostly work asynchronous, chat rooms are synchronous. All participants need to be online at the same time. Communication is consequently faster and consists of shorter sentences. While virtual offices can be referred to as the digital equivalent of office meetings, chat rooms are the equivalent of an evening in the local pub: informal, hardly structured dialogue, many 'speakers' at the same time. As bandwidth increases, these chat rooms will transform from text-typing to video-chat.
- Who knows whom: inspired by the theory of Stanley Milgram that every citizen on earth is only separated to any other citizen by a maximum of six social connections (the 'six degrees of separation'), several social networking applications have emerged. They allow users to enter their own social network, but also jump several degrees and explore new contacts. Examples include http://www.orkut.com and http://www.friendster.com and http://www.hi5.com.
- From virtual to physical meetings: all digital hang-outs share the characteristic to facilitate virtual contacts and consequently share the risk of reducing face-to-face contacts. Recently some applications emerged which try to facilitate the transmogrifying of virtual to face-to-face contacts, such as http://www.meetup.com.

There is one more element that needs to be brought into discussion of relationships, the issue of social capital. There is unfortunately little current research on the relation between internet and social capital that empirically distinguishes between bonding and bridging social capital. As Putnam writes, the jury is still out on this (Putnam, 2000). Wellman argues that we need not only look at the effects of internet on existing types of social capital, but also explore whether new patterns emerge. His suggestion is that a new pattern of 'networked individualism' is emerging (Boase & Wellman, 2006 (in print)). This is characterised by relations being both local and long distance, personal networks being sparsely knit but including densely knit groups and finally relationships that are more easily formed and abandoned. The development towards networked individualism is supported by new media and the possibility to address individuals rather than households. A household used to share one postal address and one telephone number, but email addresses and mobile telephone have taken this to the individual level[11].

Dynamic processes and trajectories

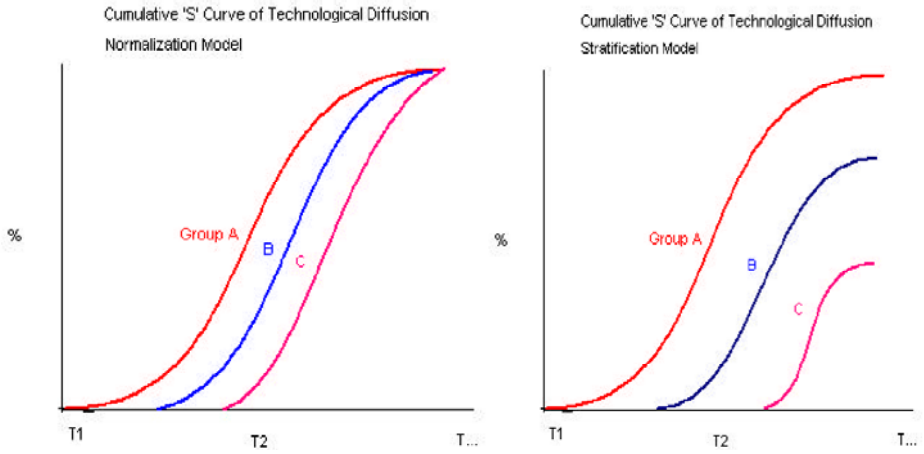
A final conceptual component of social inclusion is that it treats deprivation as a dynamic process and trajectories (see section 2.1).

11 The social capital literature differentiates between two types of social capital: bonding and bridging (a third type, linking social capital, is sometimes suggested but ill defined). Bonding social capital refers to people belonging to a social network or social group, and is inward looking. Bridging social capital refers to links between groups of citizens (e.g. between young and old, between people with different ethnic backgrounds) and is outward looking. Both have very different effects on social inclusion: "bonding social capital is, as Xavier de Souza Briggs puts it, good for 'getting by', but bridging social capital is crucial for 'getting ahead'" (Putnam, 2000, p. 23). In terms of social exclusion, having bridging social capital is essential. A set of weak outward looking social ties have been identified as influencing e.g. labour market participation (Granovetter, 1973, 1983). Poor people tend to have sufficient bonding social capital, but lack bridging social capital. One could imagine that internet can have an effect on either/both bonding and bridging social capital (Ferlander, 2003). The vastness of cyberspace enables users to find people with mutual interests, however peculiar those might be. That opportunity might increase the homophily in social networks (McPherson, Smith-Lovin & Cook, 2001). On the other hand, the many weak contacts one can have through internet, e.g. in a public chat room or through discussion lists, might increase serendipity and generate bridging social capital.

Given the increased diffusion of internet access among households, Member States at the higher end of the diffusion curve (e.g. Nordic countries or the Netherlands) see far less people being on the wrong side of the digital divide. However, citizens being on that wrong side face far more consequences. In Member States with high diffusion rates of internet, traditional service models are fading out. The quality of services offered online is rising, whereas the quality of services offered offline is declining (Steyaert, 2004, p. 36). The freedom of choice and conditions of online services surpasses that of physical offices and shops, granting the digital citizen and consumer benefits and extra resources. Numerous examples can be given, both from the profit and the public sector. Most banks offer a higher interest rate on online saving accounts. Those looking to buy or rent a house benefit from online websites (e.g. funda.nl in the Netherlands), whereas those relying on e.g. newspapers advertisements are often too late. Travellers buying a ticket for the Dutch railway at the counter pay extra, whereas those buying tickets online or through machines pay less. Those flying with Basiq Air from Amsterdam airport can check in online and avoid long queues. Citizens needing formal papers from their local authority can avoid long queues and limited opening hours by using the 'e-forms' on the local authorities' website. People calling museums for opening hours are kindly referred to websites as staff don't take or get the time anymore to provide basic information.

The S-curve model of diffusion of innovations has proven to be very relevant to the diffusion of internet amongst households. The S-curve as described by Rogers however has an open ending. It remains unclear whether eventually every household will acquire the innovation or not. Pippa Norris has elaborated on this open ending and contrasted a normalisation model with a stratification model (Norris, 2001, p. 30-31). In the normalisation model, eventually all citizens have access to the innovation and it ceases to be a divider in society. In the latter model, this is not the case and certain groups maintain a lower level of access to an innovation. There is a third model possible, in which access to a specific innovation (e.g. dial-in internet access from home) follows the normalization model, but is supplemented with another innovation (e.g. un-metered access to internet through cable or DSL) and yet another innovation (e.g. wireless internet access) … in which case groups B and C might normalise in terms of the first innovation, but still be in the stratification model for the second and third generation of that innovation.

Figure 3-4: Alternative Model of Internet Diffusion



Source: Norris, 2003

3.4 Strategies for eInclusion

The main strategies to achieve social inclusion have been described earlier in part 2.1. This section focuses on strategies directed towards eInclusion as they emerge from the literature.

Promoting access

Just as poverty strategies focused on equality of income, the simple version of the digital divide focused on increase of access amongst households. Most Western countries have seen public and private initiatives to promote awareness about the internet and raise access levels. The main types of initiatives can be labelled as raising awareness, providing public access, promoting home access and increasing computer skills.

Raising awareness on the existence and relevance of innovations is pivotal to any market introduction. There is the often quoted example of the yellow "post-it's" that failed to break through as an innovation until they were widely distributed for free for a limited period of time, so customers could experience their usefulness. A similar approach has been used regarding internet during the 1990s. Internet coaches roamed the country, television programmes and printed media preached on the usefulness of internet and free internet accounts were massively distributed as a free feature of magazines and through bookshops. While most of these awareness raising initiatives had a national coverage, some were focused on specific user groups, e.g. the elderly.

Providing public access was the next step. Once awareness increased about the existence and usefulness of internet, citizens needed places where they could actually make use of the technology. Initiatives carried names such as community internet centres, community technology centres (see http:/www.ctcnet.org) or cybercafés. These modern day equivalents of public phone booths mushroomed at public libraries, community centres in low-income neighbourhoods and civic centres such as government buildings. The private market equivalent mushroomed in venues where highly mobile citizens tended to linger, such as airport lounges.

Promoting home access was the natural sequel to increased awareness and public access points. Using internet in a public venue has its limitations e.g. when it comes to searching for health information, doing eBanking or spending several hours on internet based learning or entertainment. Initiatives were developed to promote home access. Often this involved the refurbishing and distribution of second hand computers. Some of these initiatives were highly targeted to low-income households with school-attending children. Getting the technology at home is however but the first step, maintenance soon becomes necessary. Whereas car technology is surrounded by an extensive network of maintenance services (garages, towing services, the AA), there is currently little maintenance service organised around computer technology. Points of sale (computer shops) offer limited services and hotlines can be impractical. To address this, some initiatives provided computer maintenance training to socially excluded people and launched a 'pc doctor'.

Having access to the necessary technology and network connections soon generated a demand for *increased computer skills*. These do not come naturally and call for training courses. Around the turn of the century, such courses bloomed and included both public free initiatives as well as private market initiatives. A curriculum was developed on a European scale, the European Computer Driving Licence (http://www.ecdl.com). There is much variety among these initiatives trying to increase computer skills, from low-cost courses in the backroom of local pubs using photocopied lecture notes to expensive training courses in a formal setting and full-coloured manuals.

The overall assessment about this set of interventions and the underlying strategy of promoting access is that as a national policy approach, it is only useful at the beginning of the diffusion curve of a new technology. Once innovative products are launched in some countries, their relevance to daily lives is quickly picked up through the global media and awareness is rapidly achieved. In terms of social exclusion, access promoting initiatives should be focused very specifically to those who can benefit most from technology access in terms of social inclusion trajectories (e.g. low-income households with school-aged children). Also, some groups are technology excluded (e.g. those over 70 years old) but not necessarily socially excluded or socially benefiting from technology (elderly people won't gain from increased ICT-skills in terms of labour market opportunities).

A lot of the debate on the digital divide has focused on individuals and households. Surveys have identified the faultlines in access and described the vulnerable groups. Policy and social interventions have focused on these groups by e.g. establishing community technology centres in low-income neighbourhoods or providing technology to single-parent families.

As we have already seen, not all elements of the digital divide can be explained on the level of individuals/households. There have been at least two extensions on the digital divide debate that touch upon issues beyond the realm of individuals and households. These are the availability of technology across geographical areas and the accessibility of technology for persons with functional impairments. The first of this calls for policy measures on universal access, while the second calls for initiatives promoting accessibility of technology, such as the WAI-guidelines for websites or the overall 'Design for All' approach to product development.

Employment

Being in paid work is commonly found to be the single most important protective factor against poverty as earnings are usually the most important source of income in order to prevent poverty. In addition, at-risk groups can be thought of as two-fold: those with high likelihood of being (becoming) unemployed – low skilled and temporary workers in particular - and those who are low-paid with high risk of continued low levels of earnings and restricted occupational (upward) mobility. These two groups have a large overlapping common membership. It is now accepted that there is a "low-pay, no pay" cycle in which the probabilities of non-employment and employment are roughly equal for low-paid unskilled workers (Asplund, Slone and Theodossiou 2003).

Investment in skills and lifelong learning for such groups is an essential pre-requisite for altering risk profiles and improving life chances. Although there is not much direct evidence of how ICT skills enhance employability in practice, it is clear that recruitment practices increasingly include ICT literacy as a basic requirement, while associated IT skills are also required to access these opportunities in the first place (e.g. more and more jobs are available online), even when they are not actually required for the job. In addition, the evidence from economists shows that (some) ICT skills are well remunerated in the job market and that there is an apparent wage differential associated with computer use and skills at work (see Anger and Schwarze 2002 for an overview of international evidence and multivariate analysis for Germany, for instance). However, the independent effect of ICT on wage dispersion is still not entirely agreed by analysts, because it is a common finding across econometric studies that unobserved selection or characteristics may explain estimated differences in wage levels attributable to ICT usage. For instance, *inter-alia*, higher performing employees are often selected for ICT access, the overall effect of ICT on wage dispersion means that it contributes as one factor in income polarisation across member states through increasing inequality in earnings. Any factor that contributes to growing wage dispersion will also effect median income growth and thus has a potential to alter relative

poverty measures such as the 60 per cent of median at risk of poverty measure described previously.

As the labour market is transformed and the new economy calls for a different skill base (information literacy rather than physical strength), the social exclusion patterns that emerge in education will resonate in employment careers. Outcomes of transformations in the new economy will impact on the capacity of individuals to participate and survive in rapidly changing labour markets[12].

From an eInclusion perspective, it is critical to assess the effects of the new economy and skills-biased technological change on the position of less-educated people in the labour market, rather than the overall effect. Two issues compete here. On the one hand, the new economy is associated with growth in information intensive sectors. Typically, these involve more knowledge workers, large offices and demand for high computer skills and literacy. Such a scenario seems incompatible with increased labour market chances of less-educated people. On the other hand, the new economy is associated with the deskilling of labour and the so called 'degradation of work in the Twentieth century' (Braverman, 1974): machines taking over a lot of thinking and physical strength (e.g. the need for supermarket cashiers to learn prices by heart being replaced with scanners), and large groups of (mostly immigrant) workers digging up streets to install cable infrastructure. These images relate respectively to the *upgrading* and *downgrading* hypotheses of labour market development in the new economy. Other hypotheses include *duality*, in which both low- and high-skilled labour is needed, but with the middle segment of the labour market diminishing.

Another hypothesis focuses on possible *relocation* of labour, referred to by labels as off-shoring and out-sourcing. In the global economy, labour intensive sectors (e.g. car production) would relocate to countries where labour is cheap, thus decreasing economic activity in Western countries. This would specifically have an impact upon the labour market chances of citizens with poor education and little formal qualification. With the development of software industry in developing nations (e.g. India) and the expansion of relocation to the service sector (e.g. back offices of airline companies in third world countries), relocation could also influence labour market opportunities for skilled staff. Such gloomy perspectives were seen e.g. at the launch of NAFTA and at the expansion of the European Union from 15 to 25 member states.

A recent study from the Dutch central planning office however indicates the effects of relocation of labour are minimal and government policies can hardly influence developments (Gorter, Tang & Toet, 2005). Decision on location of production capacity is not only influenced by labour wages but also by labour productivity and access to suppliers and market. Western countries like the Netherlands can compete with low-wage countries if high wages match high productivity. The effects of relocation of labour would be minimal, compared to the effects of technology-induced shifts between economic sectors (Gorter et al., 2005).

In sum, despite the available research and economic indicators, it is still unclear which of these hypothesis (upgrading, downgrading, duality, relocation) best predicts future labour market developments (Borghans & ter Weel, 2001).

12 Diffusion of new technology has traditionally been associated with fears of job loss. As handmade production gave way to mechanised production, labour efficiency increased. The followers of John Ludd ('luddites') demolished new machines in early 19th century Lancashire, fearing the loss of employment in the textile industry. In France, workers threw their wooden shoes ('sabots') into machinery and equally contributed to our vocabulary: 'sabotage'. Leading economists of the time (like David Ricardo) expressed concerns about structural unemployment as a result of the deployment of machines (Ricardo, 1821). Marx came to the analysis that the concentration of production means in the hand of a few would result in the rich getting richer and the poor poorer. Marx and Engels predicted ever increasing social exclusion in industrial society.

Apart from the number of jobs and how they relate to different skill levels, the location of labour is also relevant from an eInclusion perspective. New technology such as mobile phones, laptops and home access to broadband revitalises the idea of telework. In some cases, this is mobile work with people moving from city to city, from airport to airport, and working in lounges or temporary meeting places. In other cases, it translates to partial homework that could result in work having an increased presence within the home environment. Again, two hypotheses compete and the evidence as to the effects is inconclusive. The European High Level Group of Experts (including Manuel Castells), thinking through information society issues for the European Commission, saw an increase in locally-bound social cohesion: "*The IS provides the tools to increase distance working. Such an increase could have a profound impact on social integration. At present, some individuals resist tele-working because they are afraid that they will be socially isolated due to reduced contact with colleagues. However, more employees working from home could result in increased social contacts within the neighbourhood and family, thus creating 'social networks' within communities*" (High Level Group of Experts, 1996). Others are less optimistic: "*The increases … in telecommunications traffic suggest that whatever is happening to the amount of time people are spending physically at home, social life there is being sapped electronically. The now widespread use of the guilt-laden term 'quality time', to distinguish the time during which parents are actually paying attention to their children from the time during which they are merely physically present, is symptomatic of the distracting power of television, computers and telecommunications*." (Adams, 1999).

Social protection

A cornerstone of European strategies towards social inclusion is the modernisation of social protection systems. This covers e.g. pensions, sickness allowances and unemployment benefits.

Providing social protection to citizens and assessing entitlements is a very information intensive service. As such, it should not be surprising that technology has been used to increase the efficiency of social protection systems. This involves the normal computerisation of administrative processes, with some specific applications. One such application is the Belgian 'kruispuntenbank' (crossroads database), which basically is a centralised overview of which social protection agency has what information on which citizen. The information is not brought together to safeguard privacy, the crossroads database only contains pointers. This is sufficient to significantly reduce the information inquiries towards citizens. Another specific application are the welfare benefit calculation systems, used to check the entitlements of a certain citizen for elements of the social security system.

Whereas such applications increase the efficiency of the social protection system and probably reduce the number of staff needed to maintain service levels, one can wonder whether they also increase the effectiveness (in terms of better addressing income- and risk inequalities). One application that probably establishes such effectiveness gain is pro-active service delivery. A well-known element of ineffectiveness of social protection systems relates to the phenomena of non-take up (van Oorschot, 1995). A lot of citizens are entitled to social security entitlements, but never receive it because they are not aware of their entitlement or because they think the financial gain doesn't outweigh the perceived administrative costs involved. A pro-active service delivery can address both. When e.g. families with two or more children are entitled to a lower tax on house property, there is no longer a need to require an initiative from those involved as government knows very well who has children and who owns houses. Matching data across databases can suffice to grant citizens what they are entitled to, as done in e.g. Belgium.

Social protection systems do not only relate to social security and financial transfers, but also to human services such as health care, schools and social services. They contribute to both

human development and social inclusion. Again, providing such services with technology can enhance their efficiency and effectiveness.

Overall assessment is that technology is available enough in health care and education, whereas social services are just beginning to reach a reasonable level of technology (in North-West Europe). Applications have mostly been geared towards administration and accountability (e.g. keeping client records, efficiency in billing patients), less so towards the primary processes. The focus in e.g. education or social services is now changing towards those applications in the primary process.

Participation

There is frequent concern about the declining level of civic engagement and the detachment of citizens from society. Turn out rates at elections are low and decreasing. Membership of political parties is at a dramatic low.

The background to such developments involves different models of citizenship. The calculating citizen is juxtaposed to the communitarian citizen (van Gunsteren, 1998). While the latter is a member of his community and contributes to that community (e.g. by voluntary work, by dutifully paying taxes, by turning up at elections), the former calculates what minimum investment in community s/he can get away with, to maximize personal agendas. In this area, technology is sometimes seen as a threat. Fiskin mentions technology as the cause of the crisis in civic engagement, when writing about 'soundbite media'. He calculates that the average time a politician talked in the media has declined from 42 seconds in 1968 to a mere 9 seconds in 1988 (Bryan, Tsagarousianou & Tambini, 1998). Bourdieu was equally critical and blames the obsession for 'scoops' on the decline of quality of news media (Bourdieu, 1998).

But more often, the resources that constitute the new economy are heralded as lifebelts for drowning civic engagement. Labels such as "teledemocracy", "cyberdemocracy" and "eDemocracy" are used. This is related to - but must be distinguished from - the interest in eGovernment, where the main focus is on the quality of government's services to the citizen. Within the eGovernment debate, the citizen is a consumer of services, not an active participant.

E-democracy and related concepts refer to the notion that new media can be a facilitator and an incentive for citizens to move up the participation ladder. The metaphor of the ladder identifies several stages of civic engagement, starting with information and knowing what happens, then moving to setting the policy agenda, political debate, consultation and decisions. At each level, examples of technology applications exist.

Information: availability of information is a precondition to democracy. Without up to date and reliable information, no opinion taking or participation in a debate makes sense. Internet is a strong instrument for providing access to vast amounts of information. Within countries high on the internet dissemination curve, there is virtually no public organisation without a website providing access to its work, publications, reports, contact information and the like. Political parties provide online access to their political programme, the agenda of activities, essays on recent developments, diaries from Member of Parliament and the like.

The supply of information is not always of the same quality, and its diversity calls upon specific information skills from citizens (Steyaert, 2000). Some information is provided by persons trying to mislead citizens, other information was once reliable but long past the 'best by' date. Most information is scattered across many websites and requires citizens to 'cut and paste' together what they need. Most of all, citizens need to be aware that the amount of available information can easily distract them from what is not provided. E.g. it is easy to find an overwhelming amount of detail from the local hospital, but does that also include comparative data on the success rate of the surgery the user is going to have there?

An important development involved the shift of the citizen from an information consumer to an information producer. The number of people that actually contributed to the media landscape of a specific country was often limited to professional journalists (printed media, radio, television) and only involved citizens through e.g. letters sent to opinion pages of newspapers. With digital media, every citizen can put their information and opinion onto a website and attract readers. The technology applications supporting such development are the straightforward website, weblogs, wiki's and the like. Some initiatives have built on such technology, for example the Korean http://english.ohmynews.com/ facilitating an average 30.000 citizens to act as 'journalists'. Or the international Indymedia voluntary movement or http://www.wikipedia.org, the initiative to mirror the Encyclopedia Brittanica but based on voluntary contributions of a great variety of citizens.

Setting the policy agenda: the development from information consuming to information producing citizens contributes to the shift from passively participating in society by merely following what is happening to a more active setting of the agenda. In the pre-internet era, this was achieved by writing to local councillors, writing letters to the (local) newspapers, organising petitions or organising/participating in a protest march. This portfolio of instruments to set the policy agenda has been expanded by the dissemination of internet. A politician can now be reached not only by letter, fax or phone, but increasingly also by email or through their website. New media can not only provide an alternative to old media, but also support their use. An example is http://www.faxyourmp.com and http://WritetoThem.com, simple websites that facilitate citizens in voicing their opinions to their Member of Parliament.

Some politicians take this to a higher level and organise chat sessions with their constituency. This can both be a 'real' chat session which is very unstructured, or a dialogue more focused on specific issues.

These instruments also provide the infrastructure for e-activism. The most telling example has been the Zapatista opposition in southern Mexico, receiving global fame through the support from Noam Chomsky. Another example is the opposition of some individuals against the fast food chain McDonald and their e-pamphlet *What's wrong with McDonald's? – Everything they don't want you to know* (still available through http://www.mcspotlight.org). Equivalent to the real world, one can see examples of e-activism that are polite ways of political participation, as well as less polite ways, e.g. when opposition used brute e-force to take down nike.com during summer 2000.

Political debates: political participation does not only involve acquiring information and setting the political agenda, but also contributing to the debates and participating in the dialogue. That is at the heart of democracy. While this usually takes the form of public hearings at a certain time and place, the online equivalent has the advantage of being less dependant on a specific time and place, as well as to allow citizens who are less likely to speak up amidst an audience to contribute.

Consultation and decisions: gathering and providing information, and participating in a dialogue to form an opinion are all building up to the cornerstone of democracy, taking decisions and making one's vote count. This can take the form of public opinion vote, a referendum, or voting. All have their digital equivalent.

Public opinion polls were reasonably expensive as they traditionally called on substantial survey work. With the emergence of internet survey tools, organising public opinion votes on the internet has become very easy. No wonder this is resulting in an increase of such survey work, e.g. on websites of news media who ask their readers whether they are for or against a certain issue/proposal. The gain in speed and lower costs is however mirrored by a decrease of reliability. There is no sampling framework underneath such online public opinion voting, and the results are therefore highly questionable.

Referenda greatly differ from public opinion surveys because they are always organised by public authorities, whether local or not. Examples include the Spanish referendum on the EU constitution or the several referenda organised in Switzerland each year. There is little experience with digital equivalents of referenda, but it has been described like a utopia for democracy. Every important issue could be made subject to a referendum and every citizen could participate in the decision making, as the costs for organising a referendum decrease through internet technology.

Voting is problematic in many countries, as turn-out rates at elections are low and decreasing. The expectation is that application of internet technology can take away some of the burden of the traditional voting process (having to go to the polling station, facing the risk of queues and waiting times) could be taken away by introducing eVoting. A condition to establishing eVoting is a high level of internet access (whether through household access or public internet access points) and reliable technology both to check the identity of voters as well as to process votes.

Internet has implications and applications for the several levels of interaction between citizens and democracy. But can internet stop civic disengagement? From an eInclusion perspective, two main issues are at stake regarding the developments of e-democracy. First, the question arises whether digitalisation of civic engagements results in greater quality of the engagement. This is related to the availability of technology and information, but also to digital literacy and authentication (e.g. e-voting). It also refers to the level of quality of contributions to digital debates, which are often intellectually limited.

Secondly, there is the question of whether e-democracy acts as an equaliser in terms of which part of the population engages with society and which does not. Do the internet applications provide incentives to citizens to engage with democracy more than they do without such applications, or at a 'higher' level of democracy? There is equally the strong possibility that technology offers a new forum for those groups of citizens who were also active in the pre-technology era. If that is the case, expanding participation by using digital media does not influence the nature of the traditional 'participation elite'. The challenge remains to capitalise on the characteristics of certain technology applications that are potentially eliminating thresholds for civic engagements, such as less text based and more graphic representation of information and gaming environments.

Some likely trends may be discerned from a recent U.S. survey conducted by Pew (2004). This found that, for the two thirds of U.S. citizens with internet access, the flow of information between them and government is increased, being three times as likely as non-internet users to get in touch with government. Citizens particularly feel that the internet provides them with more information to support their communication with government. However, the survey also finds that the more complex or urgent an issue, the more likely citizens are to prefer telephone or face-to-face contact with officials. Also, it provides some indications that groups at risk of e-exclusion are particularly likely to want to retain non-digital interaction with government. For instance, traditional means of contacting government are strongly favoured by people with disabilities, who are also less likely to have internet access.

Mainstreaming

Education

Within the social exclusion literature, educational exclusion receives considerable attention. As it takes place in the early stages of life and as it provides resources for personal development, patterns of educational exclusion are deemed a precursor for social exclusion in other domains of life, such as labour market opportunities or health.

There is also substantial concern about developments in educational inclusion and exclusion. British research on the effects of tuition fees indicated that the gap between rich and poor in higher education grew during the 1990s (Galindo-Rueda, Marcenaro-Gutierrez & Vignoles, 2004). The Higher Education Funding Council for England (HEFCE) indicated "teenagers in the richest areas could expect a better than 50% chance of going to university, while in the poorest neighbourhoods it was 10%" (HEFCE, 2005).

Both within the Lisbon Strategy about economic, social and environmental renewal in the EU as in the eEurope action plans, there is considerable attention for technology in education, both as a subject matter (e-skills) as well as part of the educational infrastructure.

Given both developments, it is obvious to scrutinise whether or under what conditions bringing in more technology into European schools reduces social exclusion.

There can be little doubt that technology is rapidly entering schools. Whereas computers and Internet connections initially were applied in the administrative back-office, they later emerged in a separate dedicated technology classroom (not dissimilar from the language labs that were introduced thirty years ago) and more recently into all classrooms. This results in ever increasing ratios of pupils per online computer for educational purposes. These transitions clearly follow a trickle-down pattern, with innovations first being introduced in higher education, to be followed by secondary schools and primary schools. Nowadays, in higher education, we already see an abundance of laptops and wireless campus-wide networks and there is little doubt that this will soon be commonplace in secondary education.

This digitalisation of European education has far-reaching implications for the pedagogical framework and the educational profession. From an eInclusion perspective, other issues are involved. This relates to the large discrepancies between European Member States, in terms of how much technology is available in schools and whether this is cumulative or corrective to home access.

In terms of potential inclusive impact of ICT adoption in schools, it is essential to look at how the technology is used within schools and what is the socio-demographic background of those students making most use. One recent study on the digital divide mentions a research finding that whilst 25% of teachers engaged in Internet activities primarily or exclusively with academically advanced students, only 5% did so with lower achieving students (Warschauer 2003). Additionally, the educationally strong students could use their computer time for challenging applications, while the weaker students used the technology for remedial drill. Such differences could be justified if e.g. allowing strong students to use the technology frees the teacher to focus more energy on weaker students. The key issue is whether the mixture of computer-enhanced and other ways of education increases or reduces equality of educational opportunities (Schofield and Davidson 1998).

More generally, although there is a body of evidence that examines the way in which the internet is used by children and its risks and advantages (see Livingstone and Bober 2005, for instance), there is less evidence of good quality concerning the independent effects of ICT on children's learning and outcomes. Indeed, the evidence on ICT in children's educational development is mixed. Schmitt and Wadsworth (2005) find that children living in households with PCs have significant increase in secondary school educational outcomes when all other factors are controlled for. On the other hand, evidence from a quasi-experimental study of the use of computers in schools for computer-aided instruction shows that such teaching methods are no better and may even be less effective than other teaching methods (Angrist and Levy 2002).

Health & health care

There has been a lot of investment in increasing the efficiency and effectiveness of health care with the help of technology, e-health is a booming business. However, almost none of this investment had a social redistribution effect, or focused on health inequalities. The Black report released in 1980 in the UK showed that there had been a continued improvement of people's health and quality of health care, but at the same time there remained huge discrepancies between life expectancy of citizens of different socio-economic classes. Rich people didn't only earn more money, they lived longer to enjoy it!

There are few technology based applications that address these inequalities. The current understanding of these inequalities relates a large percentage of it to lifestyle differences (smoking, being overweight, etc…). Some internet applications aim to promote a healthy lifestyle, like the several internet sites that allow to calculate your real age, depending on your lifestyle rather than your birth date. Unfortunately, such applications can hardly be targeted specifically to low-income people and hence could enhance rather than decrease health inequalities.

e-Accessibility

Within the debate on the digital divide, special focus has been given to citizens with functional impairment and their access to new technology. Disability is strongly related with being on the wrong side of the digital divide. This is not only a result of disability correlating with low income and age, but also because most technology is designed to exclude. It is not the functional impairment of the citizen that makes usage problematic, but the way technology is designed to work only for people with full functionality. Whenever the situation or the person's characteristic divert from optimal, usage becomes problematic.

In many Western countries, this led to the emergence of a policy action and a legal framework that called on technology providers (hardware, software and content) to construct their products and services so as to maximise accessibility. This is known as 'Design for All' in Europe and 'Universal Design' in North America.

The 1992 re-issue of the U.S. Rehabilitation Act indicates that government agencies in their procurement of products and services need to take into account accessibility. This and similar laws have resulted in companies like Microsoft, Adobe or Corel making a real investment in improving the accessibility of their software[13]. While this is significant progress, a lot remains to be done regarding content providers. While Adobe publisher or Frontpage may include accessibility features, it is the users who use these software environments that need to use the accessibility features while building a pdf-document or a website.

The missing link - citizens' information diet

There is so much one can do on the internet that the mere notion that somebody has access to and is spending a certain amount of time on the internet becomes meaningless. Does one send emails to friends, chat with unknown fellows, play a game, download music, hunt for scholarly information or a new job, watch pornography, read e-newspapers, search health information for a neighbour, … It is a fair assumption that these usages differ in terms of their expected contributions to somebody's social position in society as well as to overall social quality (e.g. having solid social networks, feelings of safety). Some applications provide users with increased resources, others are fun but contribute little.

Consequently, we need to start untangling some of these different activities and focus on 'content preferences'. Research into television has already deconstructed the concept of

13 http://www.microsoft.com/enable/, http://www.corel.com/accessibility/ and http://access.adobe.com/

television into viewing attitudes and has shown that preferences for certain type of programmes go hand in hand with things such as political attitudes and with social participation (Holtz-Bacha & Norris, 2001; Hooghe, 2002). It's not the technology that's having an impact on human development or social exclusion, but the kind of data that's processed through using that technology.

Recent research suggests this may also be true for the internet. Leeds and Sheffield universities have just published findings of a survey on the effects of home computer usage on school results. It found that children who used computers for school work had better results whereas children who played games achieved significantly lower grades. As it is most often boys playing games on the computer, the net effect may be a widening gender gap in education, in the benefit of girls (Valentine et al., 2005). A similar result was found in research into the effectiveness of the use of the television for narrowing educational gaps, noteworthy the effect of Sesame Street on reducing gaps between white and Afro-Americans. Even when taking into account the amount of viewing time, children from white households benefited more than children from Afro-American households. While Sesame Street was initially developed to reduce education gaps, it appeared to increase them despite raising the overall educational level. This unexpected and undesired effect was labelled the 'information gap' (Tichenor et al., 1970).

There are indications that the increased use of internet (in terms of time online, and in terms of bandwidth used) can be attributed to increased use for entertainment. This is similar to earlier innovation. In the sixties, television was heralded as a great platform for education, an assumption one wouldn't dare to make looking at what's being broadcasted these days. While the internet was welcomed by the 'homo rationales', it is rapidly being taken over by the 'homo ludens'. Research on internet use among Swiss households found that entertainment use of internet varies across socio-demographic groups. Less educated people use the internet predominantly for entertainment, while more educated people use the internet in a more information oriented way (Bonfadelli, 2002). This also relates to low-income households being surprisingly well represented among broadband users as a consequence of KaZaA-like applications.

One could paraphrase McLuhan and argue that in terms of social inclusion and information technology, it is not the medium but the message that is important. Whether citizens acquire their 'information diet' through traditional media (newspapers, radio, television) or through new media (internet, mobile phones) is not relevant. The content of the information diet and whether it contains enough 'healthy information' is a more significant element influencing social inclusion. If this is the case, social interventions cannot suffice by giving socially excluded citizens access to the internet, but need to focus on people's information diet.

4 Assessment of eInclusion measures with potential to contribute to social inclusion in the Member States

This Chapter presents the work of the study on analysing and assessing eInclusion measures with potential to contribute to social inclusion in the Member States. The Chapter is organised into four main sub-sections:

- The conceptual framework,
- Data sources and data gathering approach,
- Discussion of overarching measures and thematic presentation and analysis of specific measures at Member State level,
- Summary assessment of the levels of activity and policy implications for each theme.

4.1 Conceptual framework

An overall conceptual framework (Figure 4-1) was developed within the study to support the analysis of eInclusion measures and social inclusion in Europe. This provides a bridge between the literature review and other background material and analysis in Chapters 2 and 3 and the empirical investigation of actual measures in the Member States. It draws on the material in Chapters 2 and 3 and also from a more inductive appraisal of available compilations of information about eInclusion measures from the different European countries (collated for purposes of this study from sources such as the eInclusion@EU project, ESDIS and so on).

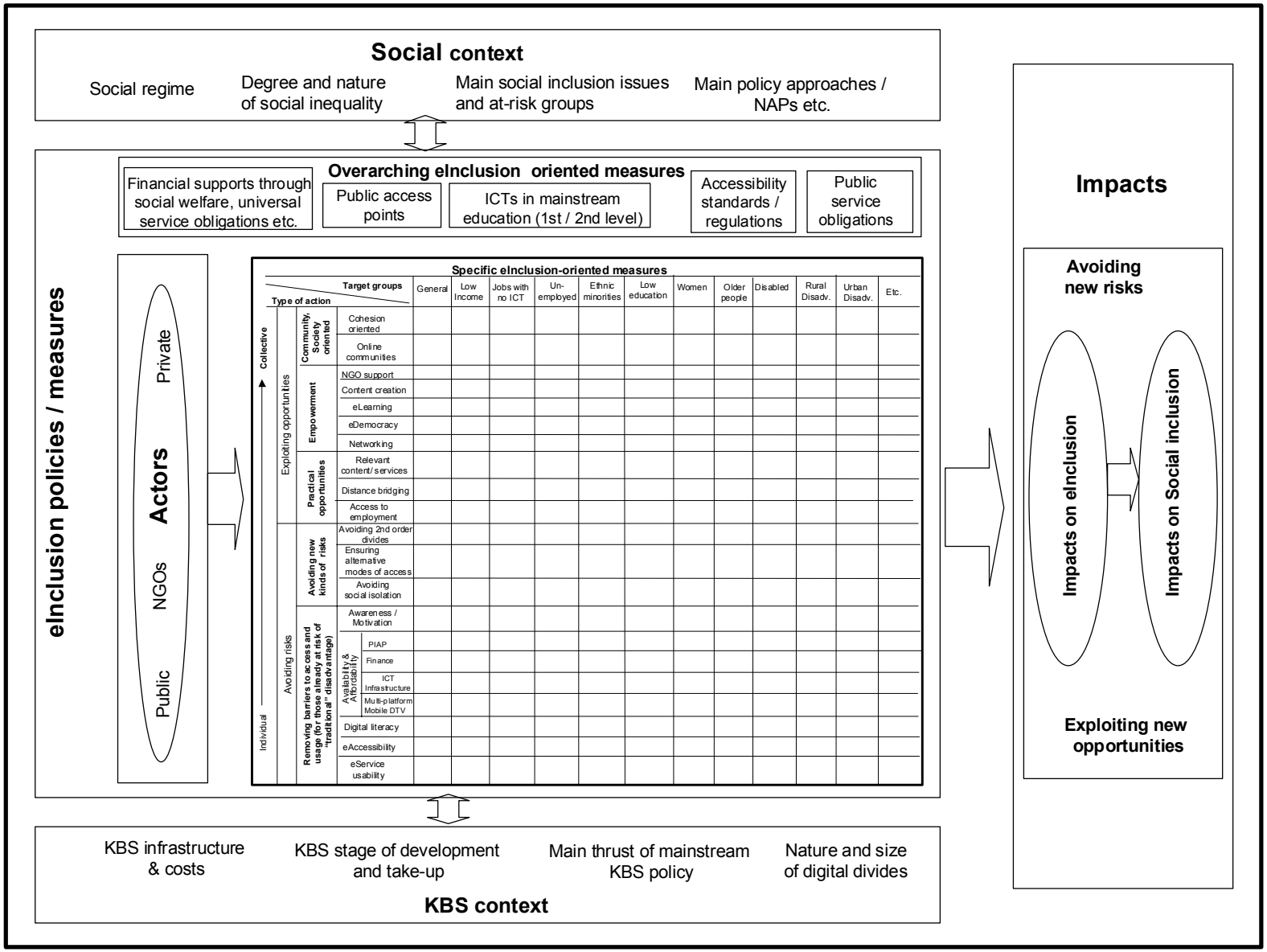
At the core of the framework is a thematic organisation of eInclusion measures in accordance with the type of relationship that they have to various aspects of social inclusion. Two types or levels of measure are included – overarching measures and more specific measures.

Overarching measures are those that have universal reach (or at least potential reach) whether across the population as a whole or for particular sub-groups (e.g. all low income groups, all people with disability, all children of school-going age). The main thematic approaches identified are:

- financial supports (through social welfare provisions, universal service obligations, and other such mechanisms),
- public access points (where universal coverage is aimed for through usage of outlets such as libraries, post offices, schools and so on),
- ICTs in mainstream education (where universal access to ICTs for all pupils in first and second level education is the target),
- eAccessibility standards / regulations (to ensure that ICTs and online services can be used by people with disabilities and others with functional restrictions throughout the EU),
- public service obligations (obligations to provide and ensure access for all to services of public interest).

Specific measures are organised into two main thematic categories – avoiding risks and exploiting opportunities – each with associated sets of sub-themes (Table 4-1).

Figure 4-1: Overall conceptual framework



Source: The author

Table 4-1: Specific Thematic eInclusion Measures

	Main theme	*Sub-themes*	*Issues addressed / approach*
Avoiding risks	Removal of barriers	Awareness / motivation	Demand side measures aiming to raise awareness and encourage interest amongst late adopters
		Availability / affordability	Demand / supply side measures aiming to remove tangible, practical barriers
		Digital literacy	Demand side measures aiming to provide eSkills
		eAccessibility	Supply side measures to ensure that people with disabilities and others with functional difficulties can access ICTs
		eService usability	Supply side measures to ensure that all groups, especially at-risk groups, can use online services
	Avoidance of new risks	Alternative modes of access	Supply side measures to ensure that important services remain available to those who are not online
		Avoiding social isolation	Measures to ensure that increasing virtualisation does not lead to social isolation of vulnerable persons
		Avoiding second order divides	Demand side awareness-raising and eSkills measures to help people get real benefits from online opportunities
Exploiting opportunities	Practical opportunities	Access to employment	Demand and supply side measures to give at-risk groups better opportunities in employment
		Distance bridging	Demand and supply side measures to exploit the inherent properties of ICTs to bridge constraints of distance (and time)
		Relevant content / services	Supply side measures to develop content and services that is really relevant to the needs of those at-risk of exclusion; includes services that support independent living (e.g. telecare) for older and disabled people
	Empowerment	Networking	Measures to exploit the networking capabilities of ICTs to empower at-risk groups to address their own needs
		eDemocracy	Measures to facilitate more engagement and more effective engagement / influence of at-risk groups in all aspects of politics and governance
		eLearning	Measures to facilitate self-directed personal development and lifelong learning for at-risk groups
		Content creation	Measures to facilitate at-risk groups to become content creators, not just consumers of content created by others
		NGO support	Measures to help NGOs exploit ICTs in support of their work with at-risk groups
	Community / society oriented	Communities Online	Measures to encourage the deployment and utilisation of ICTs amongst at-risk communities
		Cohesion oriented	Wider initiatives aiming to use ICTs to spread knowledge, appreciation of and interaction between different groups across society

4.2 Data sources and data gathering approach

A multi-level approach was employed in gathering data on the eInclusion measures across the Member States. Most of the effort focused on gathering information on the types of specific measure that were identified in Table 4-1. In addition, some (more limited) attention was given to the overarching measures identified in Figure 4-1.

As regards the various specific thematic measures, one component of data gathering involved collation of available information on measures from across all Member States. The primary sources for this were the eInclusion@EU project and the work of the ESDIS group. An analysis of each of the NAPinclusion documents (for the old EU 15) and the Joint Inclusion Memoranda (JIMs) for the New Member States was also carried out as part of the study.

Another main component involved a direct and more in-depth investigation of measures in a sub-set of Member States. A total of 12 Member States were included in this (these are listed in Box 4-1). These were selected to provide a good spectrum of countries in terms of social inclusion issues and levels of development of the information society, and a mix of New and Old Member States.

Box 4-1: Member States included in the in-depth investigation of eInclusion measures

- Austria
- Belgium
- Germany
- Estonia
- Finland
- Ireland
- Italy
- Netherlands
- Poland
- Slovenia
- Sweden
- United Kingdom

Information on measures was collected by a team of national correspondents (see Annex V for details of the template used to gather the information in the Member States).

Finally, effort was also spent on compiling profiles of all Member States in terms of social and economic situation, social inclusion issues, levels of development of the information society and digital divide issues (Annex I). This provided a structured basis to help with the selection of countries for the in-depth investigation of measures and, later, for the contextual interpretation of the identified measures. This type of information can also be of value in the development of technical guidance for Member States when working to tune their eInclusion efforts to the national circumstances.

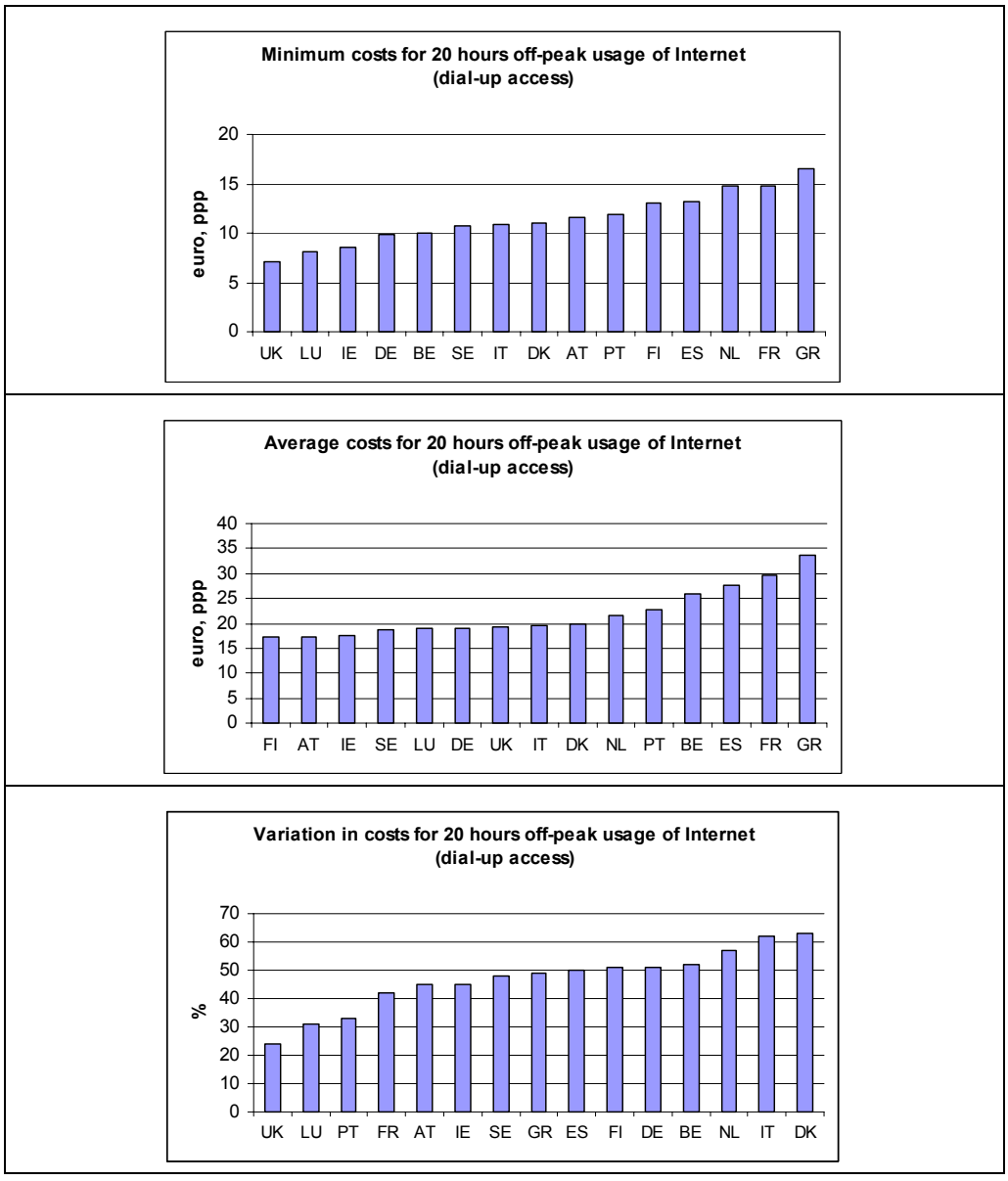
4.3 Overarching measures

Assessment of the extent to which overarching measures are in place and the success or otherwise of such measures was not the main focus of this study. The presentation in this section therefore focuses on identifying the main characteristics of the different types of approach and provides some data where this is readily available. The importance of giving these types of measure more attention within the OMC and other shared EU-wide processes addressing eInclusion / social inclusion is taken up again in Chapter 5.

Financial supports

The affordability of internet access and usage is clearly a prerequisite for participation in the information society.

Figure 4-2: Comparison of Dial-up Internet Usage Costs* across the EU15



Source: Teligen (2004); *PSTN rental charges not included

Public access points can play an important role in this but the real convenience benefits of the internet especially derive from personal access at home, particularly for those who do not have workplace access. In this regard there is evidence that home access is affected by costs for a considerable proportion of people. Overall, available data suggest that about one-third of Internet non-users in the EU25 cite costs being too expensive as a barrier (see Annex I), comprising almost one-half of non-users in the accession countries and one-quarter in the old EU15. The biggest initial barrier may be the cost of PC purchase, and this may be especially the case for many in the New Member States as well as for low-income groups in the old Member States. In addition, internet connection and ongoing usage costs can be a significant barrier for those on low incomes.

As indicated in Figure 4-2, costs (in euro, purchasing power parity) of Internet usage vary considerably across the EU. Countries with low prices and low variation will generally have relatively low cost access available to all or most users, while low prices and high variation means that there are other packages that are significantly more expensive on the market. Comparing the lowest price with the average for each country minimises the effect of any very expensive packages that may exist. Overall, the variability of prices within countries suggests that comprehensive and transparent consumer information to help cost-conscious selection is an important issue, especially for low-income groups.

The Teligen data also provides comparisons in terms of costs and value-for-money between dial-up PSTN access, ADSL and cable modem (always on) access. The results are interesting in that the value-for-money benefits of ADSL and cable modem access are apparent at higher levels of usage (between 56 and 90 hours per month for ADSL and 34 to 38 hours per month for cable modem usage), whereas dial-up PSTN access (especially off peak access) is more cost-effective for lower levels of usage (such as 20 hours per month, off peak). The implications of these cost-benefit characteristics of broadband need to be examined for their implications for usage and costs of usage of those at risk of social exclusion, especially people on low incomes.

The main actions that can address cost barriers are at the legislative / regulatory level. In principle there are a number of different ways that support for costs of accessing and using the internet can be publicly supported.

One way is through provisions in relation to Universal Service in the telecommunications and wider electronic communications field. The EU Universal Service Directives[14] enable national regulators to introduce measures that help to make access to basic telephone services affordable to low income and special needs groups, including people with disabilities. Some Member States now have schemes in place under their national universal service regulations that provide some degree of cost subsidy for vulnerable groups. However, there is no recent compilation of the extent of and nature of such measures across the Member States and this is an important gap in relation to the formulation of eInclusion policies addressing the affordability aspect. Apart from provisions within the universal service context, many Member States also have provisions through social protection schemes that provide support for telephone costs for low-income people and households.

Fixed telephone lines remain the main mode of connection of homes to the Internet throughout much of Europe. Households without a fixed line therefore often face an insurmountable barrier to home Internet access. Apart households without fixed lines because of affordability problems there are an increasing number of households with only mobile phones. To date, the level of Internet access provided over mobile phones is a lot more limited in comparison to that provided through PCs connected to the fixed telephone network. In addition, costs for Internet access and usage over mobile phones can be high.

[14] Directive 2002/22/EC of the European Parliament and if the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive).

There is a need for a detailed examination of the fixed and mobile phone circumstances of low income households and the impacts that this is having on Internet access and usage.

Partly linked to this is an issue that has been on the agenda in the universal service debate for a number of years, namely, whether the scope of universal service provisions should be extended from basic telephony services to mobile services and, indeed, to internet access. This is an issue that has been examined in various studies in the 1990s and the argument has been put forward that if access to services that can be considered to be "public goods" (e.g. health services) is increasingly dependent on internet access then internet access should fall within the scope of the universal service concept (e.g. WIK, 1999).

In the particular case of access to online health information and services, a study for the European Commission in 1999/2000 concluded that any need for extension of universal service obligations in a manner that would facilitate the affordability of online access to health services for citizens would depend on the extent to which such services become a normative and central feature of health activity of citizens (empirica and WRC, 2000). The study recommended that this issue be kept under review as the information society evolves in Europe. The latest evidence suggests that the internet is now coming to play an increasingly central role in the public's health management in Europe and that enduring income-related digital divides now pose a risk of contributing to wider health divides (eUSER, 2005). Against this background it seems timely that the issue of financial support for access to the internet be revisited and re-examined.

Apart from universal service and/or social protection provisions, some Member States, sectoral interests and ICT suppliers have implemented other fiscal / financial approaches to help overcome cost barriers and these are discussed in section 4.4.

Chapter 5 returns to the issue of affordability and discusses how this aspect can be taken forward through various lines of EU policy, including benchmarking of developments in relation to the Universal Service Directive and through OMC mechanisms in the context of NAPs/Inclusion and others relevant instruments.

Public Internet Access Points

The establishment of Public Internet Access Points (PIAPs) to facilitate affordability was one of the targets of the eEurope action plan and this has been a significant stimulatory factor in their implementation across Europe. There are significant numbers of PIAPs in many Member States and, overall, about 7% of the EU25 population used PIAPs in 2002 (SIBIS, 2002). Data from Eurobarometer suggests that PIAPs are, to a certain extent at least, reaching at-risk groups – for example, 19% of users were low-income and 12% unemployed (CEC, 2002). However, as already mentioned above, discretionary access from home offers significant advantages in terms of convenience and privacy, especially for online activities in areas such as health. In addition, the available figures would suggest that the majority of current users are *not* those who are at high risk of social exclusion and that more targeted measures may be needed to reach these groups and address their needs. This aspect is taken up again in section 4.4.

The need for increasing targeting of such public interventions and differentiated monitoring of who is being reached and the benefits that are being achieved is taken up again in Chapter 5, along with a discussion of how this might be included within the relevant OMC mechanisms.

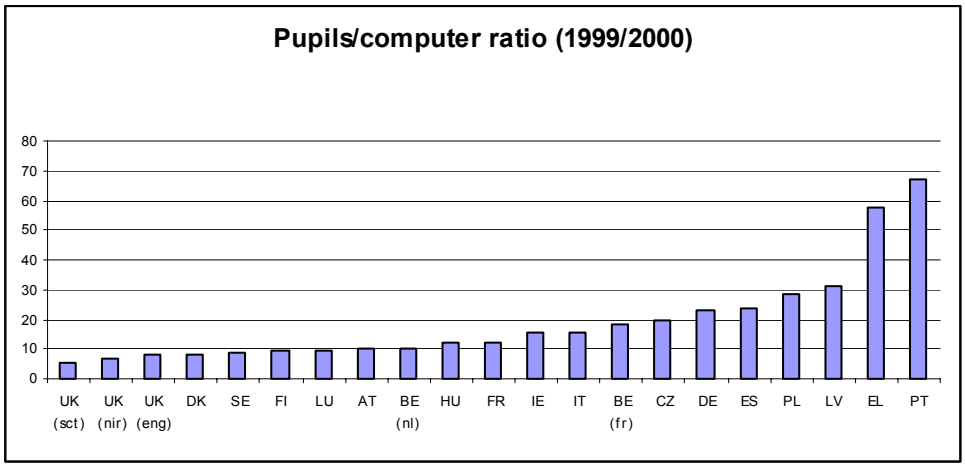
ICT in mainstream education

One of the most important ways to promote eInclusion is through ensuring that all children have equal opportunities to access, use and become skilled in ICTs. Available evidence indicates that such opportunities vary depending on the wealth of countries and, within countries, depending on the socio-economic circumstances of households (Eurydice, 2004). As regards the latter, the strength of the association between home computer access and household socio-economic circumstances varies considerably across the EU.

This points to the importance of universal and equal access to ICTs at school if the eInclusion dimension of social inclusion is to be addressed in a preventative manner. However, the evidence suggests that in the majority of countries decisions pertaining to investments in computer facilities have tended to be taken at local level (Eurydice, 2004), with often no central recommendations specifying the number of pupils per computer or the number of computers per school. However, some countries or regions – Belgium (Flemish Community), UK (England and Scotland), Malta and Slovenia – do specify a ratio for the number of pupils per computer. In addition, Greece, Portugal and Lithuania have established official objectives in this area.

Although targets have been set under the EU's eLearning initiative and action plan, available data (if somewhat dated) suggests that wide variations across countries may remain in the average pupil/computer ratio in schools (Figure 4-3).

Figure 4-3: Pupil/Computer Ratios in EU Schools



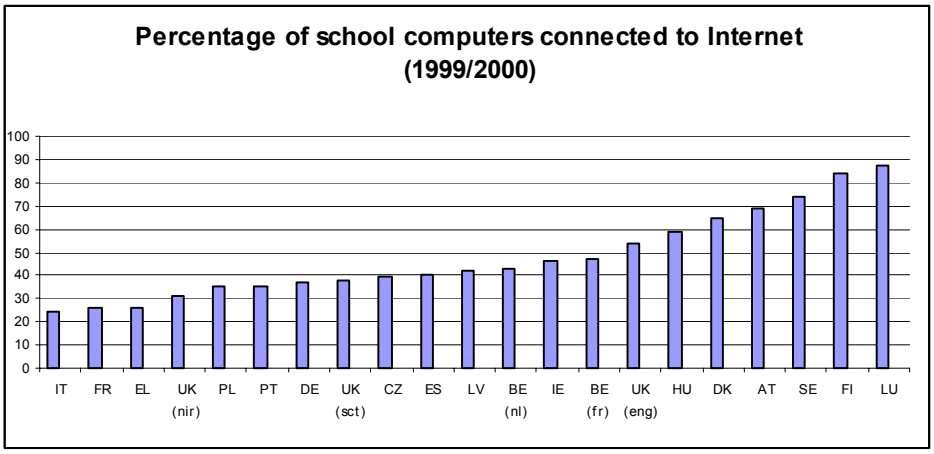
Source: Eurydice (2004)

The Eurydice data suggests that the patterns in relation to ratios of students to computers mirror those for home access, with lower ratios in schools and higher home access tending to be found in wealthier countries. In addition, the available data suggests that there are marked disparities in the level of computerisation of schools within some countries (Eurydice, 2004). Variations are a lot smaller in countries where there are centrally regulated pupil/computer ratios as well as in countries where the overall ratios are higher. Finally, there is evidence that in some countries computerisation is more developed in private schools than public schools.

The quality of access also varies across countries in terms of the proportions of students who have access to a computer in their classroom as opposed to some other part of their school. In addition, the Eurydice data indicates that the objectives and content of ICT teaching in schools varies across the Member States, as do the modes of access to and usage of ICTs (e.g. as a tool for other subjects, as something to be used in its own right, etc.).

The percentages of school computers connected to the Internet also vary widely across countries (Figure 4.4), although it is likely that some of the gaps have closed in the intervening period since that data was gathered. Those countries in which schools have a greater number of computers also show high rates of computers connected to the Internet.

Figure 4.4 Percentage of School Computers connected to Internet



Source: Eurydice (2004)

Public service obligations

In parallel with the efforts to liberalise the European services market (Services Directive) there have been ongoing EU discussions in relation to the protection of so-called "services of general interest". This is an important issue for social inclusion and one that warrants more focused attention in the context of the objectives on access to goods and services within the NAPs/inclusion. The increasing utilisation of ICTs to provide access to and deliver public services (especially eGovernment but also eHealth) brings an eInclusion dimension to this domain as well. Issues of concern include making sure that online services are usable by and accessible to at-risk groups as well as ensuring that those citizens who are not online have equal access (and equal quality of access) to services of public interest.

This is an area that has not received sufficient attention to date, either in social inclusion or eInclusion discourse and policy. Some Member States have begun to address various aspects either at the regulatory level or in customer service practices but so far no overall picture of the situation across the EU has been compiled. This issue is taken up again under the relevant theme in section 4.4 and in the recommendations in Chapter 5.

eAccessibility and Design for All

A key area of eInclusion concern for people with disabilities and older people is the extent to which ICTs and online services are accessible in relation to any functional difficulties that they may have (e.g. in vision, hearing, dexterity or cognitive abilities). This is an area that has been given considerable attention at the EU level. .

Complementing the accessibility approach is the broader Design for All approach. This has been supported at the EU-level through help with the establishment of the European Design for All Network (EDeAN). Part of the work of this network is on the development of Design for All curricula for designers and other relevant stakeholders.

The main elements of current EU policy that specifically addresses eAccessibility are:

- Communication of eAccessibility[15]
- Council resolution on accessibility of public websites[16] and eAccessibility more generally[17],
- eAccessibility in the EU Public Procurement Directives[18],
- digital rights management (exemptions allowed to enable accessibility for disabled people in the Copyright Directive[19]).

There is also potential to address eAccessibility in some other policy contexts, including:

- The Universal Service Directives[20],
- The Terminals Directive[21],
- The Framework Directive on Employment Equality[22].

However, there is evidence that the national transpositions of the various EU Directives do not always give direct attention or specific prominence to the eAccessibility dimension, in the first place, and that there is wide variation across countries (eInclusion@EU project). For these reasons there is a clear need for EU level activity to encourage and provide guidance to the Member States on strong national transpositions of the various Directives so that they give due and appropriate emphasis to eAccessibility. In addition, as regards the follow-through of the Council resolutions on accessibility of public websites and eAccessibility more generally, the current picture across Europe is quite patchy, in terms of both whether and how the issue is being addressed (eInclusion@EU, 2004a).

Another aspect of eAccessibility concerns the provision of assistive technologies that can be connected to or used with mainstream ICTs in cases where this is necessary to ensure their accessibility. Apart from a role on supporting eAccessibility there are many assistive technologies that have a key role to play in supporting independent living for disabled and older people. There is evidence that the extensiveness and quality of services in this area vary widely across the Member States. So far this theme has not been taken up in any OMC context although some consideration has been given to the possibility of an EU-driven initiative in this area.

Again the need for EU-level encouragement and support is indicated in relation to eAccessibility and the related theme of assistive technology. These aspects are further considered in the recommendations in Chapter 5.

[15] Communication on eAccessibility. COM(2005)425 final. SEC(2005)1095. Brussels 13.9.2005

[16] Council Resolution of March 2002, "on the eEurope Action Plan 2002: accessibility of public websites and their content".

[17] Council resolution 5165/03 e-Accessibility: improving the access of people with disabilities to the knowledge based society, OJ 14 January 2003.

[18] Directive 2004/18/EC and Directive 2004/17/EC.

[19] Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

[20] Directive 2002/22/EC of the European Parliament and if the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive).

[21] Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity.

[22] Council Directive 2000/78/EC of 27 November 2000 establishing a general framework for equal treatment in employment and occupation.

4.4 Presentation of specific thematic measures in Member States

Table 4.2 at the end of this Chapter presents a detailed profile of the panorama of measures across the Member States that address the specific themes identified in section 4.1. A complete inventory of specific measures is presented in Annex II of the report.

The following sections provided a theme-by-theme presentation of selected examples of initiatives from the 12 Member States that were identified in the in-depth investigation carried out as part of the study.

4.4.1 Removing barriers to access and use

Awareness & motivation

The initiatives falling under this subheading tend to be demand side oriented, aiming to raise awareness of the potential of ICTs and encourage interest amongst late adopters of ICTs, most frequently in the form of media campaigns, roadshows, and similar activities. Of necessity, non–internet based promotion channels and advertising tend to be used, for example via the national TV, radio and printed media.

These measures are particularly relevant in the early phase of IS development and originally often tended to be single once-off events, without a structured follow-up. A typical example would be a senior-surf day **[Seniorsurfen]** in **Sweden**, an annual, one-day event, aiming to encourage senior citizens to get going online and increase their use of the Internet and computers. However, there are signs that these measures are now evolving and becoming more complex and diverse, both with regard to their targeting techniques and their scope. Indeed, more targeted approaches that are now being used include (pro)actively involving and effectively co-opting the existing communities and organisations (NGOs) that late adopters may be associated with. It has also been recognised that such an approach is one of the key success factors. In this vein, there are a number of examples of late adopters being successfully reached and engaged by utilising relevant NGOs to this end (these are addressed later in the relevant thematic section).

It has been found that appropriate targeting makes a difference and this remains an issue to bear in mind even when an apparently homogenous group of late adopters is being targeted. An illustrative example is the **Frauen ans Netz ("Women to the Net")** initiative in Germany which has sought to achieve a more equal gender balance in the demographic composition of Internet users by arranging and providing introductory Internet courses for women. In the first phase, all women all over Germany, regardless of their age or confidence in using the internet were targeted, although two different types of Internet courses were offered – an introductory course for beginners and a 4-hour course for women who already had some experience in internet usage. After the first phase, it transpired that there was a further need to target specific sub-groups such as unemployed women, older women and women living in rural areas.

An even more critical issue under this theme is the need for some sort of demonstrated “follow-up”, for example, where online novices are motivated by introducing them to the benefits of going and, crucially, remaining online. This is more obvious in cases where awareness raising is an element of a more holistic initiative, and we are now witnessing an increasing number of these. Typically, such an initiative first addresses basic digital literacy and this may be accompanied by or followed up with demonstrations of purposeful use of the

ICTs for everyday life leisure and social activities and / or for some more tangible practical needs.

A good example would be the **Seniors TIC** project in the **Walloon region of Belgium**. This is a joint venture between the Walloon agency for telecommunication (AWT), the University of Third Age in Namur (UTAN) and other partners to develop awareness and training tools (CD-ROMs) for utilising ICTs for accessing relevant services online. These tools can be used by individuals themselves but there is also evidence of them being effectively utilised by the relevant NGOs (for older people) in their own activities, as a starting point and support for general ICT awareness. In addition to covering a series of uses of ICT and the Internet in everyday life (including digital photo, banking, shopping, using eGovernment, advice regarding online privacy, etc.) these CDs included offline entertainment applications that were likely to encourage interaction. For example, a game about proverbs, envisaged to be played together by grandparents and children, has the potential to encourage intergenerational interaction, which would in turn have a positive externality of reducing social isolation of older people.

In some initiatives the provision of basic digital literacy can be a first step towards more advanced and in some cases, formalised eSkilling (these initiatives will be discussed in more detail under the digital literacy sub-theme).

Finally, these initiatives can be important contexts for learning more about the needs of hard to engage groups, and the lessons learnt can be utilised for better structuring other types of initiative, as illustrated in the UK online initiative highlighted in the Vignette 1 below.

Vignette1: Awareness & motivation example – ' Get Started Campaign' , UK

Get Started Campaign (UK Online) - A six-week campaign offering free sessions to introduce members of the public to the internet at more than 6,000 UK Online centres and through a range of partner projects with industry and the voluntary sector. The campaign, at a cost of £1 million, aimed to invite people to experience the benefits of going online through free introductory internet sessions at UK Online centres, to highlight the benefits of using the internet and to break down the barriers that prevent people getting online. Nearly 37,000 people took up the offer of a free internet starter session in one of the venues countrywide (UK online centres, Learndirect and other partner IT centres). Additionally some 130,000 people responded to the campaign by requesting further information through the helpline, website and digital TV. In terms of target groups, nearly 40% of those who responded were over 65, over 16% had disabilities, 14% were unemployed and 20% were from ethnic minorities. With the help of Age Concern, the campaign helped introduce over 11,000 older people to the internet. The communications structure of the Get Started campaign offers a model for future work to engage those who remain disinterested in the internet. The UK Online Annual Report underlines the importance of working in partnership with the private and voluntary sectors that have resonance with particular offline groups. It notes that the 'hooks' that engage older people will not be the same as for those with disabilities or for those who are unemployed – a broad 'one size fits all' campaign, without a diversified targeted approach would be unlikely to yield the same results. The lessons learnt from the campaign are being fed into the work of departments who provide services for key offline groups. Relevant findings have also been passed on to Ufi and Resource, who collectively manage the UK online centre network so that their future marketing activity could build on the campaign's approach. In addition, the OeE was to embed an understanding of how to engage hard to-reach groups within the work of the eGovernment Delivery Programme (e-GDP). This was deemed important for services aimed at disproportionately offline groups – for example people with disabilities or the elderly. Finally, the Department for Education and Skills was to complete the development and national roll-out of an introductory offer to enable citizens to become autonomous users of the internet and progress to further learning.

Issues and impacts

Broadly targeted awareness raising measures are particularly relevant in the early phase of IS development in a country. In addition, and regardless of the level of the IS development, they are necessary for reaching various at risk groups.

It can also be observed how these initiatives have tended to evolve from mainly once-off events into either initiatives with some sort of a structured 'follow-up' or have become an integral part of more holistic initiatives, that incorporate awareness raising with other aims. Although a necessary step for utilisation of ICTs for promoting social inclusion, there is a danger that many who are marginalised are still unlikely to be reached, encouraged and facilitated to engage with ICTs. Therefore, incorporating these types of initiatives within more holistic approaches is a positive step. Awareness and motivation initiatives appear to be best conducted by co-opting the relevant associations of at risk groups and/ or associations (NGOs) that represent or work with these groups.

Relevant success factors

Targeted approach - reach and engagement (e.g. right 'hooks', also reliance on non-Internet channels); informality of the initiatives (e.g. in terms of access, conduct etc.); follow up – demonstration, introduction to practical aspects of ICTs usage, working with relevant NGOs.

Availability and affordability

These types of measures are mostly supply side in nature. Four main sub-types can be identified:

- financial / fiscal policy measures (for example, discounted prices for ICT equipment and access, direct subsidies, financial incentives to taxpayers, financial incentives to employers) for various groups, sometimes specifically targeted towards at-risk groups,
- Public Internet Access Points (PIAPS),
- developing and making available less expensive ICTS,
- targeted infrastructural initiatives such as those aiming to bring broadband connections to locations that are/might otherwise be left out if left to the free market alone, and in the absence of some form of public sector intervention).

In addition, measures involving multi-platform delivery (e.g. using cheaper and / or more widely available technologies such as SMS and digital TV) are also relevant and these are addressed later in the context of measures to ensure (continuing) access to services of public interest.

Financial measures

The most widespread types of initiatives under this sub-heading are being implemented through the workplace. An example is the **Personaldatorreformen (Personal computer subsidy**) in **Sweden**, a supply side tax relief to business when buying computers for the purpose of selling them, tax-free, to their employees. The scheme has been in operation since 1998, being initiated when the price of computers and associated peripherals was relatively high. The purpose was to promote low-income groups to acquire computers for their home by reducing the financial costs involved (the rationale being that they should benefit disproportionately more, although an obvious limitation existed in relation to reaching those not working). According to an evaluation carried out in 2002, a considerable number of households (about 800,000) had by then acquired computers with support from this subsidy,

indicating that the measure has been successful in increasing the general diffusion of ICTs in terms of the use of computers in households. However, the measure has also been criticised for excluding the unemployed 'by default' and, through this, effectively increasing the gap between low-income and high-income groups in relation to their ICT endowment. In fact, it is not known how many low -income people actually benefited.

The **LO-datorn** (LO-computer) initiative has sought to address the latter point. It was set up by LO, the **Swedish Trade Union Confederation** organising traditional blue collar workers and one of the largest unions in Sweden. The initiative aimed to address the low computer usage among its members, many of whom are on relatively low incomes. To do this, LO became an intermediary between the computer vendor and its members, extending also its financial support in this way. 57,000 households bought a computer via the LO, which, while a considerable number in itself, nevertheless was just a small part of the LO membership and, despite this measure, 35 per cent of members still do not have access to a computer in their home.

In the **UK**, the **HCI** (Home Computing Initiative) is another example of financial types of measure providing supports for the workforce through their employers. In a bid to achieve a wider diffusion of computers, the HCI allows an individual, through their employer, to have the use of a personal computer up to the value of £2500 per annum as a tax-free benefit, with the potential for substantial cost savings through income tax and National Insurance savings – indeed, cost savings of up to 60% compared to traditional channels can be made. Over 380 companies, employing more than 3.6 million employees had committed to implementing the HCI schemes by January 2005. Various lessons for improvement have been learned through experience of operating the scheme and some of these have been taken on board in the Governments proposals in the 2005 Digital Strategy to adjust the scheme. One aspect has been that the uptake has been so far disproportionately concentrated in large companies, while small companies have often found it 'too complex'. Another barrier to some companies – particularly SMEs - implementing the scheme is the requirement for the Office of Fair Trading to formally approve implementation of the HCI. At the same time, the HCI scheme suppliers exhibited preferences for dealing with larger organisations. There has been a response to this by launching a drive to encourage small and medium-sized firms into the project (both in terms of awareness campaign by the BBC, as well by trying to co-opt providers to specially target SMEs).

In practice, most HCI initiatives by employers involve salary sacrifice on the part of employees. The employee accepts a reduction in their gross annual salary in return for use of a loaned computer, which can later be bought at a reduced price, the rationale being that spreading payments over an extended period may be more attractive to employees. However, those on the minimum wage cannot enter such an arrangement, even if they wished, because their pay would drop below the National Minimum Wage. In addition, for an employee in the final years of employment, it may be unwise to reduce their gross pay if their pension plan is based on this.

Other workplace-oriented initiatives can be found in Denmark, Finland and the Netherlands.

Examples of more universal initiatives providing some level of financial support for ICT acquisition for home use can be found in **Austria**, **Hungary** and **Portugal**. In the **UK** there is financial support to parents towards the cost of purchasing laptops for their children's school-work. In addition, there are also some examples of small scale initiatives targeted specifically towards at-risk groups. In **Ireland**, free laptops are available for school children with dyslexia. In **Greece** there is an initiative targeted towards young farmers in rural areas..

In **Italy**, the **"Vai con Internet"** initiative is relatively large in scale, and aims to support the diffusion of computers and use of the Internet amongst Italian families on low incomes. It has been initiated by the Ministry for Innovation and Technology with a decree establishing that families having an income lower than 15,000 euro per year could have access to a

contribution of 200 euro towards the purchase of a computer. The contribution is allowed at the time of purchase , provided that the computer at least has a hard disk or is suitable for office or managing software or is preset for the Internet connection. A funding limitation of €30 million applied in 2004, allowing support for purchasing of 150,000 computers. A similar measure has been initiated for teachers and another one extending this offer to public sector employees.

It has been reported that bureaucratic difficulties have led to delays in the payment of the government contribution to traders and this may be a deterrent for the traders to accept and promote the initiative. Another issue is that the initiative presupposes a sufficient level of interest and digital literacy among the would-be beneficiaries.

In the **Netherlands,** the **PC Prive** initiative has provided free ICTs to poor households with children, targeting single-parent families and low-income households with school-age children. The rationale was that the precarious situation of the single parent or the poverty of the household should not reduce the educational opportunities of the children. In the event, there is some anecdotal evidence suggesting that the technology was used more for social/ entertainment purposes rather than educational purposes, although arguably this is still very relevant for skill development and (future) effective use.

In **Belgium** there is an allowance to help purchase ICTs and internet access for target groups in the NAPs (young people, single-parent families, people suffering extreme deprivation, registered job-seekers in vocational training, low income families with dependent children and older people). In the **Netherlands** there are heavily subsidised computers available to long-term unemployed, on successful completion of training. In **Hungary** and **Poland** there are financial supports towards the costs of ICTs for disabled people. In the **UK** there has been an initiative to make recycled computers available at a nominal price to low income families and there are initiatives to subsidise ICT equipment and internet connection / usage charges for late adopters in disadvantaged areas.

Issues and impacts

One issue concerning these measures and their role in relation to social inclusion is that approaches to boosting affordability of ICTs through workplace / via trade union membership almost inevitably exclude those who are unemployed or who are otherwise outside the workforce and are therefore often at high risk of social exclusion. A negative externality, therefore, might be to exacerbate both social exclusion and e-exclusion of the unemployed and others outside the workforce. Even within the workforce, appropriate targeting is an issue since those employed in more proactive companies are more likely to benefit, while tax based systems can favour those on higher incomes. In addition, access to these schemes is likely to be more limited, or even unavailable, for people in precarious employment. Also, there is evidence that the administrative burden that these initiatives may pose for employers can be a barrier to take-up by SMEs, whose employees are often less advantaged in terms of ICTs endowment and opportunities to acquire and utilise IT skills in the first place.

On the other hand, if these initiatives reach workers who would otherwise have little exposure to ICTs in their workplace then they may offer opportunities for increasing access to the benefits of the Information Society amongst the workforce even if not directly targeting those most at risk of social exclusion.

There are some examples of more targeted initiatives for at-risk groups, some operating at a national level and others being more local in their focus. However, there is not yet much information available on how well these are reaching at-risk groups and how effective they are in achieving the desired objectives. It seems though that the initiatives which seek to incorporate other inclusion oriented goals, such as enhancing access to / facilitating education and training are particularly worth pursuing.

Overall, as already noted in section 4.3, this is an area that warrants EU-level attention in terms of studies on the cost barriers for at-risk groups in the Member States and of the most effective mechanisms to address these barriers (e.g. through an appropriate mix of provisions under universal service, social welfare and more targeted provision of financial supports). The interactions with market regulations and market processes also need to be given consideration in such an exercise.

Key issues relevant for success of fiscal / financial initiatives

Appropriate targeting; efficient & effective administration of the initiatives; attention to relevant contextual factors (e.g. regulatory framework); appropriate stakeholders' role (employers, ICTs suppliers, trade unions); in-built additional motivation for acquiring access / equipment (e.g. training, further education, etc.).

Public Internet Access Points

Public Internet Access Points (PIAPs) are probably the most common type of initiative under this sub-heading to date. These have become quite widespread in all Member States, and have developed to also include some aspects of user support and promotion of digital literacy, even if often at a basic level.

Vignette 2: Digital Antwerp - Open access, ICT training center and cybercentre for the citizens of the city of Antwerp

The Digital Antwerp initiative stems from the Policy agreement 2001-2006 of the city of Antwerp, being initiated at the local level within the policy programme of the new mayor of the city of Antwerp (the biggest Flemish city in Belgium).

The initiative has been delivered by a partnership of local government agencies and municipalities - the City hosts, organises and finances the centre "antwerpen.be" (digital Antwerp), while the Digipolis, which is a joint venture of the inter-municipality ICT service providers of the cities of Antwerp and Gent (the two biggest cities in Flanders) is responsible for infrastructure, networks, software, support, training delivery and training of trainers. The centre "antwerpen.be" is a new building, with 100 computers distributed in 2 cybercafés, 5 training rooms and an auditorium. Activities include: open access to internet (with help if required); training courses for citizens; demonstrations of internet applications and on-line services; exhibitions (technology, digital media & arts, etc.). Besides the centre "antwerp.be", located in its popular suburb, the city of Antwerp also gives a free email address and web space to all citizens, has a series of internet terminals in all public offices and gives subventions to cybercafés. It is considered that the City of Antwerp's long experience of providing relevant ICTs for citizens (it has already been involved in projects of "telematics for citizens" in the '80s, being involved in "telecities" networks) has been effectivley leveraged for this initiative.

The main objective is to give all citizens equal opportunities of access to internet and to online municipal services. While in principle access is open to all citizens, particularly targeted are those who have no internet access at home and there is considerable evidence that this group is being reached (72% of users in 2003 had no interent connection at home). Best efforts are being made to reach at risk groups and prevent exclusion arising out of their inability to access internet based services pertinent ot the locality, which are increasingly migrating to the net . Also, special provisions are made for people with disabilities, such as ensuring physical accessibility of the centre. In addition, the initiative has recently made a point of trying to reach the city's ethinc minorities. Indeed, it has become an important aspect of a wider socal inclusion drive that seeks to promote social interaction with the City's ethnic minorities, and by promoting diversity, reduce the influence of the extreme right (the racist party Vlaams Belang), which has been gaining ground at the local level. Finally the Centre has provided an opportunity to acquire basic IT skill training to 55,200 people.

Their effectiveness in relation to social inclusion has been enhanced by targeting particular groups at risk. For example, the PIAPs initiative in the **Walloon municipalities** in **Belgium** has sought to target those who have no access to computers or internet at home or at work, and who are likely to require basic IT training, by giving priority to municipal projects fostering access for older people, low-skilled, people on low income and those more likely to experience poor living conditions.

Locating PIAPS in places where those at risk of social exclusion are likely to gather, either to access the services that are relevant for them and / or to engage in community and social activities is increasingly used for better targeting. One interesting approach comes from **Antwerp**, in Belgium (see Vignette 2 above). Another example of this comes from **Scotland**, with a focus on venues frequented by groups such as lone parents, ethnic minorities and New Deal Clients (see Vignette 3 below).

The merits of this approach have been recognised in **Italy** also, where PIAPs are increasingly being implemented with active co-opting of non profit associations and organisations (NGOs), which are best placed to provide assisted access points for disadvantaged people (e.g. **Internet Social Point ISP in Basilicata Region, Italy**).

In **German**y, the **Digital Opportunities Foundation ("Stiftung Digitale Chancen"**) network aims to support late adopters in their first digital steps, primarily by directing them to non-commercial PIAPs. The initiative also supports the providers of PIAPs. The foundation has a web site that supports a comprehensive database of PIAPs in Germany and this online resource is reportedly used heavily.

The PIAP related initiatives are especially relevant in those countries where ICT diffusion is relatively lower. Thus in **Estonia** there are more then 500 PIAPs already and the network of PIAPs in being developed further with support from the Open Estonia Foundation and the Look@World Foundation as well as the State through the Ministry of Culture.

In **Slovenia** (and a similar approach has been adopted in Ireland and some other countries), PIAPs are located in a wide range of public open access places, such as public libraries, various infoterminals, cybercafes, schools and, of late, wireless local-area networks, multimedia centres and other e-points. This seems to be a good strategy to widen the supply and reach - the number of PIAPs in Slovenia grew from around 40 in 2001 to over 335 in the middle of 2004[23]. The number of visitors is steadily increasing and PIAPs are increasingly becoming well-known. However, it seems that this development was not entirely welcomed by all relevant parties with some tensions emerging in relation to commercial providers of Internet Access Points in Slovenia, who are worried about losing their market share.

Issues and impacts

In relation to PIAP-type initiatives, the issue of adequate targeting of relevant at-risk groups is important in the social inclusion context. The use of venues already frequented by the targeted groups has proved to be an effective strategy in this regard. Implementation strategies without focused targeting, utilising widest possible venues, may not be likely to attract new users, especially if rates of internet diffusion stabilise. On the other hand, there can be some trade-off between utilising informal venues for reaching the desired target group and the quality of access provided in these settings, mainly in terms of connection speeds (absence of broadband) and inadequate staffing and skills required for user support. More generally, there is a need for ongoing EU-wide monitoring of who is being reached by PIAPs and what are the benefits as well as possible disadvantages (e.g. lack of privacy for conducting personal matters online).

[23] (http://e-tocke.gov.si).

Vignette 3: Public Internet Access Points, Scotland

The main intention was to bring computers into places where those not currently using them are likely to be. Venues were chosen with specific excluded groups such as lone parents, ethnic minorities or New Deal clients in mind. An estimated 170-250,000 people had used the PIAPs between Autumn 2002 and Autumn 2003.

The PIAP initiative has been subject to an evaluation. Overall, it had provided access to around 100,000 users who lack home access, and around 40,000 users who have no other public access. They have been particularly effective in attracting unemployed users and have had a greater impact on disadvantaged areas. The evaluation estimated that each £1000 of public money spent on the initiative has given 24 people access in socially disadvantaged areas. The PIAPs gave theoretical access to 4.8 million (94.6% of the population). Of those still without access, three quarters were in urban areas. Half of those using the PIAPs did not have home Internet access. This is higher for users in socially excluded areas (59%) which suggests some success in targeting disadvantaged groups in these areas and, indeed, one-third of PIAPs are in areas categorised by the Executive as socially disadvantaged. The evaluator's user survey identified a number of areas where PIAPs appeared to be successfully targeting more disadvantaged people e.g. users in these areas were more than twice as likely to be using the Internet to look for jobs (36% compared to 16% elsewhere). A higher proportion of users in disadvantaged areas stated that their ICT skills had improved since using the PIAP (85%).

The proportion of users aged 65 and over was much lower than in the wider population as a whole, representing only 5% of 16+ users. This suggests that PIAPs are not an effective way of targeting this group. In general, the initiative seems to be better at targeting existing clients within the host venues than bringing in the wider public - eight out of ten users had visited the venue before the PIAP was opened. This is a positive feature and one of its stated objectives. It is also an approach that is widely advocated in the digital inclusion sphere. More generally, the evaluation suggested that PIAPS 'are not a particularly effective way of getting new people to use the internet'.

The key strengths of the programme were said to be its focus on remote rural areas where there was no existing public access and on disadvantaged areas where home internet access rates are low. The most effective way of targeting disadvantaged groups was through agencies and / or projects which currently work with them.

Four-fifths of hosts were positive about the future of their PIAP service, though only 36% said they would definitely continue to host the service when their free internet access contract runs out.

Some important practical lessons have been learnt. Problems with equipment and internet connection were 'fairly common'. The evaluation identified a need for staff training and a minimum requirement for some basic support for users - around half of users needed some help in using the internet at PIAPs but staff were often not available or able to help, implying a strong need for adequate support structures. The advantages of informality were offset to some extent by variability in terms of the service provided. It also suggested that any future programme should set out minimum requirements for the location and general environment of the access point including issues of space, visibility and accessibility as not all of the PIAP venues were ideally visible and accessible to serve as effective public internet access.

Key issues relevant for success

Accessibility in a wide sense; informality, but at the same time quality of access; basic user support; relevant venue targeting; working with NGOs; integration of basic skill training.

Developing and making available less expensive ICTs

Under this sub-theme it is worthwhile highlighting **The One Laptop per Child (OLPC**) initiative (http://laptop.media.mit.edu/faq.html) which originated as an altruistic scheme to provide a personal laptop computer to school children in the poorest parts of the world. This

could also have a role to play in addressing aspects of the digital divide in Europe. The initiative was first unveiled at the World Forum in January 2005 and at first seemed as if it might be overly ambitious. However, by combining and utilising existing technologies (the laptop will have basic processor, flash memory instead of a hard disk, will be powered by batteries or a hand-crank, will run Linux open source software, and will be conducive to peer-to-peer communication) the OLPC consortium has apparently managed to push the price of producing the unit down to $130. This makes a computer almost as affordable as text-books used in mainstream education. The production is scheduled to start by the end of next year and there are already some indications that the new machine might find its way into state schools in the US sooner rather than later – the Governor of Massachusetts has given consideration to instructing all secondary schools to purchase one for each student, as soon as these become available.

Targeted infrastructural roll-out

The most important aspect of infrastructural roll-out at present concerns the availability of broadband to the home and, when it is available, the cost of connection and usage. The arrival of broadband has heralded what amounts to a paradigm shift in Internet usage, with the possibility to instantly download very large files, view videos and listen to quality music online, have an always on connection and avail of often attractive tariff packages. From the point-of-view of social inclusion, equal access to broadband is becoming an increasingly important requirement if the benefits of the Internet and its full capabilities are to be realised.

Most initiatives in Europe have focused on encouraging the roll-out to rural and other low demand areas where commercial forces alone are unlikely to result in the availability of broadband for the foreseeable future. In addition, in **Sweden** and **Austria**, **tax relief** is available for the cost of broadband connection.

It is informative to look outside Europe as well in this regard. Thus in the **U.S.** there has been considerable activity focusing on providing broadband connections to low income housing units. A coalition of technology companies and non-profit groups has launched a national effort to encourage builders of low-income housing to include broadband Internet connections in new building projects. The coalition, led by non-profit technology group One Economy, encourages broadband access through the incorporation of incentives into the national Low-Income Housing Tax Credit (LIHTC) program, which helps fund $6 billion worth of low-income housing each year. The LIHTC program, funded by the federal government and administered by states, provides tax credits to encourage private investment in low-income housing projects. The **Bring IT Home** initiative is encouraging individual states to require high-speed Internet connections in LIHTC housing, and to include the cost of broadband in the subsidised-housing operating budgets. As they put it "It takes a long time to be poor…. We often ask the poor to stand in line, when they could be online." So far, 12 states have changed LIHTC rules to encourage broadband connections. Also in the U.S., New York City Council has a scheme whereby low income housing units get free or subsidised broadband.

A prominent example of European initiatives to encourage the roll-out of broadband comes from **Austria** through a programme to increase the availability of broadband connections in rural regions with the support of infrastructure investments. The objective is a "full coverage" of the Province of Upper Austria with broadband networks. The target groups are persons and companies in rural municipalities not yet supplied with broadband access, and therefore at risk from a ‘second order’ digital divide due to the mixture of geographical and economic reasons. The measure comprises three levels of activity: provision of broadband access for citizens and companies, construction of an optical fibre backbone network covering Upper Austria, and the support for different projects to enrich the infrastructure with services and contents. The expected result is "full coverage" with broadband access by the end of 2006 (the measure has been emulated in other regions in Austria).

An even more elaborate broadband roll-out scheme can be found in the **UK**, where a host of partnerships have been set up to introduce broadband to rural areas. In England, the East of England Development Agency (EEDA) has initiated its Connecting Communities Competition, as a part of its successful overall Demand Broadband campaign designed to speed up broadband access, particularly to more rural areas. The main aim was to address the market failure in this regard since originally, due to its scattered population, and few large urban centres, the East of England had many communities that broadband suppliers considered as not commercially viable to connect. The funds were made available through the competition to put in broadband infrastructure, with awards to those areas that could demonstrate sufficient supply.

In addition, the **Community Broadband** concept has been set up by BT to test delivery of ADSL to low demand areas. BT relied on local campaigners across the UK who have done much to raise awareness of the benefits of broadband in their communities. Also of interest are the **Community Network Projects**, the most notable examples of which are Arwain project and Kingsbridge Link. The former used WI-Fi technology to provide free broadband access to the residents in the Cardiff area (with no public funding), and there is a drive to diffuse interconnectivity and use broadband for community purposes. The latter is a smaller scale project in the community of Kingsbridge using the same technology. There are some concerns that community networks of this type are an interim solution - DIY for local communities - which while commendable might be used to justify the lack of strategic planning and investment.

In the **Netherlands**, **'Fibre fever'** is a well established initiative with both central government and about ten local authorities launching several fibre-to-the-home projects. The most well-known project is **Kenniswijk** in **Eindhoven**, where around 10.000 households got an option of bundling together the high speed Internet, telephone and television.

Issues and impacts

Outside Europe, there are interesting initiatives in the U.S. focusing on bringing broadband to low income households and these merit a study to see if there are transferable elements relevant for the European situation. In a few countries there are tax incentives for household uptake. These can make the costs more affordable but run the same risks as the other tax-based supports mentioned earlier in the sense that the most disadvantaged may be least likely to benefit.

Most broadband-related initiatives in Europe focus on bringing broadband to areas where the level of apparent demand is unlikely to attract commercial offers, especially being relevant for many rural areas. There are interesting examples of innovative provision of free broadband to entire communities (using WiFI, for example). Although such community-wide initiatives in principle offer access to everyone, in practice, those who are disadvantaged are less likely to be in a position to avail of the opportunities. Targeted supports will therefore still be required.

Key issues relevant for success

Demand stimulation; demonstrating the case for the commercial provision, tackling the lack of awareness of the benefits of broadband aggregation; compliance with the relevant competition rules; targeted supports for the most disadvantaged [areas / communities].

Digital literacy & skills

ICT literacy is fast becoming a basic skill and pre-requisite for many things in the Information Society, including access to good quality employment and to many services. Such skill requirements are not static and there is a requirement for continual updating to cater for new applications, products and services. Also relevant in the context of mobility of EU citizens is

the portability and recognition of digital skill qualifications. The European Computer Driving Licence (ECDL) is an important development in this regard.

As regards measures in this field, a distinction could be made between basic digital literacy training and training in more advanced, higher-order IT skills. Basic digital literacy programmes are often incorporated within the "Awareness & Motivation" type of initiatives discussed earlier, where some basic introduction to computers and Internet, often in the form of live demonstrations is incorporated, as well as within some "Availability & Affordability" types, where some basic e-skills are often imparted in more user oriented PIAPs. There are also examples of teaching digital skills for specific purposes, such as enabling members of particular at risk group to address issues of particular relevance or concern for them, utilising ICTs. More advanced eSkills programmes are more likely to be part of up-skilling for purposes of gaining employment, although there are some examples of training in higher order skills for purposes other than employment, being utilised primarily for social purposes such as networking and community-related content creation.

In practice there is often no such clear dichotomy in this area, with initiatives often having an intended progression path from acquiring basic digital skills to mastering more advanced, higher order ones. An example is the **Equal Skills** Initiative from **Ireland**, which has been designed as a flexible, informal, learning programme suitable for absolute beginners. Due regard has been given to important pedagogical issues, such as studying at own pace, learner support , including the possibility to get one-to-one teaching and demonstration and the possibility to check own progress. In addition the learners' feedback has been taken into account in deciding how best to conduct their assessment. There is also a progression option in that the course is 'set to open the door for students to do any other course of their choice'. More practically, perhaps, it is possible to continue up-skilling using the services of the same main provider (ECDL provider in Ireland) and this modularization approach is a useful one.

The approach has proved a good way to acquire basic digital skills and most participants have progressed to basic utilisation of the technology and towards availing of some online applications. Although set up as an informal course, those who complete it are awarded a certificate which, apart from having an intrinsic value, can be utilised for further progression. Finally the pilot project did attempt to target people at risk of exclusion such as women outside the workforce (in home duties) and people belonging to the farming community.

One challenge to the promotion of digital literacy amongst those at risk of e-exclusion is posed by the fact that the benefits of acquiring IT skills are frequently not tangible enough for, or appreciated enough by the intended target groups. Awareness-related activities are thus a natural point for diffusing the message regarding the opportunity to learn ICT skills. For example, in **Estonia** the elementary IT training organised by the **Look@World Foundation** was targeted at adults who had not seen an apparent need, or had not had the opportunity or confidence to use computers and the Internet. This was an extensive initiative, reaching 100,000, with the majority of those who have attended going on to become internet users. Thus the interconnection between the digital literacy training and motivation to use the technology is not just unidirectional.

This is also evident from the example from **Finland**, where many elderly people who were taught the use of PCs, Internet and mobile phones have even bought their own devices after finishing courses and started to use PCs and Internet.

Vignette 4: Promoting digital literacy amongst the disadvantaged youth in Germany

The Media competencies for Young People [Jugendmedienkompetenz - JUMEK) project was launched by the Office for Children, Youth and Family of the city of Cologne, together with the University of Applied Sciences in Cologne [Institut für Medienforschung und Medienpädagogik], and was financially supported by the local community association GEW Cologne AG. The main aim was to promote digital literacy amongst young disadvantaged people and, through this, to enhance their social competencies in the long run. The intention was to familiarise young people with new ICTs and help them to integrate these into their daily life. It was also envisaged that the encouragement of competencies in using new media should improve job perspectives and increase employability of the participants.

The rationale for the JUMEK project has been the perceived lack of adequate mainstream support measures for increasing media competencies of disadvantaged young people, as well as their position of disadvantage regarding wide-ranging social competencies. Furthermore, it has been recognised that computer courses in schools are often strongly directed towards knowledge transfer, with creativity in using new technologies often missing.

Young people stemming from disadvantaged backgrounds (e.g. from low-income families, ethnic minorities & foreign born, low education achievement, and with disabilities) were reached via welfare and children's organisations. Weekly training courses were undertaken in children's and youth welfare institutions, delivered by staff members of these institutions. Learning took place in small groups and the tutors were adequately trained for the purpose. Software programmes utilised are required to be simple to use and cost-efficient e.g. MS word or image-editing programmes were most widely used. In addition to weekly meetings, there are special seminars focusing on different issues in the field of new media.

Within the framework of the project, 17 youth centers in Cologne were integrated in arranging weekly meetings and training of tutors. The project has been very successful in achieving its intended aims, according to the comprehensive evaluation that has been undertaken. For example, none of the young participants left the project before its intended end. Using the relevant youth welfare institutions was proven to be a very successful strategy for reaching young people at risk from exclusion. Evaluation results reveal increased self-confidence, increased critical faculties and increased willingness to accept an obligation. With regard to media competencies, the participants adequately learned how to use a computer, the Internet and various software programmes.

In the first phase of the project there were some problems in acquiring adequate tutors and in promoting the project in an effective manner. It transpired that there was a need for tutors to be trained in both media and pedagogic competencies. The evaluation of the pilot phase revealed that there had to be more emphasis on media competencies of the tutors than assumed before. In addition, apart from the content delivery, there was a need for a better handling of issues such as relating to and dealing with particular problems of young participants. In this regard, the possibility to get support from external pedagogues has proved valuable.

It was found that creative and playful usage of new ICTs seems to be very effective and raises motivation to learn (this was very importnt since the educational background of participants was rather low) and to use ICTs for other purposes as well. The willingness to learn how to use a computer has been the main incentive to take part in the project (in turn suggesting that incorporating ICTs into 'mainstream' up-skilling initiatives would have a positive impact on participants' motivation). Worth mentioning also is that participating young people had an influence on the contents of training courses and were therefore highly motivated to actively and regularly participate in weekly meetings.

Another example where awareness and motivation are intertwined with the promotion of digital skills comes from **Italy** where the **"It's never too late initiative"** has utilised a non-Internet medium, a national television programme, for the diffusion of IT literacy skills. The main goal of this initiative was to give very basic e-skills to people that are not involved in the labour market (elderly and homemakers). The initiative has leveraged the existing

experience of the national TV network in creating and distributing educational programmes. The programmes can be seen on the national TV, on the satellite TV Rai Educational and on the Internet website and reached 250,000 people, a relatively high number for an educational TV programme.

An example of informal, but yet purposeful digital up-skilling from the **Netherlands** focuses on promoting digital skills amongst disadvantaged young people. Several local initiatives established children's news agencies in primary schools, most often in schools with a high percentage of at-risk children (e.g. from households characterised by poor education background of parents). In small groups, these children learn how to use computers and associated technology to produce news. This involves going beyond basic computer skills, including website building, operating a digital camera, and similar. It also involves acquiring more general skills, such as communication skills, information management skills, how to turn a complex story into headlines, and so on.

In the **UK**, online centres were established by the Department for Education and Skills (DfES) to address the 'digital divide' and help people to learn new skills in the community, with an emphasis on exploring the opportunities information technology can offer. This involved helping people to use the Internet for their daily life activities , for example to find out about local events of relevance to them, family history, travel and health; how to send e-mails and use other ICT applications such as games, mobile phones and digital television. The initiative linked with the boosting availability of access places, with access centres being located in libraries, community centres, schools (27% of UK online centres are located within voluntary-sector organisations). Progression to acquiring higher order skills is also a relevant issue and there was a positive association between attending the centres and progression towards some formalised upskilling. Thus about half of all users who stayed at centres for six months or more went on to do learning that earned them a certificate (whether externally verified or not), and many progressed to college or Learndirect courses.

Initiatives under this theme can benefit from already structured and standardised learning material, such as ECDL (European Computer Driving Licence). This material can be adapted to suit various target groups and it has already been demonstrated that it is possible to adapt it in ways to facilitate skill acquisition for some specific at risk groups.

A good example of this comes from **Austria**, namely the **ECDL barrierefrei** initiative, which has redesigned ECDL study materials for persons with disabilities, and will provide course materials as well as training for trainers to allow disabled persons to acquire an ECDL (the outcome will be training materials which can be adjusted to the specific needs of the persons with disabilities). The main objective is to offer better access to education to persons with disabilities and in this way to assist in their integration into education, labour market and social life.

Some initiatives have focused on the workplace as an environment to increase digital literacy levels amongst those in jobs that would not typically involve working with ICTs. For example, **Volkswagen** in **Germany** has developed an extensive programme in this regard for its workforce. The initiative (called "Level 5 Internet Initiative") uses the company's existing training structures provided by Volkswagen Coaching GmbH, a subsidiary company, responsible for vocational training at Volkswagen GmbH. The initiative was launched in 2000 aiming to provide all employees with basic internet skills within 2 years. After having successfully passed the Level 5 test employees receive a certificate and are allowed to use the internet up to 10 hours per month for free (via the Volkswagen portal). In terms of content and level of digital skills being taught, the initiative included basic principles of the Internet, surfing the Internet, systematic searching, downloading and email programmes.

The programme uses blended-learning, combining computer-based training, online learning, learning in groups, presence seminars etc.. The availability of face-to-face personal support proved very important during online learning processes, especially for untrained users. A CD

learning programme and a learning tutorial were distributed to all employees offering the opportunity to learn at Level 5 Internet Stations which have been established in each Volkswagen factories. In addition, employees could learn online at computer workplaces and at home.

Apart from the Internet stations in each factory there are working rooms in the production halls of Volkswagen where employees can prepare themselves for the Level 5 test. In addition, learners were given support through so-called "Level 5"-Scouts in attendance at each station, who were responsible for giving advice, trouble shooting etc. (employees could book a personal scout for training lessons at the workplace). Mobile Level 5 Internet Stations were also established in cafeterias and lunchrooms.

The initiative has further developed to include three subprojects: a) "Level 5 plus", b) "Level 5 Ambassadors" and 3) Integration of the ECDL in the vocational training process at Volkswagen. For "Level 5 plus", Internet trainers offer courses designed for employees in the production halls, including night workers. "Level 5 Ambassadors" are trainees who act as ambassadors or multipliers. Other aspects of the initiative include a Volkswagen online portal for employees has been established, specially designed CD learning programmes for Italian employees and usage of sign language for deaf employees.

By 2002, 70 000 employees had successfully passed the Level 5 test, and according to most recent figures, 90 000 employees have successfully passed the Level 5 test thus far. The initiative was recognised at the national level and was the winner of the IT Training Award 2001. Its infrastructures are proving useful for various purposes.[24]

Issues and impacts

Most Member States are addressing digital literacy in various ways although there is a lot of variation in terms of the scale of activity (universal, nation-wide approaches versus more limited, ad-hoc approaches). Targeted initiatives focusing on at-risk groups can be found in a number of countries. ECDL-based approaches are prominent in some but not all Member States. In addition, as discussed earlier, there is an important overarching dimension to this theme, particularly in relation to access to ICTs in schools.

Apart from the considerable variability across the Member States in this area, there is not much data on who is being reached (e.g. the proportions of at-risk groups) and of outcomes (e.g. certification at particular levels). This is an area that would benefit from an EU-driven initiative that would seek to encourage EU-wide activities on an appropriate scale and targeted towards at-risk groups in particular. Such an initiative could also encourage a harmonisation of approaches (e.g. usage of ECDL) and an OMC setting of common targets and benchmarking of results across the Member States. Follow-up of graduates over time would also be useful to see what types of enduring effects can be detected.

Relevant success factors

Peer teaching and its effective use (e.g. instructors are mainly also elderly themselves in the case of initiatives targeting the elderly, while novice users can become 'local champions' and effective instructors); offering a certification/ and/ or progression option – "modularization" approach; awareness of / addressing the higher threshold to start learning IT skills for some groups; learning content appropriateness and flexibility (e.g. facilitating learners' input &

[24] Sources: Berliner Gespräche zur Digitalen Integration-18. November 2003 "Zukunftschancen-Medienkompetenz für sozial- und bildungsbenachteiligte Jugendliche" http://www.digitale-chancen.de/transfer/berlinerg/25.pdf and http://www.vw-coaching.de/index.php?id=1359. Final report of the Level 5 Internet Offensive, http://www.vw-coaching.de/fileadmin/user_upload/pdf-Dokumente/LEVEL5_ABSCHLUSSBERICHT_72D.pdf

feedback); reliance on Community and Voluntary sector for attracting higher proportions of socially excluded and digitally excluded – e.g. co-opting of NGOs for attracting and engaging at risk groups.

eAccessibility

eAccessibility concerns the design of ICT products and services in ways that ensure that they are usable by people with disabilities or others with functional restrictions, such as older people. As well as the design if mainstream products and services to be accessible, eAccessibility can also be supported by assistive technologies that can be connected to or used with mainstream devices to make them accessible.

As indicated earlier in section 4.3, overarching measures provide the primary level of action in relation to the achievement of universal eAccessibility to meet the needs of people with disabilities. These include EU level Directives, establishment of targets within OMC mechanisms, standards and so on. eAccessibility of mainstream products and services is now being addressed in these contexts but focused attention on ensuring consistent access to and quality of assistive technology services has not yet been given sufficient attention. At national level, overarching measures are also of central importance, including strong transposition of EU Directives and comprehensive attention to eAccessibility in other national level laws, regulations and guidelines. Also important is the extension of the concept of eAccessibility in the context of the broader Design for All (DfA) approach. The **Finnish** efforts in this area provide a good example in this regard, and are outlined in some detail in Vignette 5.

Apart from these more top-down approaches, there is also considerable scope for more local and sectoral measures in this field, for example, lobbying and awareness-raising of employers and providers of online services.

An example addressing interpretation for people who are deaf comes from **Germany,** with an **integrated Call-Centre** [“Neue Dienste-Telefonservice für Gehörlose, Schwerhörige und Ertaubte"], running via the Internet, serving the needs of people with hearing difficulties. The service allows deaf people to communicate with relevant third parties - enterprises, public institutions, physicians etc. The initiative seeks to address the issue of unidirectional information flow, which often ensues for many people with hearing disabilities even if they are using assistive technology devices (sometimes also arising due to the lack of compatible bespoke devices on the side of institutions). The service combines written communication via email or an especially developed internet chat-room with a "normal" telephone chat. Effectively, the service is an intermediary - a specially trained call centre agent receives written requests from deaf people and refers these request to the designated institution or organisation or physician; subsequently, the response obtained on their behalf is translated into written language and returned to the deaf person. The communication is working as a kind of real-time chat. A positive externality is the fact that the call centre also offers access to employment to people with disabilities, since they have proved to possess relevant skills for effective communication in this way. The potential for growth into a nation-wide service centre has already been demonstrated in the Netherlands and Sweden.

Vignette 5: *Design for all in Finland*

The Finnish Design for All (DfA) Network is part of the European Design for All eAccessibility Network EDeAN. It currently involves 32 member organisations - research institutions, universities and user organisations, with cross-disciplinary expertise on Design for All. Member organisations represent DfA expertise in product, communication, space, new media and strategic design; in architecture; in information technologies, assistive, wellness and building technologies; in usability and smart product studies; sociology, gerontology and gerontechnology; and education, including special education.

The objective of the Finnish DfA Network is to support the development of the information society, according to objectives defined at European and at national level. A key objective is development of an Information Society for All, to equally serve all citizens. Another relevant context for the Finnish Design for All Network is sustainability, that is to support economically, ecologically and especially socially sustainable development.

The primary objective of the DfA network is to transfer DfA related knowledge to both the public and private sectors. The initiative was originally channelled through the eEurope 2002 action line with the support of DG INFSO Unit eInclusion and the eAccessibility expert group (top down) but the local, national level initiative in Finland actively involved the input of organisations that were to become the original members of the Finnish Design for All Network (bottom-up, involving all relevant organisations involved with people with disabilities).

Among its objective, the aim to disseminate Design for All information to both the public and private sectors and to support the implementation of Design for All approach is particularly noted. The Finnish DfA Network is after its establishment in 2002 now recognised as a Finnish DfA expert body. A demand for the DfA service has been created. The Network has four joint projects ongoing, initiated during 2003. All projects have been initiated following priorities defined by the Finnish DfA Network, and they are in accordance with the objectives defined by EDeAN and the eEurope 2002 action programme. On average, each project has a timeline of 3 years. Projects are: 1. University for All (including Polytechnics), 2. Design for All Education in Finnish Universities and Polytechnics, 3. Cities and Municipalities for All, 4. Web Accessibility. The focus of the projects is now on its way to shift from practical implementation of DfA to developing DfA strategies. Design for All workshops are also organised for other target groups in both public and private sector.

Accessibility related initiatives seem to be well established in **Finland**, with some examples of intermediary services supporting people with disabilities to avail of online offerings. Thus the Web site on speech impairments and plain language seeks to provide information, and to enable information exchange between people with speech impairments and those relying on the use of plain language. The site features voice support or text only format, while the symbol pages contain short sentences and plenty of images and signs to support communication and understanding. In addition, the site also includes the links to relevant sites of other organisations (Source: http://papunet.net/info_enganti.php. date: 29.06.05).

Another example from Finland (VETURI Networking interpretation services) deals with the supply side aspects of support for municipalities in meeting their obligation to provide and develop interpreter services (as stipulated in the Services and Assistance for the Disabled Act, where people with severely impaired hearing or speech have a right to receive interpreter services of at least 120 hours and with deaf and blindness at least 240 hours in a year). The support for municipalities will also be extended through an action plan for barrier free communication aiming to ensure the provision of e-interpretation and e-consultation using multimedia.

Another dimension to this theme concerns access to ICT-related assistive technologies. There is evidence of considerable fragmentation in this area across Europe. An example of an initiative to address this comes from **Austria** where the focus is on facilitating exchange of

information among suppliers of **assistive technologies** and services for persons with disabilities and concerned persons themselves. The focus is on themes of relevance for people with disabilities such as access to education, access to employment and so on, with a particular theme given special attention each year. The measure comprises provision of comprehensive information on the chosen topic both for interested persons and for institutions, which is often a catalyst for further discussions and networking between the suppliers of technologies for disabled persons (within the industry itself) as well as between the industry and people with disabilities and their organisations.

Another initiative from Austria deals with supporting research & development, consultation & training and renting & selling of electronic communication systems, individually adapted input devices for the computer, alternative input devices, mouse-simulating devices, special software programs and environment control systems. This initiative seeks to bring together educational, psychological, social and integrative knowledge of members of social welfare organisations on the one side, and the technical, electronic and programming know-how of researchers and developers on the other. This was achieved through the **LifeTool** programme, of ARC Seibersdorf Research GmbH. LifeTool is operating consultation centres in Vienna, Klagenfurt and Novi Sad as well as the Linz headquarters. It has developed a number of special software programs (Archimedes, CatchMe, Kon-Zen, Pablo) as well as the awarded IntegraMouse, a computer mouse controlled solely with the mouth.

Issues and impacts

eAccessibility of online services for people with disabilities is not a very visible element of eInclusion measures in the Member States (in the sense that it is identified as an eInclusion measure, per se), being only included as such in a minority of countries. In fact, there is a lot more activity (e.g. addressing accessibility in public web sites) underway at present (see, for example, the results of the eInclusion@EU project), although with a lot of variation across countries.

There is an important overarching dimension to this theme. This is an area where regulatory mechanisms at EU and Member State levels have a key role to play. Detailed analyses of the regulatory space has been prepared in the context of the eInclusion@EU project, as well as in various documents of the Commission. One of the key requirements is for strong implementation of the relevant EU Directives and Council Decisions at Member State levels (accessible public web sites, eAccessibility in public procurement, Universal Service Directive, Copyright Directive, Employment Equality Directive, etc.). This would also benefit from guidance from the Commission on what could / should be included in the national transpositions to make them “strong” and effective in this field.

Relevant success factors

Use of the current legislation and regulatory framework; incorporation of eAccessibility into the Design for All concept.

General user orientation and usability of eServices

With regard to online services, whether they are public or commercial, apart from barriers posed by their inaccessibility forpeople with disabilities, there can also be barriers posed by lack of usability and absence of wider attention to user needs. Such barriers can affect the population in general but can also be especially pertinent for particular groups. For example, older people can experience certain cognitive changes that need to be taken into consideration in the design of online services, ethnic and linguistic minorities need services in languages that they can use, people with low levels of literacy need online service in plain language, and so on.

As in the case of eAccessibility, this theme needs attention both through overarching measures and through more local or sectoral initiatives. For example, usability, user orientation and catering for diversity need to be included within OMC activities focusing on eGovernment and on access to services of public interest.

As regards national or local measures, there is a considerable amount of activity of relevance already (e.g. as compiled within the eUSER project) but a lot of this tends not to be picked up or referenced within the eInclusion context. For example, in the UK a specific diversity management function has been defined in the development and implementation of online services by some local authorities.

A specific example of activity in this field is the **Swedish Social Insurance Administration's** web page [**Försäkringskassan**] which offers information in all the major EU languages and all the major immigrant languages to ensure that all are aware of their rights and entitlements for social insurance benefits. The information is also available in "easy Swedish" for persons with reading and understanding difficulties and in sign language for people with hearing difficulties.

These initiatives are often being mainstreamed now, by incorporating relevant issues within general eGovernment initiatives. A relevant example in this regard is the **National Citizens' Portal,** which was set up in **Italy** as a key tool for the implementation of eGovernment. The portal provides a one-stop-shop that enables quick and easy access to online Public Administration services and information from a wide range of websites and portals and providing users with a large amount of information and knowledge as well as a range of on-line services. It has been explicitly recognised that the digitalisation of public administration may be an additional reason for exclusion for specific categories of citizens. The relevant features of the portal are user friendly language and useful communication tools and these have proved to be effective in helping all the citizens to use online and off-line public administration services (by providing relevant advice, guidelines, etc.). The approach has become quite comprehensive and is relevant for almost all categories of citizens. All relevant life events are covered and all the online/off line services that are available and provided by the government are presented. The efforts to organise government content in a user-friendly way are also particularly noted in **Denmark, Ireland, UK**, and this practice is now being mirrored / taken up in other EU countries.

Issues and impacts

This is a theme that is receiving increased attention across Europe although the extent to which the needs of those most at-risk are being catered for seems to vary widely. Important elements include multilinguality, plain language and wider usability. A mix of overarching European-wide and more local measures are needed in this area.

Relevant success factors

Recognition of diverse user needs; structuring the online content with attention to user / potential user context; bilingual content, use of plain, jargon free language; usability - structuring the online services / websites in a way that users can navigate through with a relative ease; utilisation of best practice in this regard – e.g. life events approach to eGovernment services to make content more real and less abstract, while at the same time ensuring that all relevant issues are effectively covered; co-operation with the relevant players in the field – e.g. Design for All networks.

4.4.2 Avoiding new risks of exclusion

Ensuring [continued and equal] access to services of public interest

Three types of measure are relevant here:

- Measures aimed at ensuring that alternative (more traditional) modes of access (face-to-face, telephone) remain available and accessible in parallel with online offerings of services of public interest to ensure that those without online access and skills are not disadvantaged.
- Measures that seek to facilitate wider (and cheaper) reach of relevant services by providing multi-modal service delivery including utilisation of more widely available devices and appropriate platforms such as SMS and digital TV, for example.
- Measures that facilitate (mediated) access to online services for those who are not online.

Continuing more traditional access channels

Some countries have given considerable attention to ensuring that traditional modes of access to services of public interest remain available and, equally importantly, to ensuing that the efforts to modernise public administration that have been triggered by eGovernment developments are also applied to more traditional ways of accessing services. Improvements through one-stop-shop offices and through effective utilisation of the telephone (e.g. call centres) are important in this regard. This is an aspect that warrants attention in an appropriate OMC context (e.g. in relation to objective 1.2 of the NAPs/inclusion) to encourage high quality approaches that meet the needs of at-risk groups throughout Europe.

Multi-platform approaches

The **IDTV Interactive Digital Television** initiative in **Flanders (Belgium**) is an interesting example of an approach in this area. It seeks to promote availability and affordability of new media / ICTs and at the same time ensure Internet access and delivery of eGovernment services through interactive digital TV. The objective was to utilise the high TV cable subscription rates (reaching 95% of Flemish household) and offset the relatively lower internet / computer diffusion rates. The initiative had to grapple with both technical and non-technical issues, mainly commercial issues. In addition, it is now apparent that the service might become more attractive for its leisure potential (e.g. on demand online leisure features), rather than for ensuring wider reach of eGovernment services.

The **eInnovations Programme** in the **UK** is another example that seeks to ensure that local government services are available and utilised by all. Its theme 'Bridging the Digital Divide' promotes using eGovernment in ways that help services to reach those who are socially excluded and in particular addresses the concern that eGovernment might lead to some people being further isolated from the support and services they need.

So far, eleven projects have been funded under the 'digital divide' banner and each project has its own objectives and target audiences. Projects include a scheme to provide virtual tours of social housing for prospective tenants (London, Camden), production of a DVD to promote online services (Chiltern), developing 'smart' tokens for authentication and access to e-services (Sandwell MBC), using ICT for widening community access to library services (London, Sutton) and use of SMS for local council text messaging in rural areas (West Devon). The wider availability of digital TV in UK has been utilised for the provision of local services by government, and there is a genuine effort to develop alternative access channels for at risk groups, allowing them to avail of relevant online services (see vignette 6 below).

A somewhat similar initiative is also ongoing in **Finland**. The **ArviD** Digital-TV cluster programme is seeking to support the smooth transition to the era of digital TV. One element of this is the **Minor** project, dealing with establishing digital TV for language minorities formed by immigrants and people depending on sign language. It is intended to provide more effective service with little extra cost overall.

In the **UK**, the **Employment café** initiative has demonstrated that mobile telephony (SMS messaging) can be used very effectively to ensure that the target groups are reached, and that they avail of relevant services (in this particular case - job offers for the unemployed).

Supporting at risk / vulnerable groups in accessing online services

Initiatives under this sub-there would focus on ensuring that at-risk groups who are currently offline had access to online services and can make use of their offerings through intermediaries. The investigations in the targeted countries did not identify any specific in this area, however.

Vignette 6: ***DigiTV in UK - Ensuring access to the services of public interest for less advantaged.***

It is the UK government's vision that DTV becomes a means to provide all citizens with access to eGovernment services. Local government services and relevant information are provided via interactive digital TV. Alongside the technology, DigiTV offers councils access to platforms at low cost and a DigiTV Starter Kit, which provides a simple, locally accessed, secure CMS with which councils can publish a wide variety of information, polls, forms and services to their citizens on the digital TV platform. Local authorities seek new ways to deliver online public services to the one in four UK citizens with no access to the internet at home or work. With UK plans to switch to digital broadcasting by 2012, television is an obvious medium to reach the public, with 44 per cent of the population already having access to digital TV.

However, initial local authority digital TV projects proved costly, time consuming and resource-heavy. The DigiTV objective was to create a single system that enabled local authorities to cost effectively deliver eGovernment services to a greater number of citizens over digital TV.

The content and interactive services provided by iDTV and mobile devices are also important and may represent more attractive alternatives than the PC for population groups that are often digitally non-engaged - thus because of familiarity, a broadcast-led medium such as iDTV may enable rapid digital engagement among older people. An important element of DigiTV is the trial of the TV set top box that combines the DTT digital terrestrial television proposition (Freeview) with a modem, allowing internet access. The pilot projects are now in a second technical stage, where the Starter Kit integrates with local databases, offering end-to-end transactions.

There seems to be plenty of scope for developing and customising the service at local level (65 local authorities have so far engaged with the project with a view of making an impact on the inclusion of relevant groups. Thus one London Borough (Hillingdon) is looking to use this as a means of delivering e-services more conveniently to a specific customer segment – local authority housing tenants. On the other hand, projects also yielded useful learning points. Thus one local authority's website required some 're-purposing' in order to deliver an 'optimal experience' for the user. A degree of 'expectation management' was also necessary, in terms of explaining the set top box to tenants (i.e. as a means of accessing local government services – rather than a substitute for a PC). DigiTV says the service has 'dramatically lowered the cost for local authorities to roll out digital TV channels, while simplifying the way it is run'. DigiTV is to continue post March 2005, led by a consortium of Local Authorities as it is claimed 'the project has got to a stage where it is a viable business and interest is still high'.

Issues and impacts

This is another dimension that is not very visible within the initiatives identified as eInclusion measures, per se. In a few Member States the use of digital TV or SMS was reported as contributing to eInclusion through providing alternative (cheaper / more widely available) access platforms. Efforts to maintain / enhance access to public service through traditional means (drop-in, phone, call centre) were not much visible within the identified eInclusion measures although other sources (e.g. eUSER study) have identified such approaches in some countries.

As discussed in section 4.3.1, there is an important overarching dimension to this theme in the context of universal access to services of general / public interest. This is an aspect that needs EU-level attention. There would be merit in developing a common EU model of good practice as regards ensuring the continuance / enhancement of alternative modes of access to public services and of inclusion of this dimension in an appropriate OMC context.

Relevant success factors

Service design – suitability for multi-modal delivery; promoting and ensuring Service equivalence - delivery over widely available end-devices (e.g. SMS messaging can be very effective), promoting interactive services; building / utilising digital TV potential.

Avoiding second-order divides

These measures, if implemented, would focus on divides amongst Internet users in terms of knowledge, skills and motivation to use the Internet in ways that exploit the potential for the achievement of useful benefits (e.g. increasing one's knowledge, finding out about jobs, sourcing cheaper products). There is emerging evidence that those who are already more advantaged are more likely to gain further advantages from using the Internet in comparison with those who are less advantaged. However, the investigation found few examples of direct targeting of second order digital divides, per se, in the countries covered.

There are various initiatives in relation to employment (e.g. facilitating job search for the unemployed) and in providing portal-based access to thematic services for specific groups (older people, disabled, immigrants) that can help to facilitate effective use and gaining of positive benefits, but not much evidence of concerted efforts to develop knowledge and skills that enable real practical benefits in other areas of life to be gained from the Internet.

Some initiatives relating to child safety on the Internet also have some relevance for this theme. An example in this regard comes from **Poland**, involving a quality marking web site certification initiative (part of a European program "Safer Internet") seeking to promote desirable content online. The children's' websites certification system seeks to reduce the burden on the end user by effectively marking 'good' sites / content. The Click Sharp initiative in Belgium also addresses this theme both through site certification and awareness-raising about online safety for children.

Issues and impacts

It seems that little attention has so far been given to examining the extent to which second order digital divides are emerging in Europe and, if they are, to the development of interventions to address this area. This is something the now needs to be addressed within eInclusion policy. There would be merit in a more focused concentration on this aspect within the context of an EU-driven initiative to encourage EU-wide coherence in relation to digital literacy. A specific focus on skills for at-risk groups to enable them to gain real benefits (e.g. getting health information) would be valuable.

Avoiding social isolation

Measures under this theme would focus on counteracting any social isolation that might arise as a result of the increasing virtualisation of life with the emergence of the internet, e-mail and so on. In fact, there were few if any initiatives found with a direct focus on this theme.

One measure that is somewhat related to the theme comes from **Germany**, where the **"Mousemobil"** project supports and encourages elderly people in using the Internet, especially older people who are forced to stay at home because of long-standing illness or disability. The project combines a visiting service with computer and internet training courses. Voluntary advisors give internet training, classes on computer usage and help to order products and services. In addition, there is a possibility for virtual communication via the Internet. Furthermore, each participant gets an own email address. Currently, "Mousemobil" is active in five cities.

Issues and impacts

There was little direct attention to this dimension in the identified initiatives. However, it is likely that many NGOs and voluntary players at the local level continue to provide social support to vulnerable groups, even if a link to the challenges posed by virtualisation of society is not very visible at present. This is a dimension that would warrant a dedicated research focus (e.g. Eurobarometer survey or co-ordinated Member States surveys) to assess the impacts of virtualisation on social contacts and isolation, especially in relation to the vulnerable groups. The results of such surveys would provide a basis for deciding on what, if any, interventions might be warranted.

Relevant success factors

Inclusion of a social (face-to-face) component in ICT initiatives targeting those at risk of social isolation.

4.4.3 Exploiting practical opportunities

Access to employment

With regard to measures falling under this sub-heading the main focus is on using ICTs and the applications and services of the Information Society to enhance employment prospects overall, provide better employment opportunities, and promote employability in general, especially for groups at risk of social exclusion caused by, or exacerbated by unemployment. These measures can be both demand oriented (e.g. enhancing individuals' e-skills endowment) and supply side in nature (e.g. by using ICTs to create and bring jobs to the people, usually by bridging a distance gap).

The relevance of these initiatives is linked to the premise that employment is often the best route to social inclusion, especially in terms of providing the way out of poverty. Being in employment is commonly found to be the single most important protective factor against poverty. In addition to the unemployed, amongst at-risk groups considered under this sub-heading are also those with a high likelihood of becoming unemployed – the low paid, low skilled and temporary workers. Finally, those who face a high risk of lagging behind and not improving their , knowledge and skills, such as for example older workers, those employed in the sectors of economy that are labour intensive and not making a sufficient use of technology are also the 'natural target' for these initiatives.

A variety of types of measure can be identified, including:

- ICTs training to improve employability,

- ICTs training including fast-tracking to employment,
- Use of ICT to support job-seeking and vocational guidance and support,
- eWorking to provide employment opportunities for disadvantaged groups,
- Initiatives using ICTs to bring work opportunities to (geographically) disadvantaged areas.

ICT training to improve employability

A relevant initiative in this regard has been in operation in **Belgium** targeting those with relatively low eSkills, and at the same time working in the 'exposed' sectors of the national economy – being at risk from restructuring and global pressures. The **Basic ICT skills for all** training programme supported by the Flemish government and operated by the Flemish public agency for training and labour market (VDAB) targeted the unemployed and those employed in labour intensive sectors, characterised by low use of technology. The main rationale was that by targeting those employed in at-risk industries and low skill, labour intensive industries future long spells of unemployment would be prevented. In addition, on a macro level, the (inevitable) structural reform and transition of the economy would also be facilitated.

At the same time, in the Walloon region of Belgium, the **PMTIC** (mobilising ICT plan of the Walloon Regional Government) provides basic ICT training for unemployed people, with the long-term target to provide basic ICT training to about 100,000 low-skilled unemployed people over 5 years. A range of players are involved – the training courses are designed by the University of Liège (LabSET) and implemented by a series of "certified" training centres belonging to the public sector or the non-profit sector. At the time of the research for this study, 28,103 trainees had already completed the whole training programme (broken down into three modules) and worth mentioning is the fact that the initiative managed to attract a considerable proportion of men over 40, the group which are often hard to engage in this type of training, but often most at risk from lagging behind in terms of e-Skills.

Another good example from Belgium is the initiative run by **Brutec**, a non-profit organisation co-ordinating six ICT training centres in the Brussels Region for young people who have disengaged from schooling and/or are unemployed. The initiative provides vocational training in ICT jobs for these young people at risk of exclusion (due to unemployment, early school leaving, low education level). The training courses organised by the six training centres have an average duration of 7 to 12 months, always including some work placement in enterprises. Some preliminary training in updating language and maths knowledge that may be required before ICT training is also organised in the same centres. The main focus is on intermediate rather than basic skills and the content of training (curriculum) is reflective of continuously changing skill requirements from potential employers. This alignment is necessary to ensure that course attendees will acquire the skills that will be appreciated by prospective employers and be in tune with industry needs. There are also agreements in place between Brutec and the education system allowing for recognition of some Brutec certificates as degrees from secondary education. The initiative has managed to obtain a high level of commitment from the course attendees – the so-called "dropout" rate is very low (2%) - while at the same time there is a high likelihood of getting a job after the course completion (about 55% of the attendees got a job within a year after completing the training).

In **Austria**, the **bfi IT Training Center** has improved the situation for blind people through various innovative projects and has become a centre of competence in Europe. Earlier projects "BiQ" (Blind in Qualification) and "GRIBUS" (Graz: centre of information and innovation for blind and vision-impaired people) have been followed by the project **ISIS** which is dealing with the development of vocational opportunities for blind people in the field of

information technologies (IT) according to European standards. The initiative wants to open up job opportunities that are different from classical employment opportunities for blind people. ISIS offers many ways of qualifying beginning with basic digital literacy documented by the European Computer Driving Licence (ECDL). A central part of ISIS is the TeleTrading House, a call centre in which blind or visually impaired persons are working for limited periods (up to three years) before the acquired skills allow them to change to regular call centres. ISIS is a permanent measure and evaluation takes place as part of monitoring and reporting to the supporting Federal Social Welfare Office Styria. The outcome has been a high quota of transfer into regular jobs. Very positive feedback results have also come from the evaluation of the courses by the participants.

ICT training in conjunction with fast-tracking to employment

In contexts where there are skill shortages in ICT-related jobs in the labour market, ICT training in conjunction with fast-tracking to available jobs offers a lot of potential. A good example of this type of approach comes from the **FIT** initiative in **Ireland** (see vignette 7).

Support for job-seeking and vocational guidance and support

Support for job-seeking and more general activation-oriented supports towards re-entry to employment are another sub-theme. Public employment services are increasingly investing in ICT for job search and vacancy listing.

In the **UK**, access to employment opportunities for individuals seeking employment or training has been supported through a combination of a 'bricks and mortar' internet café and web and mobile phone technology. The initiative - The **Employment Café** - is an independent job centre with objectives to assist applicants in finding worthwhile employment and training opportunities, particularly targeting those from ethnic minority communities. It also seeks to promote diversity in the workplace, and to act as a central repository of information and services related to employment. The cafe aspires to a friendly informal atmosphere in which clients can search for work in various sectors including Construction, Retail and Hospitality.

Other services include CV writing, Internet access, personal development, career consultancy, office facilities, a minority outreach programme for Job Centre Plus, job brokering with specialist agencies, and the web / text-message job matching service. The website is an important tool in this regard – it offers a demonstration of both the job-seekers' and training/employers' 'ends' of the service. The decision to utilise mobile phones was customer-driven in origin, given that clients often gave their contact details as a mobile number rather than a landline. It was also seen as a means of bypassing the traditional 'digital divide' and a method particularly suited to the 'hard-to-reach' 16-24 year old age group. Text alerts were seen as a more cost-effective option than calls to the mobiles. For candidates, the free service alleviates the time taken up by proactively searching for information on vacancies either in a job centre or via a website. Employers pay for a package which enables them to have varying amounts of interaction with candidates, including browsing candidates' profiles before sending information via SMS about times, places and requirements for interviews.

In **Sweden**, the **Datortek** initiative promotes digital skills amongst disadvantaged groups by using the local jobcentres as venues and including practical, working life oriented activities such as learning how to write job applications. At the same time, the Swedish National Labour Market Administration's web page lists job offers (hosting the job offer database) to which candidates can apply by email, while prospective candidates are also provided with a set of relevant instructions, such as how to write a CV, how to act at an interview, and can

also undertake an on-line test in order to see what job they might be more suitable for. This website is increasingly popular and has reached a wide audience.

Vignette 7: FIT Programme in Ireland – ICT training and fact-tracking to employment for unemployed

FIT is a national action plan marrying responses to the shortage of IT skills in industry and tackling long term unemployment. As such it has enjoyed support from the IT industry (and is effectively industry-led) and the Government, both in terms of funding but also in terms of a broader support and facilitation. The main aim is to meet the recruitment needs of industry in the area of ICTs, through the provision of training, support and career opportunities for unemployed people. It is also an evolving measure with two phases, and spin-off initiatives – such as facilitating progression to third level education for some participants, digital divide initiatives at local level, and equality for women initiatives. FIT is a good example of partnership between the IT industry, local communities (via LENS - Local Employment Service Networks and APC-Area partnership Companies), and government / voluntary agencies (Vocational Education Committees, FAS - the National Training Authority and the National Training and Development Institute). The effective marrying of industry and social inclusion needs is also evident from the more than 40 companies that are involved. It is now being also presented as an example of effective Corporate Social Responsibility, making it attractive for even more companies to get involved.

FIT promotes the concept of job targeting and market-led training, and this is another key to its success. It has developed market-led IT curricula (developed by industry in collaboration with training providers and local communities) to enable long-term unemployed people to 'leap-frog' the IT skills barrier into sustainable employment. It incorporates industry certification, which is conducive to job prospects/career enhancement in general. The initiative also co-opted HR managers by introducing the concept to them at an early stage (1999). Other relevant issues are the development of pro-active means of recruitment and selection - using aptitude tests instead of formal education to determine capabilities.

The key threat being addressed is that of exclusion from the labour market due to low IT skill levels. The target group was long-term unemployed people, while early school-leavers were also targeted. In terms of outcomes, in September 2002 over 2,500 unemployed people had commenced or completed FIT training courses across Dublin. In June 2004 over 1,800 graduates had commenced employment and progression opportunities. The intended target in terms of number of participants has been reached (3385 by the early 2004, while by September 2004 over 4,000 people had attended / were attending FIT courses). It attracted a relatively higher share of women than third level institutions, about one-in-eight of its participants are over 46 years of age, and about on-in-seven of its participants are lone parents. It also appears to offer best value for money in active labour market policy – it is more than twice as cost effective in terms of cost per placement than active measures for long term unemployed and socially excluded, while it also surpasses mainstream skills training. It is also claimed that the initiative overall was cost effective, with savings made on social welfare payments and [income] tax receipts in excess of 20 million Euro (Fit Interim review, 2002, www.fit.ie). It may be relevant to consider that while IT industry was absorbing almost 90 % of FIT graduates in the first year of its implementation, by year 2004 this has fallen to about 25%. Thus the initiative is not just of relevance for the IT industry, although the above also reflects the spread of ICTs in other sectors of the economy.

FIT has also acquired an international dimension, with examples of initiatives that are emulating its approach (and success), for example, FIT Napoli being initiated in Italy.

In a similar vein, ICTs are being utilised elsewhere to extend various aspects of support to the relevant groups that are at risk from exclusion from the labour market. In **Belgium**, for example, the **ADA** project has a special strand utilising networking of women in IT industry to open up access to employment via mentoring and working with employers for women who are disadvantaged / at risk from exclusion.

Quite an innovative initiative in this regard comes from **Germany**, with the **telementoring** project seeking to support disadvantaged young people in their occupational orientation phase. To support this, email 'godparenthoods' were established. These so-called "tele-mentors" were volunteers trying to support young people ("mentees") via email in finding a job or, at least, to work out their individual skills and potentials. In addition, the telementors acted as a kind of social worker in order to strengthen social competencies of young people who are at risk of being unemployed. The intention is also to address the lack of adequate occupational guidance or orientation within schools. It is also interesting to point out that the initiative had a positive externality of providing social support, which was appreciated by the "mentees". It also illustrates the fact that ICTs can be effectively used to supplement the offline initiatives – thus although the majority of participants were already integrated in traditional support programmes aiming at increasing employability, they were very enthusiastic participants in this online one. They appreciated the quality of answers by mentors and the interest they have shown for their mentees, including also the relevant social aspects of their queries, and the overall effectiveness of the assistance given was viewed positively by the overwhelming majority of participants. In terms of some relevant outcomes for them, apart from the intended improvements regarding job orientation, particularly worth mentioning are improvements in eSkills, self-confidence and the overall level of activity.

Another example from **Germany**, the **Good Practice Center (GPC)** has been established seeking to boost access to employment via supporting vocational education for disadvantaged groups (the GPS is a knowledge portal promoting access to training and employment for disadvantaged people, with a special focus on vocational training of disadvantaged youth). It offers information and material ranging from vocational preparation to further vocational training and informal on-the-job training. The material is presented in different ways: databases (of educational institutions, teaching places, examples of good practice and vocational training modules), knowledge base etc. Target groups are all people working in the field of vocational qualification (vocational school teachers, company personnel managers, training organisations etc.) and the people who work with occupationally disadvantaged in general. It was set up with a specific aim to tackle the exclusion of the numerous groups at-risk in relation to vocational qualification and further training. It apparently already has become a focal point for the relevant parties.

Careful examination of the impact of modernising employment services and the introduction of ICT is necessary, as indicated by the result of evaluation work in the UK. This noted that effective services for the hardest to help are not just technology-driven, and that good staff intervention with adequate labour market opportunities are equally as significant (DWP 2003). Therefore it may be the case that ICTs increase efficiency for less disadvantaged job-seekers but that further organisational investment in face-to-face supports rather than virtual contact may be important for engaging with the more disadvantaged.

An evaluation of the **Austrian eJob-Room**: Interactive Service Platform for Jobseekers and Employers found that direct practical benefits of ICTs were difficult to assess. Staff felt that the impacts of Internet access on various aspects of job search behaviour were difficult to measure and that the impacts were generally limited, one reason being that Internet access had not been advertised to clients and so the demand was low. The job-seekers interviewed said that they found the information obtained from the Internet to be useful, even though its impacts on their job search was to date limited.

Other assessments in the UK have found that up-take of telephone-based and internet job services have helped rural job-seekers but that in the eyes of the unemployed themselves "*All the technology in the world will not help if the jobs aren't there. It doesn't matter. We could all have PCs at home, be continually on-line looking for jobs, but if there are no jobs in the area, high technology does nothing for you.*" (McQaid, Lindsay and Greig 2003 p 3). This suggests that, under exceptionally unfavourable circumstances, access to better quality

information might run the risk of increased subjective feelings of powerlessness for some job-seekers.

ICTs to address regional imbalances / eWorking

The **Kuusamo eWork** initiative in **Finland** has sought to provide a boost to new businesses and jobs through strategic development. The measure has succeeded in creating new ICT based jobs for unemployed people, as well as in enhancing possibilities for e-learning and exploitation of e-services for inhabitants in this remote, rural area. The most significant result has been the creation of new jobs in about 20 ICT and software companies, with 15% of those who were unemployed having found new jobs.

A high dependency on national and/or international markets notwithstanding, it is a good example of ICT-based distribution of work processes into rural areas. A new business sector has been created and established in Kuusamo and a successful business model for customer service centres has been created, which has been disseminated to other rural municipalities and regions.

A similar approach can be found in **Slovenia**, with **E-Center** as promoter of the network economy on a local and regional level. This on-going project aims to introduce teleworking centres in Slovenia which draws on other European experiences and expects to yield benefits for regional employment, mainly by opening new employment opportunities via local eCenter.

Issues and impacts

Most Member States have initiatives in this area. Aspects addressed include support for employability, help with job-seeking and other activation-oriented supports, and usage of ICTs and eWorking to bring work to disadvantaged groups and / or isolated regions.

Many initiatives are skills-oriented without a direct link to an employment opportunity. Some include specific fast-tracking to employment (e.g. unemployed trained to fill ICT job vacancies). Some focus on positive discrimination, especially for women. Some address particular at-risk groups – disabled, immigrants, ethnic minorities etc.

In many cases there is a lack of hard evidence of what is actually being achieved in terms of increased employability and the actual achievement of employment. Although clearly upskilling is valuable in enhancing the competitiveness of at-risk groups in the labour market there would be value in more systematic assessment and longitudinal follow-up of those who have been trained in ICTs or participated in related measures. This is something that might be given direct attention in the NAPs (employment), with a focus on clear identification of the levels of at-riskness of participants and outcomes for different groups.

Relevant success factors

Industry involvement & support (for the most appropriate training curriculum, certification; fast-tracking to work / workplace insertion/ placements); awareness and recognition of employer needs; co-opting of relevant stakeholders such as HR managers; achieving the right balance between making the training content interesting to users but at the same time relevant for the employability; interweaving ICTs / IT skills training into the existing, “offline” active labour market programmes; adopting a long term perspective (especially with regard to the supply side stimulation); utilisation and setting up of e-work arrangements, where appropriate.

Distance bridging

These measures seek to exploit the inherent properties of ICTs to bridge constraints of distance (and time).

An example of an initiative seeking to ensure access to key services in remote areas comes from **Italy**. The **eMountain** project aims to develop and strengthen on-line services for citizens living in mountainous areas. Most of these citizens live in remote and de-populated communities, and face a relatively high social exclusion risk. Providing these communities with local access to all basic services (in a traditional way) may be very expensive for the national economy. The project plans to improve access to the website http://www.simontagna.it that is the portal for the services delivered to these communities and to increase Internet access points facilities. The Mountain Information System - Sistema Informativo della Montagna (SIM) - developed by the Ministry of Agriculture and Forestry in partnership with UNCEM (Unione Nazionale Comuni Comunità Enti Montani), provides the public (in particular, the inhabitants of remote highland areas), businesses, government agencies and local authorities a series of services based on IT infrastructures and the integrated use of the information stored in various databases. A good example of a relevant service is the one by the agricultural and forestry sector (MiPAF and AGEA - Agenzia per le Erogazioni in Agricoltura) the government Agency responsible for paying out subsidies to farmers.

In **Finland**, the **ITSE** project in the Keski-Pohjanmaa area seeks to promote independent living of older people and people with disabilities by using technological and IT solutions that facilitate their independent housing and communication. It provides training in new technology and assistive technology for older people and people with disabilities and in parallel to this, has developed the internet service APURI (a web site of local social services for these target groups to enhance their access to relevant services in this regard).

Another example from **Finland**, **Accessible Remote Interpreting** (**ETU**) provides sign language interpretation via the telecommunication network, allowing the target group (people who need sign language interpretation) to access interpreting effectively 24 four hours per day and seven days in week. Interpreters use a web camera and PC both over the Internet and ISDN. Without remote interpreting users would have a much more limited service, not least since the number of interpreters and their time is limited. Remote interpreting saves time and is not dependent on place. It makes the interpreters' work easier because it removes the necessity to travel. In areas with a shortage of sign language interpreters or where long distances are involved it is set to facilitate the improved availability of interpreter services.

Another relevant aspect pertinent to these initiatives is the provision of access to goods and services at convenient times and places for those who are constrained in these regards. A good example of this for people facing distance constraints comes from **Sweden** - the **Österåkers country shop centre project**. It is effectively a store without goods for people living in remote areas and/or with limited access to services due to immobility (disabilities, age etc.), using the traditional country store as a distribution centre for goods bought by the local customers online. The project is a local co-operation between public, commercial and non-profit organisations as a response to diminishing services in the countryside. The measure is currently running on small scale as a test and has LEADER + funding. A positive externality is protection of local social capital.

Issues and impacts

Initiatives addressing this aspect are visible in some Member States, especially those with isolated rural populations. This is an aspect that could be made more visible in the context of some of the other approaches already addressed above, especially the ensuring of access

for all to key public services and availing of traditional and new technology based approaches for service access and delivery.

Relevant content / eServices for at risk groups

These are generally supply side measures, aiming to develop content and services that are really relevant to the needs of those at risk of exclusion. They provide practically useful content and services and are also extending into areas such as providing culturally appropriate content and services. Another set of measures under this theme relate to the use of ICTs and assistive technologies to support independent living for older and disabled people.

Online content and services

Senior@s online is an example of this type of initiative from **Germany.** It operates a communication platform (portal) for older women which provides practical information ranging from news, health tips, material for Internet training courses, an online publication service, literature lists and discussion fora. A strong emphasis has been placed on the practical benefits.

A similar approach has been taken in **Slovenia**, as a part of the Senior 60+ initiative. Here, the internet portal **www.senior60.net** has been designed for all seniors who want to be informed about current senior news and events. The portal provides a set of useful information for elderly people on different aspects and also encourages self-learning, including information on computer education and even ECDL for that target group.

In the **Netherlands**, the **Virtueel Inburgeringsloket (VI)** initiative provides relevant information and services via information kiosk aiming to assist ethnic minorities in learning about Dutch society. Several local authorities (like Amsterdam, den Haag, Eindhoven) have installed these kiosks at various locations. It is also accessible through the Internet and on CD-ROM, e.g. for home access. Since early 2005, all Dutch public libraries have started providing access to Virtueel Inburgeringsloket, thus further widening its reach. The kiosk uses easy to handle interfaces, such as touch screens as well as easy-to-understand language, also featuring a lot of graphical material (icons, video, …), making the content more accessible for people with low technology and/or low language skills. It contains a standard package of information on Dutch government and ethnic minorities (where to learn Dutch, how to get a living permit, how to search for work, and so on). There is also a possibility to further localise content by adding local information. Finally, all major ethnic minorities are facilitated by providing the content in several languages (Dutch, English, Turkish, Arab).

In **Sweden**, **Citizen Terminals for ICT** [medborgarterminaler] aim to facilitate citizens to access the Internet by setting up computer terminals in public spaces especially targeting rurally based and low income groups. The content provided has focused on (effectively was limited to) the services provided by the public authorities which were considered relevant for at risk group – such as access to employment related information, contact with public authorities, obtaining insurance and so on). In addition, the Swedish Social Insurance Administration provides information on entitlements seeking to boost the uptake amongst at-risk groups.

There are a lot of initiatives of this type also in the **UK** and there is a policy effort to actively encourage this area. For example, **Glasgow Homeless** network is aiming to assist homeless people by providing content that is of practical relevance for them (see Vignette 8).

The **eInnovations Programme** (local government services) seeks to promote the tackling of social exclusion using new technologies at the local level. So far, eleven projects have been funded under the 'digital divide' banner and each project has its own objectives and target audiences. Projects include a scheme to provide virtual tours of social housing for prospective tenants (London, Camden), production of a DVD to promote online services (Chiltern), developing 'smart' tokens for authentication and access to e-services (Sandwell MBC), using ICT for widening community access to library services (London, Sutton) and use of SMS for local council text messaging in rural areas (West Devon).

Vignette 8: Homeless Information pages, Scotland

Glasgow Homeless Information Pages (GHIP) provides a 'one-stop' online information and advice resource for homeless people in the city of Glasgow. The project's starting point was an identified need for improved access to information for people affected by homelessness taking into account the fact that homeless people can be excluded from public access points such as libraries that may require a proof of address. Access to the online service is provided at 13 sites across the city. Topic areas on the website aim to reflect the needs of homeless people and include accommodation, food, clothing, furniture, addictions, health, employment, money advice and support services.

The project includes basic IT training in order to ensure that the target group can use the service. A mobile ICT unit travels to places that homeless people frequent, such as hostels, day centres and crisis accommodation, offering tutoring in basic computer skills in these settings. In addition, there is a chance to move on to further training in IT. The project also sought to actively involve the target group - a HIP Service Users Forum was set up to allow service users to shape the website. The project has some reported success and in the last two years has delivered training to around 500 individuals. Around 20 people have moved on to mainstream training. Between October 2003 and the summer of 2005, the website has had more than 4,000 visitors. The project is currently bidding for an additional three years funding.

Another interesting example from the **UK** is the **Learning for Living** initiative, combining an on-line learning programme for unpaid carers with the possibility to get a qualification. The potential target group for this initiative is rather large in the UK, where nearly four million carers juggle paid work and care (one in seven people in the workforce) and many have to reduce the hours they work or give up work altogether. Keeping a job, or returning to a job when caring has ended, can mean facing significant barriers such as loss of confidence and work skills, invisibility to mainstream services such as Jobcentre Plus. Carers are faced with a difficulty in finding good quality jobs, and / or an understanding and flexible employer. Learning for Living was developed as part of the ACE (Action for Carers and Employment) national project, which aimed to raise awareness of the barriers facing carers who want to work, and to test and promote ways of supporting them. It is the first qualification and learning resource designed specifically for carers by carers. It aims to build on the skills that carers and former carers have, to help build confidence and develop computer skills, with the possibility of further study or return to a paid job.

There are two integral aspects to this initiative: the qualification known as the 'Certificate in Personal Development & Learning for Unpaid Carers' and the learning resource known as Learning for Living. Learners who do not want to take the qualification can opt for doing just the resource. Learners are assigned a tutor who provides direct learning support. Centres will offer the qualification and the e-learning in varied ways depending on the centre, which will include local colleges, carers centres and organisations. There is a remote centre which allows learners to do the learning without ever entering a learning centre. The project has been successful in developing a product (the online course) although is not clear at this stage what the impact will be and to what extent it will meet the needs of the target audience.

An interesting practical application comes from the **Netherlands** with the **eDorcas** initiative. This is a computer application facilitating the interface between the social security system (especially social benefits aspects) and citizens. The rationale for its launch stems from the under-claiming of benefits entitlements by those who are eligible. Citizens often simply do not know enough about their entitlement, or feel threatened by the bureaucracy to claim their rights. e-Dorcas is software that can run on a simple laptop. It guides the user (citizen or professional) through a set of questions to assess whether somebody is entitled to certain social benefits. The city of Hengelo originally used the application in 1999 in door-to-door visits in low-income neighbourhoods. It has since expanded into a full front-back-office application, although its potential appears still to be under-utilised.

In **Italy**, the **SIVA Portal** is a permanent exhibition of technical aids, where information about most types of assistive technologies can be directly found. It includes several environments (mobility, communication, computer access, kitchen, bathroom, playground etc.) which represent the most common situations that a person with disability may encounter in daily life at home, outdoors, in the worksite and in the school. This Portal is intended for a wide audience that includes users of assistive technologies (persons with disabilities, their families, caregivers), professionals in health care and social services, technologists and industry professionals, scientists and researchers. This is the reason why a variety of methods are designed for searching in the Portal databases. Some are very simple - although less precise - for those who are not so familiar with assistive technologies or with database search. Others are much faster and precise - although more complex - for specialists in the field. In case people don't succeed in finding the assistive device they are looking for in this Portal, it is possible to send a question by filling-in a form.

There are also some examples of effective use of ICTs for supporting at-risk groups more indirectly. A good example is are **truancy tackling** initiatives by schools where **SMS** messaging systems are used to monitor truancy of children and send SMS when a child is absent without reason. The SMS can be sent to the child, to parents or to school social services, depending on the situation. The main rationale is that truancy is a strong indicator and early warning for educational exclusion, including early school leaving.

It appears that these initiatives are now gaining in popularity and are increasingly being endorsed by schools. Early examples were most common in the **Netherlands** and they are now being set up in **Ireland** and the **UK**. Apart from SMS, smartcards can ease the administration of registering the presence of students and school registration systems can be linked to an SMS alerting service. In **France**, such an approach has been reported to result in a drop of 80 % of 'light truancy' (see http://www.spijbelsms.nl). A similar approach in the UK using an 'Informer for Schools' package saw an average drop of only 2%, however. No systematic evaluation of such systems is available, so it is not yet possible to judge how effective such initiatives may be under differing circumstances.

In addition to fighting truancy, technology can support children absent from school for legitimate reasons. Distance education can extend school opportunities to those children who would otherwise have vulnerable school careers, such as children with severe health problems or the children of occupational travellers (e.g. barge or circus families or the Roma in Hungary). No assessments could be found providing evidence of the impact or effectiveness of such ICT use.

ICTs and Assistive Technologies for independent living

The use of assistive technologies, telecare, telehealth and smart home developments in support of independent living is beginning to emerge in Europe. This is partly stimulated by support under the EU Framework Programmes for RTD. Most countries have national services providing assistive technologies for those who need them, although the levels of development of services vary widely. In addition, telecare services are quite well developed

in some countries, including basic telephone-based social alarm services and more advanced systems that link into safety and security sensors in the home.

In **Finland**, there has been a concerted effort to address some relevant issues in this regard in a holistic manner, targeting both end users (people with disabilities and elderly people) and those directly providing the relevant services to them (social care workers). Thus the National ITSE project (**Kansallinen ITSE-hanke**) aims to promote independent living of older people and people with disabilities by using technological and IT solutions, primarily through supply side measures (social services staff training, provision of funding for ICT solutions and long term utilisation of these by the ultimate target groups – people with disabilities and the elderly themselves, their relatives and / or their carers). The objective of the project is to promote independent living of older people and people with disabilities by improving the knowledge and skills of social welfare and health care staffs and the service users and their relatives relating to good technological and IT solutions that facilitate independent housing and communication. Furthermore, the project aimed to accelerate the creation of common operational models and networks at regional level.

Some specific issues addressed included the lack of computer literacy and knowledge of basic technical aids among social and health care staffs. It was also found that technical (hi-tech) devices on the market are not as ready as they should be for the intended purposes. Tangible benefits of the project included improved knowledge amongst professionals, older people, people with disabilities and their relatives about technical aids, and a purposeful use of new technology. In addition, the initiative has triggered more positive activity in this regard, such as for example the electronic communication network system for professionals in assistive technology, housing and rehabilitation services (Satakunta ITSE project).

Pirkanmaa polytechnic in health care and social welfare has built a permanent "model home" (ITSE-tila) with technical aids in housing to be used both in training students and professionals and in giving personal information and training to disabled persons and older people. There is also a virtual environment of this room (Pirkanmaa ITSE project).

Another example of an initiative to support independent living for elderly people comes from the **Netherlands**, where the **Esc@pe** project also incorporates aspects of digital skills promotion. In this case, chronically ill senior citizens receive relevant equipment (a computer/internet at home, including wireless keyboard, webcam, speakers, etc) and training on how to put the technology to a good use (including technology mediated interaction / communication). Home visitors (e.g. from the Red Cross or ‘de zonnebloem’) introduce the technology to the senior citizens in their own settings.

Issues and impacts

There are quite a few examples of efforts to provide targeted content and services for various at-risk groups as well as for the population as a whole. The most frequent targeted services address people with disabilities and older people, including online services and usage of ICTs to support independent living. There are also a number of examples addressing the needs of homeless people, immigrants, those with low literacy and so on.

The level of activity in this field seems to be very variable across the Member States, with the presence / absence of activity apparently not necessarily an indicator of the contextual importance of the theme. There are some examples of very interesting approaches (e.g. for homeless people and immigrants) and there would be good value in increasing awareness of these across the EU.

Relevant success factors

Addressing relevant needs; emphasis on practical issues; user orientation (which incorporates content customisation and appropriate delivery modes and channels); utilisation of the premise of providing the services of public interest;

In relation to independent living - holistic approaches bringing together welfare and users on the one hand, and technical expertise and industry and R&D on the other; incorporation of effective imparting of relevant ICT skills.

4.4.4 Empowerment

Networking

These are measures seeking to exploit the networking capabilities of ICTs to open up opportunities and indeed empower at-risk groups to address their own needs. They can vary in the nature of the issues addressed, ranging from targeted measures to promote bonding networks for those at risk (facilitating social linkages with family, friends and community) to the promotion of bridging networks for those at risk (facilitating links outside one's usual community of contacts).

Most often, the networking dimension evolves after a certain level of maturity has been reached within initiatives that have been set up for other reasons, such as awareness and motivation raising. A good example in this regard is **Senior web** from the **Netherlands**. This started as an active membership organisation that helps senior citizens in learning about technology. Subsequently, online course material was developed for utilisation of technology for practical affairs. Gradually, the focus shifted to include technology support (online help, or even help at home in solving computer problems) and the website has also developed into a portal and a meeting place (50plusnet). Crucially, it has become a sustainable, self-financing initiative.

Another example comes from **Germany**, where a networking element is a dimension of the "**Job-Net- Online"** initiative that aims to harness online media support for long-term unemployed re-entering the labour market. The philosophy was "enabling unemployed to support unemployed". To this aim, an online platform was developed, featuring an easy-to use search mechanism pointing to German job exchanges and other employment-related online resources, a smart database providing advice how to go about with on-line job applications, etc. It has networked itself with other initiatives and it provides several useful briefing documents especially addressing the needs of long-term unemployed. The actual impact has been good amongst those unemployed who participated (they used ICT to work on the project, even mastering new ways of working such as teleworking). However, the reliance on volunteers, while an inherent and desirable aspect of the project might have an impact on its long term sustainability.

In **Belgium**, various aspects of networking have developed within the **ADA** initiative targeting women. Women who are ICT professionals have actively participated in construction of women's networks in ICT occupations, which in turn have sought to promote opportunities for other women, mainly unemployed, to enter IT occupations (e.g. by mentoring, job related networking, promoting gender balance amongst IT trainers, while also using awareness training modules for young girls). The development of a network of contacts with companies for training / placement of women trainees is another important aspect of the initiative. ICTs have been utilised effectively - women's narratives and accounts of their own experiences, which were diffused over the net, proved powerful aids within the initiative.

Another example is the **Netwerk ff** contact initiative from the **Netherlands**. This is aimed at children who are chronically ill, seeking to use technology to support and enable them to maintain contact with friends and family as well as proceed with their education as much as possible. Manuals have been produced for the children, their parents, the schoolteachers and the care institutions on how they can involve technology to support the ill children. Similar initiatives are in operation in **Ireland** and **Italy**, with active involvement of relevant

health institutions. These initiatives could be of particular relevance for less advantaged children, those with fewer resources and hence relatively more at risk from further disadvantage due to illness. This is especially the case if the level of offline services and support is not well developed in their countries.

In **Poland**, within the **Kidprotect** initiative, the website features an e-support group for the victims of sexual abuse, which can become the first step towards redressing the issue of abuse.

Issues and impacts

Only a small number of networking activities were included within the identified eInclusion initiatives. However, there is clearly a large amount of online networking of NGOs that is now an incorporated, day-to-day feature of their activities but is not necessarily articulated as a "measure" or "initiative" per se. More generally, the networking theme is possibly best seen as a cross-cutting theme that would be a relevant component of some of the other themes, including relevant content / services, support for NGOs, content creation, online communities and cohesion-oriented activities.

Relevant success factors

Co-opting 'champions' amongst the at-risk groups; promoting and supporting effective 'ownership' of the initiatives by at risk groups.

eDemocracy

These are measures aiming to utilise ICTs to promote and facilitate civic engagement of at-risk groups in political and governance processes at local, regional, national and international levels. There is potential for promoting social inclusion through such initiatives but it is likely that specific targeting and support for at-risk groups is required if they are to be reached and effectively engaged in active citizenship.

At the most basic level, these initiatives can increase transparency and accountability of governments. In this way, such these initiatives have (had) an important role to play in many new Member States. In **Poland**, the **eSEJM** initiative is considered important since it aims to bring the working of the Parliament closer to the citizens. An important aspect is its interactivity, where citizens can post enquiries and receive answers, and this feature appears to be widely used. However, it is thought more likely that at-risk groups will be reached at the local level. Indeed, there are examples of more local initiatives in **Poland**, for example, an interactive message board where inhabitants of **Bemowo** district can express their own opinion about matters referring to their neighbourhood.

In **UK**, there are examples of effective use of widely adopted technologies for the promotion of eDemocracy at the local level. For example, DigiTV offers local councils access to platforms at low cost and councils can publish a wide variety of information and conduct polls on the digital TV platform. There is also a growing use of SMS by local councils to engage people and obtain feedback on issues of relevance to local residents.

In **Sweden** such initiatives can be found within a nation-wide effort to raise the low level of democratic participation. In **Jordbro**, a suburb of Stockholm, part of this work has been to start a web-portal for the citizens aiming to increase their sense of "belonging" and the participation in local democracy. The web-portal works as a network where locals can receive information about what is happening in the area, find information about relevant services offered and receive information about current local-political issues and debate them. An additional aim is to aid social capital building, through an increased sense of "belonging" and reduced segregation among the citizens.

Another initiative from **Sweden**, the **Portal for e-democracy** in Falun municipality promotes e-democracy at the local level. It aims to encourage democratic participation and promote an active citizenship in general and among groups with low interest and political activity in particular (e.g. young people, persons with low education). From the portal, the citizens can get in touch with politicians by email, can find records and reports from the proceedings from the work of the politicians, find information about who to contact and how the municipality is governed. The web-portal also includes a web-based discussion-forum where citizens and politicians can debate current issues / express opinions.

In **Belgium** eDemocracy has been promoted via the development of appropriate content and is sponsored as a part of the **CITI** (Citoyens d'internet) initiative. The initiative gives financial support and methodological consultancy to selected projects from non-profit associations in Wallonie and Brussels. It aims to develop web contents oriented towards education regarding democracy, desirable values and active citizenship and to develop the culture of ICT-supported citizens' participation.

Issues and impacts

These measures seek to facilitate more effective engagement / influence in all aspects of politics and governance. The main aims include promotion of the concept of active citizenship, two-way communication (interaction) with government online, providing for more transparency, the sense of belonging to the local community and arising out of this some form of purposeful activism. However, in the absence of specific targeting of at risk groups, their participation still remains only a potential.

Relevant success factors

Opening up communication channels with citizens; utilising widely used devices / communication channels; actively promoting interactivity; providing the (online) space for local communities and facilitating their participation; instigating debates on relevant issues; engaging groups at local level – e.g. local councils / administration levels and awareness that all politics are in the first instance local.

eLearning

For present purposes, the concept of eLearning is used to refer to initiatives and programmes aiming to facilitate self-directed personal development and lifelong learning of at-risk groups. They include the use of eLearning as a facilitating tool for returning to mainstream education, specifically targeted measures to provide appropriate learning content for at-risk groups and encouragement of at-risk groups to exploit the new forms of access to information and education on the Internet.

A good example of the use of eLearning comes from **Italy**, where a programme of computer-assisted education in the juvenile prisons [**E-learning per gli Istituti Penali Minorili**] both provides a specific content for this particular at risk group and also seeks to aid their return to education. One of the specific aims is to guarantee the right to education and to professional training to the juvenile prisoners in order to offer them rehabilitation and, crucially, facilitate their inclusion in the labour market and in society more generally. It is one of the policy measures under the programme Innovation for the Teaching Methods.

Similarly, in **Austria**, the project **Telfi** (Tele-learning for Imprisoned People) contributes to the preparation of prisoners for the time after their release, where they face increased demands from life in general and the labour market in particular. In Telfi, courses that are relevant for the national labour market have been developed, and the necessary structures implemented in prisons to make them available to prisoners. The following courses were conducted: IT-basic skills and ECDL (European Computer Driving License), languages (English, German

for foreigners), basic skills in Mathematics, reading, writing, profession specific skills that are relevant, such as word processing, wood-working, metal-working, stock management etc.

It has been realised, however, that simply offering courses is often not sufficient to improve the target group integration into the labour market. Therefore, Telfi has developed a new model that includes support of prisoners while they are in the correction system and also afterwards, given that this is the time when they are quite vulnerable. This involves a careful planning of the individual support needed to psychologically prepare the participants prior to, and facilitate during their learning phase.

Preparation for the life after prison and for the labour market participation are both measures which should promote inclusiveness. There is a good potential for a wider impact at the national level, since Telfi can demonstrate that there are many prisoners who have the desire and the motivation to work on improving their chances for social and professional re-integration. To reach these, access to Telfi will be gradually offered to other prisons and will not be limited to the initial 240 estimated participants, aiming to contribute to a general development of the education for prisoners. The project seems to have been very successful to date - 90% of the participants wanted to continue eLearning, 92% finished the courses and 83% passed the exams. With the help of eLearning, target groups that are very sceptical about traditional forms of teaching have been successfully engaged and very positive self-experiences for the prisoners, such as improvements in confidence, have been achieved.

It needs to be emphasised that the e-learning model in Telfi was supported by other activities. It was embedded in an integrated process comprising selection assistance, coaching and also incorporated forms of presence teaching and backing after release. The measure took place in different prisons with different categories of prisoner (including women). Its relevance is even greater if one considers that in some prisons the availability of (conventional) training opportunities is far lower than in regular prisons.

In **Germany**, a similar initiative for the same target group is in operation funded under the EQUAL programme. The "**e-lis**" (E-learning within penitential institutions) initiative aims to increase employability of prisoners and offenders, to facilitate the process of integration of released prisoners into the labour market by increasing their competencies in using ICTs, and to adequately integrate ICTs into education and vocational training programs for this target group. There are also several subprojects ("spin offs"). It is interesting to note that the certificates awarded do not display that the course has been attended in a penal institution. Furthermore, the learning content of the courses is presented in modules. With regard to the major outcomes of the project, also worth mentioning is the successful implementation of an e-learning and networking platform.

Another example from **Austria** - **ECDL barrierefrei!** –already mentioned earlier– demonstrates the benefits of appropriate targeting of at-risk groups, but also shows how standardised eLearning content can be utilised for this purpose. The aim is to redesign ECDL (European Computer Driving Licence) study materials to make the easier for persons with disabilities to use. It then seeks to offer better access to education to persons with disabilities and in this way to assist in their integration into education, labour market and social life. "ECDL barrierefrei" will provide course materials as well as training for trainers to allow disabled persons to acquire an ECDL. The outcome will be training materials which can be adjusted in various ways to the specific needs of the people with disabilities. All modules have been scheduled to be become available at the end of 2005 and offered at affordable prices.

In **Slovenia**, the **BITEMA** project (Bilingual Teaching Material for the Deaf) is also utilising ICTs to open up eLearning for people with disabilities. The objective is to improve the education level of adults with hearing disabilities and to compensate for their lack of basic reading and writing skills. The education methods used included web-based video, 3D-animations, videophone, web-chat etc. These were proved to be effective for developing

education materials for deaf people because they offer the possibility of using visual language together with writing. The relevance of the initiative has been reinforced by the fact that generally education offers for linguistically poor deaf persons have not been good enough in Slovenia. The target groups were young deaf persons aged 18 and 40 years. In the first phase it was important to analyse the education area for deaf adults and to train staff for the course delivery.

Another initiative from **Slovenia**, also targeting the same group (the national project **INVATECH** (2002-2004)) has demonstrated that the use of ICTs can positively motivate students regarding using the learning material and it has enabled them to acquire relevant knowledge at their own pace and in a more relaxed manner. The results achieved compared favourably to those achieved with regular methods of teaching. Using learning material in Slovenian sign language increases daily exposure to sign language and allows students to use the material at home, to repeat unclear parts of it and learn independently.

In **Germany**, the **APOLL** (Alpha Portal Literacy Learning) initiative uses eLearning to assist adults with difficulties in reading and writing. An e-learning portal is being developed for the target group, their relatives and friends, and for literacy trainers in order to combat illiteracy. APOLL represents an attempt to utilise ICTs for promoting literacy since some equivalent offline offers that exist are under-utilised, most likely due to social stigma. Because e-learners do not need to present in person at the literacy training centres, and can learn anonymously, an online training course may well be a better option. Best efforts are made to customise the learning contents. Several learning modules are individually designed, according to the individual skills and competencies of the learner. New learning targets are developed by continuously checking the rate of progress – weekly progress is automatically recorded, assessed and targets are adjusted accordingly for the future. The learning software is capable of identifying recurring mistakes and can suggest appropriate exercises in this regard. However, those with poor literacy and no access to the internet / PC could prove difficult to engage, even if targeted by proxies (their relatives).

That the use of eLearning for promoting literacy can be a challenging task is also illustrated in an initiative from **Ireland** undertaken under the Community Application of Information Technology (CAIT) programme and targeting **travellers** (an indigenous ethnic minority grouping in Ireland). This found that the benefits in terms of gains in literacy skills were more likely to materialise for those who already had some level of literacy skills to begin with.

More generally, eLearning can open up opportunities for continuing education for those who would otherwise have difficulties in this regard. For example, in **Austria** the Open access to universities [**Offener Hochschulzugang im Fernstudium**] initiative seeks to provide distance learning courses for the acquisition of certificates and degrees that are necessary for acceptance to advanced studies. Target groups are adult persons without graduation certificates from high school who wish to start regular studies at universities. Specific actions comprise the development of didactic concepts for so-called learning spaces (e.g. for motivation, effective learning techniques, etc) and study guides for the students that can flexibly be adjusted. The development of standards for the design of contents, didactics and technology should provide persistent improvements beyond the project period. These offers should be made available also in rural regions, which are without regular institutions for these courses. The time and location independent provision and the development of hybrid learning arrangements should support access to higher education.

Issues and impacts

The initiatives that were identified are primarily ones set up to facilitate personal development and lifelong learning of at-risk groups. They also include the use of eLearning as a facilitating tool for returning to mainstream education and specifically targeted measures to provide appropriate content for at-risk groups and to encourage at-risk groups to exploit the new forms of access to information and education on the Internet. Initiatives targeting prisoners

seem to have been very beneficial. While it has been demonstrated that eLearning can be effective, and indeed a powerful tool to redress the disadvantage, the use of technology needs to be context-sensitive. Another issue is to nurture and maintain the required level of motivation – eLearning is primarily self-directed activity and sufficient level of motivation is absolutely necessary.

Relevant success factors

Appropriate learning content – customisation in terms of curriculum, delivery methods, including appropriate modularisation; awareness of and sensitivity to user circumstances; appropriate certification (e.g. for facilitating progression to other course); effective use of technology solutions / learning software; nurturing, supporting and maintaining participants' (learners') motivation.

Content creation by at risk groups

The measures falling within this theme focus on facilitating at-risk groups to become content creators themselves and not just consumers of content created by others. These are targeted measures to provide at-risk groups with access to content production and distribution resources, and the skills to use these, in order to address issues of relevance to them.

An example from the **UK** is Newham e-services (incorporating **Carpenters Connect** project). The local government initiated an e-service Charter for the deprived area seeking to improve availability of ICTs, with the aim of providing free internet access and email to every resident within 10 minutes walk from their home, free internet training, and guidance on safety for young people when surfing the net. It included some aspects of eCommunity (production of local content and diffusion locally via ICTs).

A key component was the Carpenter's Connect project, which was originally part of the UK government's 'Wired Up Communities' programme. It provided high-speed broadband access for over 600 households on the Carpenters Estate. Of these, 200 families could access the Internet through their televisions and could send each other emails via a remote unit, use Microsoft Office applications and surf the web. Carpenters Connect was implemented in a 'challenging environment', in an area ranked in the lowest 3% by the Index of Deprivation and where a large proportion of residents (70-80%) are drawn from a wide variety of minority ethnic groups. The project is distinguished by the use of innovative set top box (StB) technology and high bandwidth telecommunication infrastructure (based on a mix of aerials and cables). The StB provides PC functionality and access to the Internet along with direct access to locally produced videos. About 300 Set top boxes (StBs) were delivered into three tower blocks (amounting to 69% of all housing units). The majority of residents (66%) had used the technology to 'surf the Internet'.

Of importance in relation to the content creation theme was the fact that a substantial minority of residents (17%) have been involved in the development of local content and the vast majority (95%) had viewed locally produced e-content. This was the highest figure obtained in the WuC projects. A defining characteristic of Carpenters Connect has been the local production of a range of videos, which have engaged the community and fostered greater awareness and cohesiveness. This process is viewed positively by both residents and the steering group, and transpired to be one of the most valued aspects of the initiative. A survey found that a large proportion of respondents had accessed local information available on Home2Home application (75%), locally produced videos (63%) and Newham Life (57%). The initiative also had a positive impact on the internal cohesiveness of the local community.

In **Belgium**, the **Corsaries** initiative is a non-profit organisation running several projects on digital literacy, targeting young people from diverse ethnic minorities, in the western suburbs of Brussels. It began with the promotion of digital literacy amongst disadvantaged youth and evolved with the creation of the public access point and training space – Teknoweb - in 2002, which extended the availability of ICTs to the target group. The focus is on the expression of these young people through digital means - to use ICTs (internet, digital video, e-publishing) in order to foster self-expression and communication. The main action lines were the design of individual 'blogs', use of "Webmaton", an interactive simulation game for learning to deal with situations which young migrants are confronted with in everyday life, and "Magusine", a system of stimulation and accompanying tools for self-expression or group expression on the internet, or though digital video or e-journals. The first projects started in 1999 and grew up rapidly. The initiative proved a good way to utilise ICTs to address some relevant, real life every day challenges that are pertinent to the at risk group and has shown to be effective in this regard.

In Finland, the ITSE project for persons with learning disabilities in the **Keski-Pohjanmaa** area that was mentioned earlier also included a content creation dimension. After learning how to use a computer and the Internet, participants also made a website of their own in order to further advance the use ICTs for their purposes (http://www.anothergeek.net/atk-kurssi) overcoming what are often considered as insurmountable barriers. For example, some of the participants could not read or write but they learned to utilise a drawing programme.

Finally, the Ballyfermot-based **IT Forum** in **Ireland** aims to enable the local community to benefit from developments in IT. One aspect involved the development of Community IT Resource Kits. Another - the DoIT! Classroom Initiative - was an initiative for schools to pilot and promote the use of IT in the classroom that sought to address the relatively low ICT endowment in local schools.

Issues and impacts

Measures addressing this dimension appear only in a fairly ad-hoc manner in the eInclusion context across the Member States, being explicitly mentioned in only a limited number of cases. However, it is likely that there are many small-scale local activities with local reach and impact that are less visible. The available examples indicate that, with suitable supports, significant successes can be achieved even by very disadvantaged groups. Measures calssified here under this theme also have relevance for various other themes such as relevant content / services, support for NGOs, online communities and cohesion-oriented activities, and could be included as a useful component in any or all of these. Although primarily a bottom-up approach, financial supports at EU and national levels also have an important role to play.

Relevant success factors

Providing sufficient resources, as a necessary precondition for empowerment – otherwise a risk that a phenomenon / perception of a "burden" will be created , where the disadvantaged are expected to "deliver" / build up the required capacity entirely by themselves; engaging the offline community; addressing issues of relevance; stimulation of locally produced e-content.

NGO support

These are measures aiming to help NGOs exploit ICTs in support of their work with at-risk groups. In some countries, such as Spain and Ireland this aspect has been given a lot of attention and support. In **Ireland**, the national **CAIT** initiative has provided substantial resources to enable NGOs develop ICT-related initiatives. In **Spain**, a significant effort has

been implemented under the NAPs/inclusion, including support for NGOs to purchase equipment, provision of training and support for networking.

In **Germany**, the **Welcome Online initiative** was set up in order to enable social organisations and voluntary groups to utilise ICTs for their purposes and work. Social organisations such as youth centres, publicly funded internet cafés and voluntary initiatives supporting socially disadvantaged pupils can apply for both ICT equipment as well as ICT-related training courses and materials. Based on a thorough demand analysis conducted by the project team a so-called 'welcome on-line package' is donated on a case-by-case basis. Such a package may include second-hand hardware donated by private firms, system and/or specific application software as well as training materials. In addition, training courses are available to enable on-site staff to actually utilise the donated ICT infrastructure. The underlying idea is to provide 'customised' start-up support. In accordance with the 'train the trainer' principle, training is provided to so-called 'multipliers' within the applying organisation. The Welcome Online project is the successor of the earlier project "Computer Exchange" (The project "Computer Exchange" was launched in 1999 and 'wired' more than 450 organisations for young people), and is currently in its pilot phase.

Issues and impacts

Specific and substantial initiatives to support NGOs are visible in a number of Member States, but seem not to feature much if at all in others. This is an aspect that would seem to fit well within the objectives and modus operandi of the NAPs/inclusion and is one that warrants more focused attention and EU-level impetus.

Relevant success factors

Utilisation of ICTs to complement the main activities of NGOs; using ICTs (structure and IT training) to extend the "offer" of NGOs - capacity building within NGOs and leveraging the existing internal structures and resources.

4.4.5 Society and community oriented in focus

Communities online

These initiatives focus on getting existing communities online and can have varying mixes of initial objectives ranging from digital skills development to the development of wider social capital.

An example from **Scotland** is the **Caithness Community** website which was originally built and maintained by volunteers, supporting local voluntary clubs, organisations and initiatives. The wider Caithness community had been facing problems, including a fragile communications infrastructure and links, (a perception of) remoteness, restricted access to education and training opportunities and high levels of unemployment in some areas. Examples of the online content developed include local community events such as school reunion info and links, a list of playgroups, local voluntary group events, volunteering opportunities, and free education and online courses. In the spring of 2001 two options for the website's continued survival were considered - to establish a business or to operate as a charity, and the former was chosen. Following this, Scorrie Internet Services was launched in May 2002 as a separate company to provide the web pages and run Caithness.org. It builds websites for local businesses and organisations, provides web-hosting facilities and promotes Caithness as a business and tourist area.

Having started with the initial aim of providing web pages for all the community and voluntary sector organisations in Caithness, it has extended to providing a nearly comprehensive,

magazine-based information service on the whole area with news, events and views regularly added. It is thought that this move makes it more sustainable since it is less dependent on voluntary input and on the commitment of a few individuals, although at present it also depends on the continued viability of the associated business venture. It is interesting to point out that it managed to attract the interest of region's "expats" - many expatriates or people with Caithness ancestry have become regular visitors of the website.

Another initiative from the **UK** - **EverybodyOnline (EOL)** - is rather wider, comprising a set of locally based schemes in which a locally based project office works with the community to increase access to ICT and the Internet in disadvantaged communities across the UK by removing barriers to adoption. The promotion of Internet access is based on the interests of individuals, their needs and the issues within a community (such as employability, communication and community involvement). Eight pilot projects have been developed in locations chosen to target a cross-section of UK geography, ranging from inner city to rural communities and where there are relatively large groups within these communities, identified nationally as excluded or marginalized (for example by age, gender, ethnic background, disability, previous educational opportunity, employment status).

Good sustainability and local community engagement has apparently been achieved, with the overall aim of producing a sustainable project within two to three years being reached in some locations. It has been commended in one government report as 'showing real benefits by encouraging collaboration through brokering business support for ICT in community venues, engaging children to help their grandparents and parents to get involved through 'Grandparent to school' days, developing local content – establishing community group websites, establishing partnerships – working with groups such as Citizens Online, encouraging the reluctant to 'have a go' through taster sessions in venues where they already meet (e.g. community centres), targeting the less advantaged – groups such as older people, disabled people and unemployed people and providing pathways – working with local stakeholders to develop relevant progression routes and build in sustainability'. For example, the partnership of EOL and Lifelong Learning centres in Rhyl (North Wales has led to a 75% increase in people using the centres as a pathway to learning new skills.

In **Ireland**, the **Muintir na Tire** (a national voluntary organisation dedicated to promoting the process of community development) **ICT Project** aimed to facilitate Internet use, knowledge sharing and communications within its member organisations. The focus was on the development of a portable ICT solution that could be made available to community and voluntary organisations in a cheap and attractive manner. A comprehensive internet content system was set up to serve as a pilot for the community and voluntary sector. Although the initiative was judged to have been successful in many aspects it was found that the level of website compilation by the community and voluntary organisations (affiliated to Muintir na Tire) remained quite low, and there was also low uptake of email among the community and voluntary organisations. This points to some inherent barriers preventing community and voluntary organisations being able to effectively access and use ICT and a need for capacity-building on the part of Muintir na Tire in this area. More recently, the **Mobhaile** project has begun to provide web site templates and hosting facilities for all community and voluntary groups in Ireland.

The **eTampere** programme from **Finland** is a five-year development project (2001-2005) in the City of Tampere, developing services that ease citizen's daily lives and bringing these within reach of everyone. The sub-programme Infocity develops practical online services for citizens. It includes the development and co-ordination of several sectors of City administration, including social and health services. Also a forum for local communities is provided. Although relevant information (content) is made available, it remains a challenge to reach and engage all potential users.

Issues and impacts

Activity in this area seems to be fairly ad-hoc and not very visible as an eInclusion measure, per se. It seems likely that the approach can offer the benefits of local tailoring as well as the possibility of contributing to the development of social capital. The efforts to provide large-scale, nation-wide support in this area (e.g. in Ireland) warrant follow-up to see what can be achieved on a larger scale in this field.

Relevant success factors

Effective wiring of local communities; utilisation of community settings for supporting eInclusion initiatives of relevance for at risk groups; development of partnerships – for example with relevant industries to ensure sustainability and effectiveness; facilitating communities to go online – for example by developing "portable" easily replicated ICT community applications.

Cohesion oriented

Initiatives falling within this theme focus on using ICTs to spread knowledge and appreciation of different groups within society, prevent discrimination and promote interaction between these different groups and the wider society.

In **Sweden** the **www.oppnare.se** (information campaign against discrimination) initiative is a co-operation project between the three ombudsman agencies working on prevention of discrimination because of ethnicity, sexual orientation and disability. It seeks to contribute to the prevention of discrimination, and was also accompanied by a campaign using other media channels. Another example from Sweden, **Idé-skolor**, aims to create an internet based network / forum, connecting schools successful in **combating ethnic segregation**. This is done by creating a web site where 20 selected schools can share their experiences in their work against ethnic segregation. The web-site functions both as a network and as a "show-room" for good practices.

An interesting initiative in Austria, **Youth instructs Old**, targets older people and their grandchildren and is expected to contribute to intergenerational connections. Also in Austria the **neuebilder.at** website has been set up in order to assist in developing a more positive image of people with disabilities, targeting the problem that people with disabilities are sometimes still perceived in terms of their shortcomings rather than their abilities. Sometimes such negative images have been promoted by charity campaigns, presenting disabled people as inactive persons in permanent need of care. This initiative seeks to promote a more positive perception, by showing that people with disabilities can participate in and contribute to economic and social life. The main action is the creation of a picture data base that can be used free of charge. Targeted groups are journalists, media designers and social initiatives who can use the photos in their work. The expected outcome is a permanently growing database and extensions of the duration of this measure (ending at the end of 2005) are planned.

Issues and impacts

Just a few initiatives addressing this dimension were identified in the investigation, including ones focusing on promulgating understanding, positive images and intergenerational interaction. Although they appear to have good potential there has been little assessment of impacts to date. Nevertheless, the opportunities presented by the Internet (alongside the more traditional media) for increasing awareness and mutual respect / understanding warrant further attention within diversity-oriented cohesion policy.

Relevant success factors

Utilisation of ICTs to promote positive image of at risk groups; utilisation of ICTs for diffusion of good practice scenarios; utilisation of ICTs for awareness and appreciation of diversity; integration with traditional media (channels) and co-operation with relevant agencies operating in the “cohesion” arena.

4.5 Summary assessment and analysis of the current situation in Europe

The following Table presents a summary assessment and analysis of the current situation in Europe as regards each of the thematic approaches that have been discussed in section 4.4. The summary addresses the overall level and type of activity across the EU for each theme and identifies some key policy issues arising for each.

Table 4.2 Levels of activity and policy implications of current situation in the Member States

Approach / measure	*Level of activity*	*Policy implications*
Awareness / motivation	Measures addressing this dimension can be found in all Member States at some point in the evolution of the information society. Typically oriented towards the general population, at least in the initial stages, sometimes progressing to more targeted efforts to address harder to reach groups and those tending to be late adopters (e.g. older people)	The wide variety of approaches being used may in part reflect variations in the local context but it also suggests a need for an EU-level approach in terms of facilitation of exchange of good practice and guidance in this area if socially excluded are to be effectively reached in all countries. A focused EU-wide campaign on those at risk of social exclusion might be warranted, but the question must be posed as to whether this is appropriate without ensuring that the opportunity to access and use ICTs is there (see "availability and affordability" below).
Availability / affordability	Most Member States have implemented efforts to address this dimension. PIAPs are the most common approach, being found in various forms and with various levels of coverage in almost all Member States. Financial subsidies for home computer purchase and for Internet connections are provided in various ways and at various levels in some Member States. As discussed in section 4.3, there is an important overarching dimension to this theme.	The PIAP approach has been addressed at EU-level through the eEurope targets that have been set for the Member States and the (quantitative and qualitative) benchmarking of Member State activity in this field needs to be continued, as well as systematic and large-scale evaluation of who is actually being reached by PIAPs and what are the ensuing benefits for those who are most disadvantaged. Home access to ICTs and the Internet is perhaps even more important because this is where these tools can be used as an integral part of everyday life and the ongoing benefits can be realised. There is a wide mix of approaches to supporting home access, some targeted towards those at risk of social exclusion but others focusing on the workforce and those who can avail of tax relief-based measures. There is an important need for an EU-level benchmarking of the issues and approaches in this field. The question of universal service in telecommunications for low income groups needs to be re-visited (including benchmarking of current Member State provisions under the USO Directive and / or through social welfare), the affordability of communications services and equipment relative to the incomes of low income people needs to be systematically examined across all Member States and a study needs to be carried out of the most appropriate ways to provide financial supports to benefit those most at risk because of low income circumstances. On the basis of this, EU-level guidance and OMC benchmarking needs to be put in place.
Digital literacy	Most Member States are addressing this in various ways but there is a lot of variation in terms of the scale of activity (universal, nation-wide approaches versus more limited, ad-hoc approaches). Targeted initiatives focusing on at-risk groups can be found in a number of countries. ECDL-based approaches are prominent in some but not in all Member States. As discussed in section 4.3, there is an important overarching dimension to this theme, particularly in relation to access to ICTs in schools.	There is considerable variability across the Member States in this area and not much data on who is being reached (e.g. the proportions of at-risk groups) and of outcomes (e.g. certification at particular levels). This is another area that would benefit from an EU-driven initiative that would seek to encourage EU-wide activities on an appropriate scale and targeted towards at-risk groups in particular. Such an initiative could also encourage a harmonisation of approaches (e.g. usage of ECDL) and an OMC setting of common targets and benchmarking of results across the Member States.

Table 4.2 Levels of activity and policy implications of current situation in the Member States (cont.)

Access to employment	Most Member States have initiatives in this area. Aspects addressed include support for employability, help with job-seeking and other activation-oriented supports, and usage of ICTs and eWorking to bring work to disadvantaged groups and / or isolated regions. Many initiatives are skills-oriented without a direct link to an employment opportunity. Some however include specific fast-tracking to employment (e.g. unemployed trained to fill ICT job vacancies). Some focus on positive discrimination, especially for women. Some address particular at-risk groups – disabled, immigrants, ethnic minorities etc.	In many cases there is a lack of hard evidence of what is actually being achieved in terms of increased employability and the actual achievement of employment. Although clearly upskilling is valuable in enhancing the competitiveness of at-risk groups in the labour market there would be value in more systematic assessment and longitudinal follow-up of those who have been trained in ICTs or participated in related measures. This is something that might be given direct attention in the NAPs (employment), with a focus on clear identification of the levels of at-riskness of participants and outcomes for different groups,
Alternative modes of (continued) access	This is another dimension that is not very visible within the initiatives identified as eInclusion measures, per se. In a few Member States the use of digital TV or SMS was reported as contributing to eInclusion through providing alternative (cheaper / more widely available) access platforms. Efforts to maintain / enhance access to public service through traditional means (drop-in, phone, call centre) were not much visible within the identified eInclusion measures although other sources (e.g. eUSER study) have identified such approaches in some countries. As discussed in section 4.3, there is an important overarching dimension to this theme in the context of universal access to services of general / public interest.	This is an aspect that also needs EU-level attention. Again, there would be merit in developing a common EU model of good practice as regards ensuring the continuance / enhancement of alternative modes of access to public services and of inclusion of this dimension in an appropriate OMC context.
eService usability	This is also not a very visible element in the ieInclusion measures in the Member States, being only identified as such in a minority of countries. Although there is more activity in this field (e.g. usage of life events structures in public information portals, multi-lingual sites and so on) that is not specifically located within the eInclusion context, there is consderable variation across countries (see eUSER project results for an overview of the EU Member States in this regard). Relevant aspects include portals providing one-stop-shop access, multi-lingual sites, usage of plain language and attention to usability in the design of sites and services	Some Member States have given this aspect more attention than others and some have given particular attention to aspects such as “plain language” and information provision in all key minority languages. Again, this is an area that would benefit from a focused EU-driven initiative that would build on the work under eEurope to encourage the availability of online public service for citizens. A shared model of usable, user-oriented online public services, with a focus on ensuring that those most at-risk are fully accommodated, would be very helpful for this, as well as a forum for exchange of good practice. This could be applied within an appropriate OMC context
eAccessibility	eAccessibility of online services for people with disabilities is not a very visible element of eInclusion measures in the Member States (in the sense that it is identified as an eInclusion measure, per se) , being only included as such in a minority of countries. In fact, there is a lot more activity (e.g. addressing accessibility in public web sites) underway at present (see, for example, the results of the eInclusion@EU project), although with a lot of variation across countries. As discussed in section 4.3, there is an important overarching dimension to this theme.	This is an area where regulatory mechanisms at EU and Member State levels have a key role to play. Detailed analyses of the regulatory space have been prepared in the context of the eInclusion@EU project, as well as in various documents prepared by the Commission. One of the key requirements is for strong implementation of the relevant EU Directives and Council Decisions at Member State levels (accessible public web sites, eAccessibility in public procurement, Universal Service Directive, Copyright Directive, Employment Equality Directive, etc.). This implementation process would also benefit from guidance from the Commission on what could / should be included in the national transpositions to make them “strong” and effective in this field.

Table 4.2 Levels of activity and policy implications of current situation in the Member States (cont.)

Approach / measure	*Level of activity*	*Policy implications*
Avoiding social isolation	There is little direct attention to this dimension in the identified initiatives. However, it is likely that many NGOs and voluntary players at the local level continue to provide social support to vulnerable groups, even if a link to the challenges posed by virtualisation of society is not very visible at present.	This is a dimension that would warrant a dedicated research focus (e.g. Eurobarometer survey or co-ordinated Member States surveys) to assess the impacts of virtualisation on social contacts and isolation, especially of vulnerable groups. The results of such surveys would provide a basis for deciding on what interventions, if any, might be warranted.
Avoiding second order divides	Very little direct targeting of second order digital divides, per se, was identified. There are various initiatives in relation to employment (e.g. facilitating job search for the unemployed) and in providing portal-based access to thematic services for specific groups (older people, disabled, immigrants) that can help to facilitate effective use and gaining of positive benefits, but not much evidence of concerted efforts to develop the knowledge and skills that enable real practical benefits to be gained from the Internet.	There would be merit for a more focused concentration on this aspect within the context of an EU-driven initiative to encourage EU-wide coherence in relation to digital literacy. A specific focus on skills for at-risk groups to enable them to gain real benefits (e.g. getting health information, integrating the Internet into their daily lives / benefiting from the provision of various online services) would be valuable.
Distance bridging	Initiatives addressing this aspect are visible in some Member States, especially those with isolated rural populations.	This is an aspect that could be made more visible in the context of some of the other approaches already addressed above, especially the ensuring of access for all to key public services and availing of traditional and new technology based approaches for service access and delivery.
Relevant content / services	There are quite a few examples of efforts to provide targeted content and services for various at-risk groups as well as for the population as a whole. The most frequent targeted services address people with disabilities and older people, including online services and usage of ICTs to support independent living. There are also a number of examples addressing the needs of homeless people, immigrants, those with low literacy and so on.	The level of activity in this field seems to be fairly ad hoc across the Member States, with the presence / absence of activity apparently not necessarily an indicator of the contextual importance of the theme. There are some examples of very interesting approaches (e.g. for homeless people and immigrants) and there would be good value in heightening awareness and attention to this aspect at Member State level through appropriate vehicles.
Networking	Only a small number of networking activities were included within the identified eInclusion initiatives. However, there is clearly a large amount of online networking of NGOs that is now an incorporated, day-to-day feature of their activities but is not now articulated as a “measure” or “initiative” per se.	This is possibly best seen as a cross-cutting theme that would be a relevant component of some of the other themes, including relevant content / services, support for NGOs, content creation, online communities and cohesion-oriented activities.

Table 4.2 Levels of activity and policy implications of current situation in the Member States (cont.)

eDemocracy	Initiatives in this field were identified in a small number of countries, including initiatives making democratic processes more visible and interactive and ones encouraging active citizenship, including engagement of at-risk groups	This important theme is being addressed in a patchy and ad hoc manner at the moment and, apparently, only in a limited number of Member States. It is an important theme for social inclusion and one that warrants stimulatory and guiding actions from the EU. One way that this could be addressed would to ensure attention to this dimension in ongoing and future eGovernment initiatives by the EU and through the relevant OMC mechanisms, with clear operational definition of what eDemocracy and eParticipation mean in practice, the ways that these can be (technologically) implemented, and examples of how this is actually being done in practice.
eLearning	eLearning appears in a fairly ad-hoc manner in the eInclusion context across the Member States, being explicitly mentioned in only a limited number of cases. However, innovative and successful initiatives have been developed targeting particular groups, for example prisoners. These initiatives can contribute to a wider inclusion agenda – thus eLearning initiative for juvenile offenders ensures their continual education and prevents early school leaving.	Overall this is still an under-developed field and is one that warrants more focused attention at EU and Member State levels. Some countries have extensive eLearning infrastructures in place to support vocational training (e.g. Ireland) and continuing education (e.g. UK) although not directly targeted towards at-risk groups, albeit these groups can avail of these offers free of charge in Ireland for example. Quantitative data on participation and outcomes for these extensive services would be useful in guiding decisions on the role and benefits of distance learning for social inclusion.
Content creation	Again, measures addressing this dimension appear in a fairly ad-hoc manner in the eInclusion context across the Member States, being explicitly mentioned in only a limited number of cases. In addition, it is likely that there are many small-scale local activities with local reach and impact that are less visible.	This is an element that has relevance for various other themes such as relevant content / services, support for NGOs, online communities and cohesion-oriented activities, and could be included as a useful component in any or all of these.
NGO support	Specific and substantial initiatives to support NGOs are visible in a number of Member States, but seem not to feature much if at all in others.	This is an aspect that would seem to fit well within the objectives and modus operandi of the NAPs/inclusion and is one that warrants more focused attention and EU-level impetus.
Online communities	Again, activity in this area seems to be fairly ad-hoc and not very visible as an eInclusion measure, per se	The efforts to provide large-scale, nation-wide support in this area (e.g. in Ireland) warrant follow-up to see what can be achieved in this field.
Cohesion oriented	Just a few initiatives addressing this dimension were identified within the eInclusion field, including ones focusing on promulgating understanding and appreciation of diversity, positive images and intergenerational interaction.	The opportunities presented by the Internet (alongside the more traditional media) for increasing awareness and mutual respect / understanding warrant further attention within diversity-oriented cohesion policy.

5 Enhancing the contribution of eInclusion to social inclusion

This Chapter identifies and discusses some key issues that emerge from the material presented in the previous Chapters and that need to be addressed in order to enhance the contribution of eInclusion oriented measures to social inclusion in Europe. The Chapter is organised into four main sections. Section 5.1 presents the main conclusions that can be drawn from the study's examination of eInclusion measures across Europe. Section 5.2 presents an analysis of how a variety of EU policy lines and instruments can be brought to bear in an integrated manner to reinforce the role and contribution of eInclusion measures towards meeting EU social inclusion objectives. Finally, section 5.3 discusses how the NAPs/inclusion process can be reinforced in terms of how the eInclusion aspect of social inclusion is addressed.

5.1 A need for better linking of the eInclusion and social inclusion agendas

As indicated in Chapter 4, there is currently a considerable amount of eInclusion oriented activity across Europe that has relevance for various aspects of the social inclusions agenda. Relevant measures can be found at the EU, Member State, regional and local community levels, and in the activities of public authorities, NGOs, social partners, public-private partnerships and other sectoral interests. They address a broad range of objectives through a wide array of approaches and measures. However, although most of the initiatives that were identified appear to have significant merit in their own right, the overall impression is one of a lack of a real strategic articulation of and integration of the eInclusion theme within the broader social inclusion agenda.

Better integration of eInclusion and social inclusion policy domains

The first issue, therefore, concerns the need for better integration of the eInclusion and social inclusion domains. This is something that has already been pointed to in the Joint Report on Social Inclusion in 2004, where it was recognised that there are many initiatives in the eInclusion domain that are not being picked up or referenced in the NAPs/inclusion and that there is a need for more guidance on the eInclusion aspect in future NAPs/inclusion. On the other hand, it is clear from the analysis of measures in Chapter 4 that there is considerable scope for enhancing the social inclusion dimension of the substantial eInclusion activity that is now taking place at various levels across Europe. What is needed is a clear, strategic analysis of how eInclusion issues (and the measures that are suited to addressing these) feed into the wider social inclusion agenda and, on the basis of this, a focused effort to resource and promote the types of eInclusion measure that can contribute most to social inclusion. Section 5.2 presents a first view of some of the key elements of the type of strategic perspective and approach that now needs to be developed.

Both central (universal) and local actions are needed

A second issue concerns the need to ensure that the most appropriate measures are used in tackling the respective eInclusion / social inclusion issues. Some issues, such as affordability of access to personal computers and the Internet, now basic tools of everyday life, need to be addressed in a centralised, universal manner and should not be left to the

vagaries of the marketplace or voluntary initiative and effort. Other issues of more local or sectoral interest may be better left to initiative at local / sectoral level, even if central support through funding or other mechanisms may often be needed and appropriate. This is an important consideration in relation to the role of the EU in the eInclusion / social inclusion area. As will be discussed in section 5.2, some EU instruments have a key role to play in underpinning universally applicable measures across Europe; others have a role to play in providing the funding and other supports that are needed to encourage local / sectoral initiatives to flourish.

Consistency of approach and quality across the EU, where appropriate

A third issue and one that is partly connected to the previous one is the need for efforts to ensure consistency of approach and quality across Europe for those thematic measures where this is appropriate and warranted. Whilst respect for subsidiarity must be maintained and bottom-up activity has a central role and legitimacy in many aspects of eInclusion and social inclusion, there is also an important need for EU-driven measures (e.g. within OMC processes) to encourage consistency and quality in key fields, such as digital literacy and equality of access to and usability of services of public interest.

Targeting those most at risk

Another issue concerns the importance of increased attention to targeting those most at-risk when publicly-funded measures to address eInclusion are being introduced. The evidence in Chapter 4 suggests that whilst there are quite a few examples of well-targeted efforts at both Member and local level, the bulk of activity and funding in the eInclusion area seems so far to have been more generally oriented and distributed. At the EU level, there has so far been relatively little attention given to the question of how Community instruments can be used to target specific at-risk groups in this area.

Monitoring and evaluation

Finally, there has not yet been much effort given to monitoring and evaluation in this area. This applies both to eInclusion initiatives in themselves as well as to the more difficult question of how eInclusion measures are contributing to wider social inclusion. There are a number of levels at which more and better monitoring and evaluation is needed. At the EU level, there is a need for more assessment of the extent to which Community instruments (e.g. the structural funds), OMC efforts (e.g. eInclusion measures in the framework of eEurope, or ICT-related measures in the NAPs/employment context) and national implementations of Community Directives (such as the Universal Service Directive) are actually reaching and having socially inclusive benefits for those who are most at risk of social exclusion.

Such monitoring and evaluation can build upon the social inclusion indicators agreed at the Laeken Summit at the end of 2001[25]. However, none of the current indicators address the eInclusion theme. In addition, although Member States were encouraged to use a variety of

[25] These indicators are a key point of reference in the National Action Plans (NAPs). They include ten primary, and eight secondary indicators, all concerned with population outcomes at the level of individuals and households, in terms such as low income, unemployment and ill health (Social Protection Committee, 2001; Atkinson, 2002; Atkinson et al., 2005). These indicators capture many of the risks of multi-dimensional disadvantage at the level of persons and households. They also deal with the persistence of poverty over time – and thus some of the inter-temporal and dynamic aspects of social exclusion.

tertiary indicators, chosen at the national level to supplement these common indicators, only in a few cases do these make reference to eInclusion or e-exclusion. On the other hand, as already noted earlier, the Joint Reports on Social Inclusion do highlight the new opportunities and risks associated with the new information technologies and gather together such data as the individual NAPs provide on measures in this area (European Council, 2004, para 6.1). Indicators of eInclusion and e-exclusion would therefore seem obvious elements for further elaboration within the future development of the NAPs.

A variety of possible indicators are already available (Room, 2005) and some are already included in EU benchmarking, for example, the eEurope indicators 2005. Annex IV reviews the literature dealing with these indicators of eInclusion or eExclusion and offers a menu of possibilities that are consistent with our analysis of social exclusion in Chapter 2 of this report.

Apart from the EU level, there is a need for a similar monitoring as well as for an increased emphasis on evaluation of effectiveness and outcomes of measures that have been implemented at national and local level. At all levels there is a need for a lot more effort to assess outcomes in an ongoing, follow-up manner to see whether and how the acquisition of ICTs and / or of digital literacy has social inclusion impacts over time.

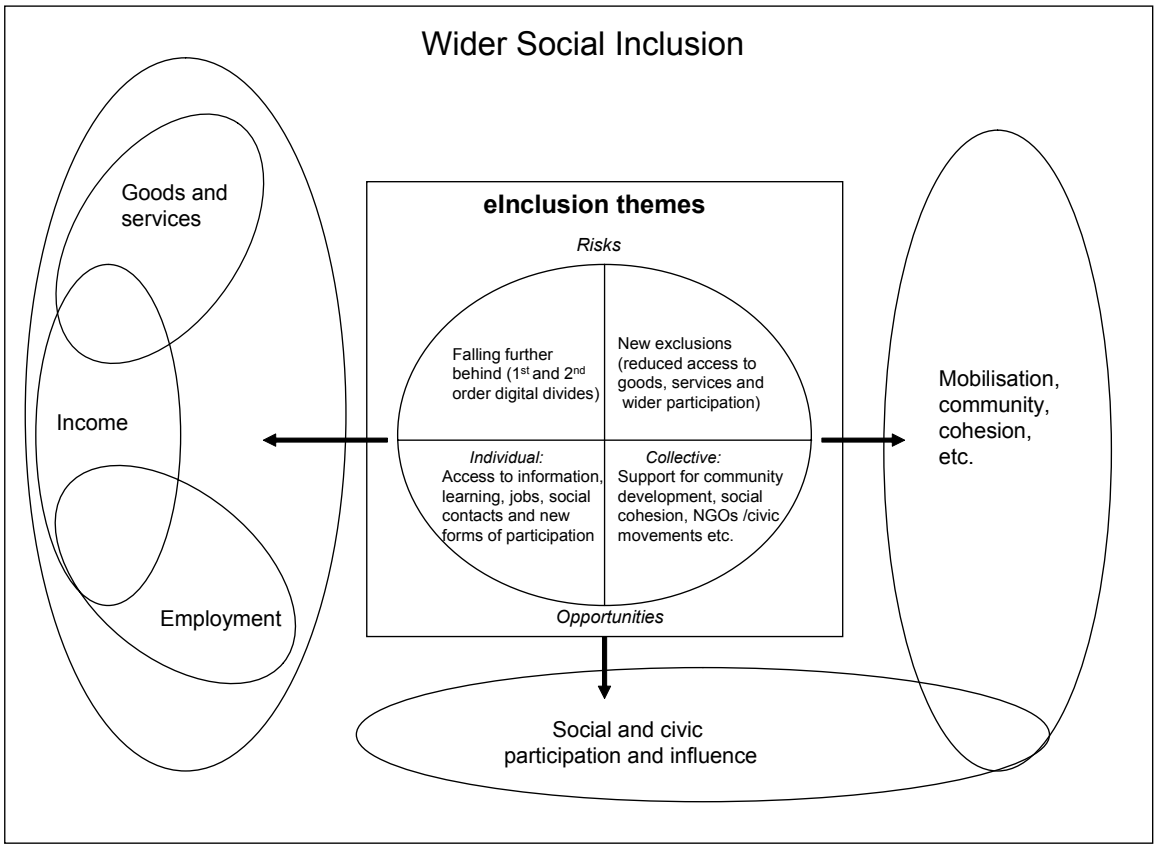
5.2 Developing a coherent approach at EU level

At the EU level, perhaps the biggest challenge at present is to develop a coherent approach that clearly identifies the ways that eInclusion is expected to contribute to social inclusion and optimally taps the different competencies and instruments that are available to the EU institutions to support the realisation of this contribution. Chapters 2, 3 and 4 of this report have provided an extensive mapping of the eInclusion and social inclusion terrains and the role that eInclusion oriented measures can play in relation to social inclusion. This section discussed how the role of the EU in relation to this can be reinforced and further developed.

Key links between eInclusion and social inclusion

Figure 5.1 presents a simplified schema of some of the key links between eInclusion and social inclusion, based on the analyses presented in the earlier Chapters of this report. It shows three dimensions to social inclusion that warrant particular attention: the practicalities of access to income, employment, and goods and services; a person's opportunities for and extent of social participation and civic engagement and influence; and the more collective aspects of mobilisation of communities of interest, community development and wider social cohesion. Both the risks and the opportunities that ICTs present in relation to these themes need to be addressed. Risks include the possibility to fall further behind (because of first and second order digital divides that reinforce existing lines of socio-economic fracture) and to experience new exclusions because of the increasing role of the Internet and online services in key aspects of everyday life. Opportunities include those presented by ICTs for individuals in their own lives and those that can support collective activities through the better networking and other capabilities offered by ICTs.

Figure 5.1 Some key links between eInclusion and social inclusion



Reinforcing and enhancing the EU role

Figure 5.2 presents a schematic mapping of some of the instruments and measures available to the EU in the framework of leveraging the potential contribution of eInclusion to social inclusion objectives. Although the EU, Member State and NGO/sectoral levels and their interactions are all included, the main focus in this section and in the report overall is on what can be done at the EU level to foster a more co-ordinated and coherent approach across the EU.

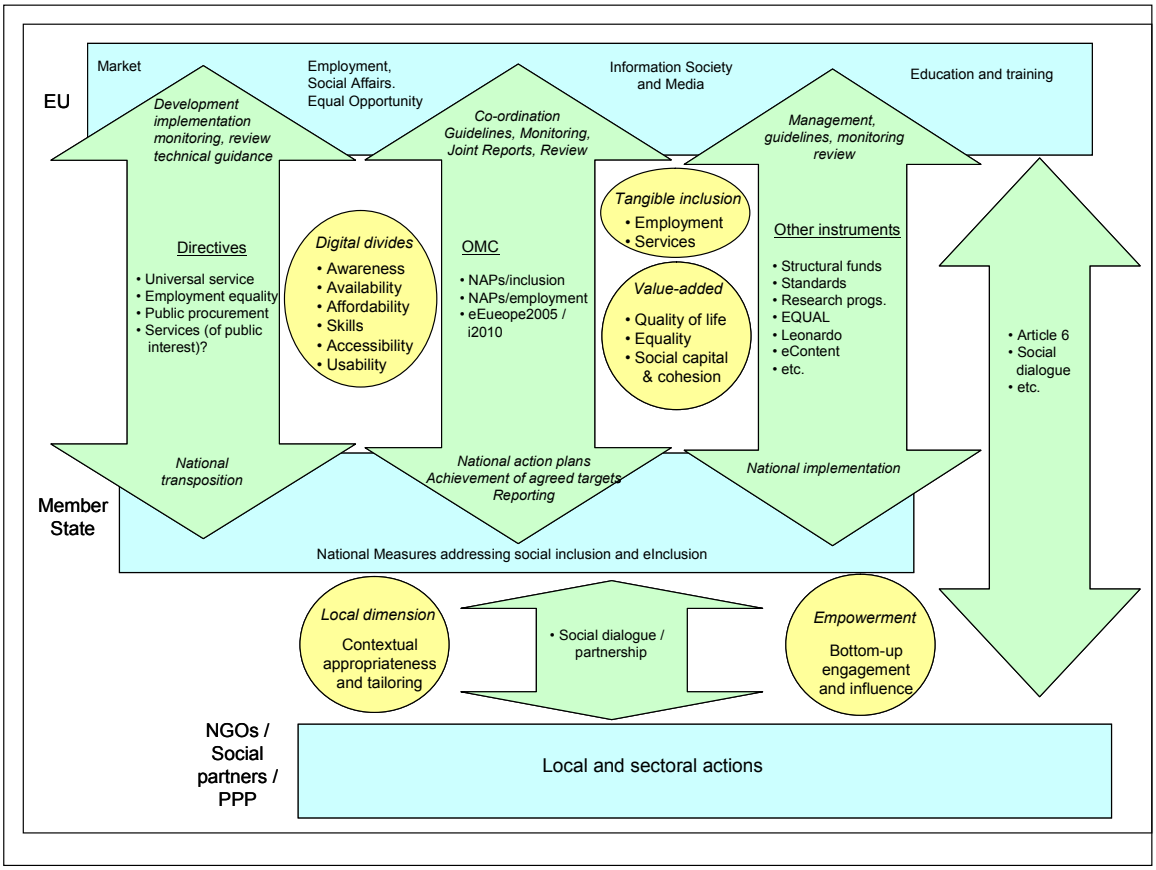
Directives

As indicated in Figure 5.2 and discussed earlier in section 4.2 there are various EU Directives that have important potential to foster eInclusion in the service of social inclusion throughout the EU. The *Universal Service Directive* provides scope for action in relation to affordability of telecommunications. The current review of the communications regulatory framework provides an important opportunity to assess whether this scope is being fully utilised at Member State level. Attention needs to be given not just to access to and costs of fixed telephony services but also to issues of affordability in relation to mobile telephony and Internet access and usage. The fact that the Internet is now becoming an essential tool in may aspects of daily life (for example, searching for health information) indicates that the time has come for consideration to be given to including the Internet within the scope of universal service provisions

The *Employment Equality Directive* provides scope for action in relation to ICTs in the workplace, for example, in ensuring that ICTs do not present barriers for people with disabilities or older people, and that the positive opportunities of assistive technologies are exploited. The extent to which the aspects of eInclusion are being addressed within the

context of the "reasonable accommodation" and indirect discrimination provisions of the Directive needs to be examined and the European Commission should consider providing guidance to Member States in relation to this.

Figure 5.2 Overview of EU competencies and instruments, and of EU targets in this field



Source: the authors

The *Public Procurement Directives* now encourages attention to eAccessibility in public procurements of ICTs. As in the case of the employment equality, there is a need for an examination of the extent to which this aspect is actually being addressed in public procurements in the Member States. In addition, the European institutions can take the lead through the incorporation of eAccessibility in their own procurements and through the inclusion of eAccessibility in the requirements placed on expenditure of the structural funds.

Finally, a Directive on protection of *services of public interest* would provide an opportunity for an EU-driven effort to ensure that at-risk groups are not disadvantaged by the increasing provision of key public services in online mode. This could address both the importance of maintaining more traditional ways of accessing key services as well as ensuring that online offerings are usable and accessible.

In all cases, the challenge for the EU (and the Member States) is to optimally use the leverage that these Directives provide. This means strong transpositions of the Directives at national level in ways that target eInclusion and social inclusion issues, monitoring of the transpositions at EU level and regular assessment of their impacts, as well as EU-level provision of technical or other guidance, and regular review in the light of changing social and economic circumstances and technologies.

Open Method of Coordination

Another powerful opportunity for EU-wide measures is provided through the Open Method of Co-ordination, currently being applied in a number of areas of EU policy. As already noted in Chapter 4, there is scope for more attention to eInclusion and social inclusion issues in these various OMC contexts, particularly as regards targeted attention to and monitoring of progress in terms of reach to and benefits for those who are most at risk. The particular opportunities that arise in the context of the NAPS/inclusion are discussed in more detail in section 5.4.

Other opportunities arise in the context of eEurope 2005 and its successor, the i2010 initiative, that is currently being formulated. It will be important that this (both of them?) gives due prominence and attention to eInclusion measures that target the social inclusion concerns of at-risk groups. The NAPs/employment also provide an important context. So far, however, only limited attention has been given to the ICT dimension for groups that are disadvantaged within the workforce or for those groups that are especially at-risk and currently outside the workforce. In addition, the Joint Employment Reports indicate that only limited progress is being made against the objective of giving every worker the opportunity to achieve digital literacy. There is a need to reinforce attention to ICT skills and other aspects of the exploitation of ICTs in support of increasing access to quality employment and equality of opportunities for all in this field.

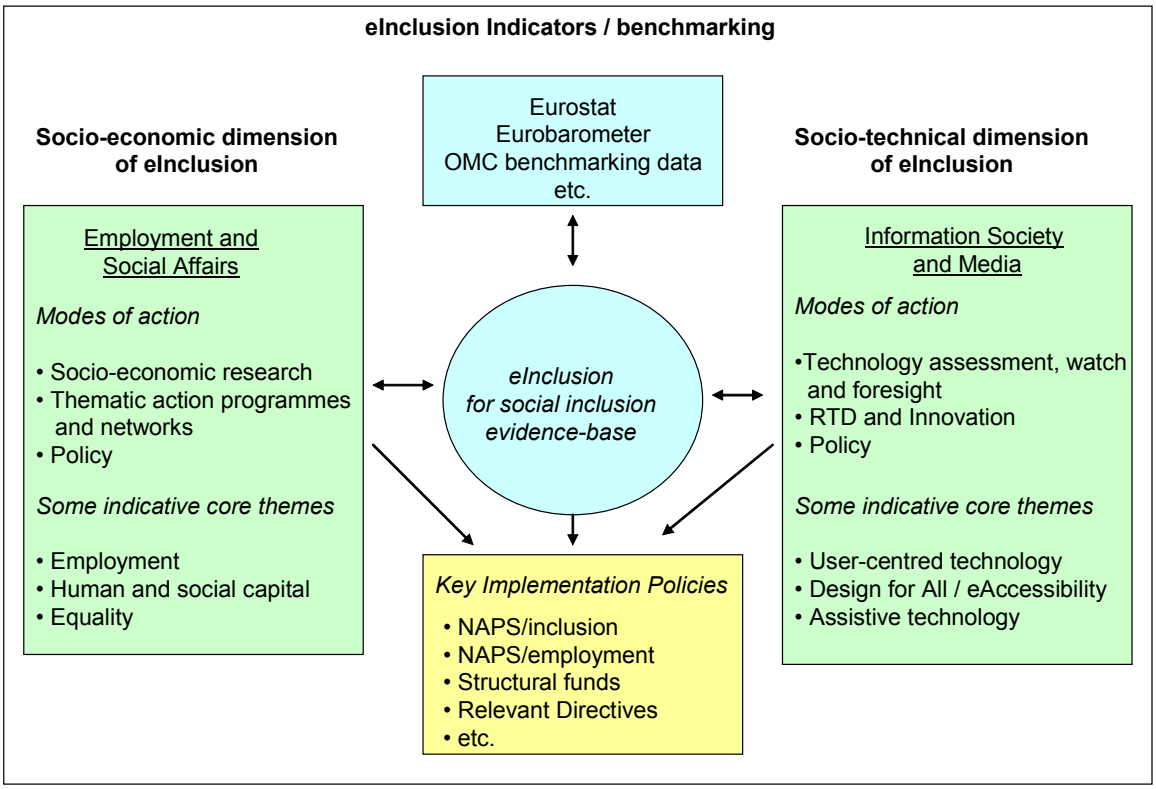
Other instruments

Finally, Figure 5.1 indicates a number of other instruments that also have relevance for promoting eInclusion at the service of social inclusion. These also warrant more attention and reinforcing in the context of a co-ordinated and coherent EU approach. The EU Structural Funds provide one set of instruments and there is scope for more targeted requirements and guidelines that address eInclusion for social inclusion and that ensure that public monies proportionately reach and benefit those most at risk. Standards provide opportunities to introduce more harmony and consistency across Europe in important technical areas, such as eAccessibility. The major research programmes, especially the Framework Programmes, already have an eInclusion dimension and this needs to be reinforced and carefully targeted for the next phase (FP7). The eContent programme, amongst other things, promotes linguistic diversity in the information society. Finally, programmes such as EQUAL and Leonardo already address aspects of eInclusion in the service of social inclusion, as do some activities in the context of EU support for the NGO sector. These provide important opportunities to support local level and bottom-up initiatives addressing the eInclusion dimension of social inclusion, and this aspect warrants enhanced attention and reinforcement.

Coordinating the EU activities in this field

Although it is clearly not the role of the authors of this report to propose how the EU institutions manage their own affairs it is nevertheless useful to point to some core institutional units and activities that could be expected to play a pivotal role in managing the development of a more co-ordinated approach. These are schematically illustrated in Figure 5.3, with DG Employment and Social Affairs and DG Information Society and Media seen as having important and complementary contributions to make, supported by Eurostat and other statistical/ benchmarking services.

Figure 5.3 Pivotal EU units and activities in the development of a co-ordinated approach



Source: the authors

5.3 Reinforcing the eInclusion dimension of NAPs/inclusion

The main Annex III to this report presents a country-by-country profile of the ways that eInclusion is addressed in the current NAPs/JIMs. It is clear that the profile of eInclusion measures varies widely across the Member States. In addition, it is clear from Chapter 4 that there is a large amount of eInclusion oriented activity that has relevance for social inclusion but is not being picked up or referred to in the NAPs. This section takes each of the main objectives of NAPs/inclusion and briefly discusses how the eInclusion element could be reinforced and brought more strongly to bear in each case.

Facilitate participation in employment

Although there is already quite a lot of activity in the Member States focusing on ICTs and employment for vulnerable groups in the labour market, there remains considerable scope for reinforcing efforts in this area in the context of the NAPs/inclusion. The key challenge is to ensure effective targeting of at-risk groups and effective interventions for the groups that are targeted.

In principle, ICTs offer some potential to address all of the sub-themes under this objective:

- *Access to stable and quality employment for all women and men who are capable of working* - More ICT skills can help access to better jobs and facilitate mobility within the labour market, provided such jobs are available.

- *Pathways to employment training* - ICTs can also support the delivery of training to those who might otherwise be hard to reach, such as prisoners, although non-technological supports may sometimes be especially important for those most at-risk.
- *Reconciliation of work and family life, including childcare and dependent care* - ICTs can support more flexible forms of working, such as eWorking, although there are doubts as to how many people can be really helped in practice because of the constraints of their jobs and/ or their home environments, and such constraints may be especially pertinent for those most at-risk.
- *Using the social economy* - there may be some opportunities to support and / or stimulate the social economy through ICTs, for example, networking of social economy players or new ICT-based social economy enterprises in the community; however, a lot of social economy activity is local and hands-on.
- *Improving employability* - ICT skills are relevant for employability although many of the jobs openings for those most at-risk will continue to be non-ICT jobs; as in the case of pathways to employment / training there are opportunities presented by ICTs in support of job-seeking and activation measures but, again, non-technological supports may sometimes be especially helpful for those most at risk.

Overall, however, the employment aspect of the NAPs/inclusion presents in a somewhat loosely defined set of objectives in relation to social inclusion, in the sense that the specific issues for those most at-risk are not immediately visible. Therefore, for future NAPs/inclusion it would be useful to further develop this objective with a focus on the types of intervention most needed for those most at risk and then map relevant eInclusion oriented measures onto this analysis.

Facilitating access to resources, rights, goods and services for all

The current sub-objectives in this area are:

- Social protection systems – ensure resources to live in dignity; overcome obstacles to employment,
- Housing and basic services (decent and sanitary),
- Healthcare (appropriate to situation, including situations of dependency),
- Education,
- Culture,
- Justice,
- Sport and Leisure,
- Transport.

One way to approach the development of an eInclusion dimension here would be to try to map ICT-related issues to each of these themes. In fact, from the analysis of measures in Chapter 4 it is possible to find ways that ICTs can play a role in access to services in all of these areas. This is something that could be pursued in the further development of the NAPs/inclusion for the next and subsequent rounds. A particular priority should be a focus on core eInclusion issues in relation to:

- Access to online services of public interest (affordability, accessibility/ usability etc.),

- Continued and equal access to services of public interest (through traditional modes of access and delivery).

Preventing the risks of exclusion

The following sub-objectives are included in the current NAPs/inclusion:

- eInclusion,
- Over-indebtedness,
- Homelessness,
- Family solidarity.

It is to be hoped that the analysis in this report will provide support for the further elaboration of the first sub-objective. For the others, the eInclusion element is likely to have only a marginal relevance, even if it has some contribution to make. In the context of over-indebtedness, ICT-based budget management support tools may have a contribution to make. Chapter 4 provided examples of practical supports for homeless people through ICTs. ICTs may also have some role to play in family solidarity, for example, in the intergenerational examples in Chapter 4 as well as for helping families to keep in touch at a distance, although potential downsides in terms of social isolation as a result of increasing virtualisation also need to be guarded against.

Helping the most vulnerable

The current sub-objectives are:

- Persistent poverty,
- Children,
- Areas marked by exclusion.

It is hard to envisage any major direct impact of ICTs, per se, on persistent poverty. Nevertheless, the potential contribution to enhanced employment opportunities (see objective 1.1) can be expected to have some relevance. In addition, and linked to actions targeting the needs of children, good educational outcomes, including ICT skills, for school children at risk of poverty is central to breaking the cycle of poverty.

In this regard, the need for ensuring that disadvantaged children have equal access to ICTs in schools, in ways that meet their needs and are appropriate to their circumstances, has been documented in Chapters 3 and 4 and should be taken into account in the future NAPs/inclusion. In addition, as discussed in Chapter 4, other relevant ICT applications include those for monitoring/ alerting about truancy and eLearning for children who are ill or are on the move.

Finally, spatial exclusion is a high risk for those who live in remote places and those who live in areas with high concentrations of deprivation. Chapter 4 identified various ICT-related measures that have relevance in addressing spatial issues, including distance bridging in access to services and provision of broadband infrastructures. However, ICT strategy for remoteness has to be part of a wider strategy for ensuring delivery of state and market services to such communities.

Mobilise all relevant bodies

ICTs would seem to have considerable potential to support the mobilisation of all relevant bodies. There are examples in Chapter 4 of some Member States who have given this aspect a good deal of attention, especially in relation to supporting and empowering NGOs. The eInclusion dimension of this aspect could be made more visible and further strengthened in the next round of NAPs/inclusion.

All in all, there are opportunities for reinforcing the eInclusion element not only in relation to the objective of preventing the risks of social exclusion – as it is reflected in the current NAP's/JIMs - but in relation to other objectives motioned there as well. Positive impacts on poverty and social inclusion may not necessarily materialise in a direct manner, and the use of ICTs in its own may not be a "killer application" as regards the objectives set out in the NAPs/JIMs. Nevertheless, both exploiting the positive potentials and preventing the risks associated with technological changes is likely to gain in relevance in relation to the social inclusion agenda as the development towards the Knowledge Society further progresses.

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Annexes

Annex I: National Profiles

This annex looks at profiles of evidence at the national level to assess how far Member States have similar profiles in relation to social exclusion and eInclusion. Further, a profile is made of member states according to several aspects of ICT penetration and maturity.

In the context of this study, this provided a structured basis to help with the selection of countries for the in-depth investigation of measures and, later, for the contextual interpretation of the identified measures. This type of information can also be of value in the development of technical guidance for Member States when working to tune their eInclusion efforts to the national circumstances.

I.I Poverty, Social Exclusion and European Welfare States

Profiles of member states' systems of social protection can be interpreted as being directly linked to their profile of poverty and social exclusion. Social protection and the "welfare state" are viewed primarily as a mechanism for social cohesion and many parts of the welfare state operate to either reduce the potential of or respond to the effects of poverty and social exclusion. However, as we hinted previously in our discussions of national definitions of social exclusion, each welfare state adopts its own characteristics of provision and regulation. Are there clusters of states that can be used to show how patterns of social exclusion are shaped in part by the array of social policies that are in place in different countries? New programmes to promote social inclusion mobilise and build on to the existing array of social policies, with the resources, traditions, and institutional procedures of each welfare state. To study the significance of ICT for social exclusion and for social inclusion policies, we therefore need to take differing social policy regimes into account.

I.I.I Welfare State Regimes

In the 1960s and 1970s, most comparative study of welfare states was concerned with the alleged *convergence* of all advanced industrial societies (Kerr 1964; Bell 1974. One strand of this work was concerned with welfare. Here a common focus was on welfare 'effort', as measured by the proportion of GDP made up of expenditure on welfare of different sorts, and the extent to which this could be explained by levels of GDP (Wilensky 1975). This interest in welfare effort, as a key dimension for comparing different national welfare systems, has not disappeared. Bonoli (1997), for example, provides a two-by-two classification of West European social security systems, by combining Wilensky's 'welfare effort' (high/low) with the distinction between Beveridgean and Bismarckian regimes: the former offering flat-rate benefits on a universalist basis, the latter offering graduated benefits according to occupational status.

Much of the research literature has moved away from comparing welfare systems according to their welfare effort: the focus has shifted to their institutional arrangements, the balance of social interests that they represent, and their implications for social stratification. The comparative literature on welfare moved from one of convergence to divergence and understanding and difference. In the hands of some writers, these alternatives are crystallised into distinct regimes or paradigms.

It is by no means self-evident that distinct social policy regimes should exist. It would seem just as likely that different countries would display a myriad of different social policy

approaches, spanning the range of possible variations in a continuum. To claim that these variations cluster into a few well-defined regimes is much more ambitious. And to claim that the whole range of a given country's social policies then conform to a single consistent regime – that there are close affinities between health policy, social security, housing policy etc – is even stronger.

Titmuss distinguished three types of social policy regime: the residual welfare model; the industrial achievement-performance model; and the institutional redistributive model (Titmuss 1974, chapter 2). These were however models: Titmuss did not go as far as some have done in identifying these with particular countries. Rimlinger (1971) was less preoccupied with labels, more interested in distinguishing distinct national trajectories for social policy: driven by liberal bourgeois interests in France and the Anglo-Saxon countries, conservative paternalism in Germany, communist collectivism in Russia. Esping-Andersen (1990) combined Rimlinger's concern with class interests, Titmuss' concern with life chance redistribution, to produce 'three worlds of welfare': liberal, conservative and social democratic.

The Legacy of Esping-Andersen

Esping-Andersen's treatment of welfare regimes has since its appearance provided the most common point of reference for other comparative welfare researchers. It has however been subject to a wide range of criticism, even if its basic tenets remain largely intact (Arts and Gelissen 2002). The differing treatment in social welfare systems of men and women have been highlighted (Lewis 1992); the role of interests other than those associated with class have been acknowledged (Room and Perri 6 1994); non-state actors have been given more attention (Gough et al. 2004); additional welfare 'worlds' have been proposed, capturing the distinctive features of southern Europe, the Antipodes, east Asia etc (Leibfried 1992; Castles 1993; Ferrera 1996; Gough 2004). Some of this literature has been brought together by Arts and Gelissen (2002), who also provide a convenient overview of the classifications of countries that emerge from these variations on Esping-Anderson.

Much of Esping-Andersen's treatment is focussed on social security: the generosity of the statutory cash benefits system, concerned with maintaining the level of consumption which people enjoy when their labour market earnings are interrupted. Fiscal welfare through the tax system and occupational welfare through employers - central themes of Titmuss's writings – are given only subsidiary treatment. With our interest in poverty and social inclusion, this definition of the policy terrain must however be questioned.

As we are interested in financial poverty, Esping-Andersen's approach may be too broad, with its primary focus on social security in general. Gough has conducted an analysis concerned with means-tested social assistance in particular. He and his colleagues distinguish four types of social assistance programme: general, categorical, housing assistance and other tied schemes; they also compare their extent, programme structure and generosity (Gough et al. 1997). Drawing on these different features, they provide a map of eight social assistance regimes: using cluster analysis Gough subsequently modifies this map and produces seven regimes (Gough 2001) However, our interest is additionally in social inclusion and must also take account of a wider range of deprivations, for instance, housing, social services and health care. These are largely ignored by the foregoing writers, except to the extent that some countries cater for these needs by providing cash benefits. Among those who have sought to address this gap in relation to social care services are Alber (1995), Bahle (2003) and Kautto (2002).

Kautto analyses social protection expenditure in order to distinguish cash transfers from services in kind: in other words, different directions of 'welfare effort'. He also tracks changes over time. Using cluster analysis he generates three groups of countries (Table 3). What he also underlines is that while levels of welfare effort along the two dimensions are

correlated with each other, countries make different trade-offs between the two, and they appear in some degree to be substitutable. Alber and Bahle are concerned more with the institutional and political factors which shape and constrain the delivery of social services: they offer a plausible account of the different trajectories of service development in several EU countries, but not in a form that generates a list of members of different 'families'. Nevertheless, their very different approach does not produce conclusions that are obviously inconsistent with those of Kautto.

Social inclusion concerns will also require a focus on policies which invest in their capacities to protect their future levels of consumption - most obviously through education and training, skills and human capital. Whether or not education, training and skill regimes map readily onto social security regimes is then an open empirical question. It is possible that the level of effort that a country makes in relation to education and training is closely associated with its social security effort and that similar principles of distribution – liberal, conservative, social-democratic – apply in both realms. It is also possible that there are trade-offs between the two, and that they in some degree represent alternative strategies for meeting socio-political goals.

Among the contributors who encompass these elements of human investment in comparative analysis are Estevez-Abe, Iversen and Soskice (2001)[1] They analyse unemployment insurance on the one hand, employment security on the other, in relation to the incentives which employees face to invest in firm-specific, industry-specific or general skills. There is, they argue, a consistency between a country's policies on unemployment insurance and employment security on the one hand, the array of skills which employers can mobilise on the other. This then produces five clusters of countries according to social protection and skill profiles.

A changing picture

There are other reasons why existing regime analyse are poorly suited to our needs – they concentrate on member states of the old EU15 but have yet to expand sufficiently to cover the new member states and accession countries. The problem of inbuilt statis in Esping-Andersen and his followers means they have problems explaining regime change. This is also not particularly helpful if the task is to explore the openness of social arrangements to new policy initiatives, which might for example transform patterns of social exclusion and inclusion. It is therefore also important to identify the extent to which, in face of internal strains and external challenges, public policy-makers are driving social policies in new directions, challenging the 'path dependency' and institutional lock-in of the existing regime.

This was precisely the question addressed by Ferrera, Hemerijck and Rhodes, in their report on social policy prepared for the Lisbon Summit (Ferrera et al. 2000). Taking Esping-Andersen as their point of departure, they surveyed the challenges which face the welfare systems of Western Europe, including those rooted in globalisation, and assessed the ways in which they were responding to these challenges. Their findings were three-fold:

- welfare regimes differ in the trade-offs they have traditionally made between income security and employment: liberal welfare regimes such as that of the UK have prioritised employment over poverty reduction; conservative regimes such as Germany have protected their income maintenance schemes but have then seen unemployment remain high; the Scandinavian countries have done relatively well on both fronts, although they remain heavily dependent on public sector employment;
- national prosperity under conditions of intensified global competition depends on welfare systems shifting towards 'flexicurity', involving a closer linkage between

[1] also of some relevance are Brown, Green and Lauder (2001) and Crouch (1999).

income security on the one hand, activation policies on the other, designed to enable and encourage people to participate within a dynamic labour market;

- while each welfare regime imposes certain institutional constraints on such adjustment, there is still scope for distinctive policy initiatives: each welfare regime offers examples of countries which are adjusting well to these new challenges.

Ireland, Denmark, the Netherlands and Portugal are singled out, as countries from different welfare regimes which have broken out from these institutional constraints. This sort of exercise, distinguishing countries not so much by the social regime within which they have traditionally been embedded, but more by their deliberate and dynamic movement away from that inheritance, is also of potential relevance to this study: whether we are examining the political feasibility of radically new policies for e-inclusion, or selecting countries for case studies that are likely to be of particular interest.

The dynamics of regime change are of even more obvious interest in the case of the countries which during the 1990s made the transition from centrally planned state socialism, some of which in 2004 joined the EU Nevertheless, they show significant variations in the patterns of social inequality with which social policies are now faced, with income inequality in Poland for example far higher than in the Czech Republic (Manning 2004). A number of scholars have tried to extend Esping-Anderson's welfare regime analysis to the various types of social policy configuration emerging in these countries (Manning 2004). The workplace entitlements to welfare inherited from communist days led some to expect corporatist Bismarckian welfare policies as most likely to emerge: social democratic policies were less likely, in conditions where the fiscal base was weak. At the same time, however, pressures from the World Bank and the IMF pushed these countries towards liberal, residualist welfare policies, supported by social assistance (Deacon 2000). The EU acquis is of course an additional influence. Any analysis of emerging welfare regimes in these countries has therefore to take account of these international pressures.

More generally, indeed, the new configurations of welfare that are emerging, in both eastern and western Europe, have to be understood by reference not only to internal strains, but also to external pressures at European and global levels. The challenge for contemporary scholarship is to move away from somewhat static accounts of distinct national regimes, emphasising institutional lock-in, towards more dynamic accounts of regime break-out within a multi-tiered world (Guillen and Palier 2004).

I.I.II Empirical Patterns of Poverty and Social Exclusion

It is against this theoretical background that we can now consider what scope there is for assigning countries to particular 'families' of social policy regimes. We review the maps of regimes that emerge from the various studies to which we have referred to previously and consider whether, notwithstanding their differences of approach, there may be some commonalities. Even this aim may however be too ambitious, if it is intended to provide the eAccess4inclusion project with a point of reference for the selection of countries for empirical study. The studies which we are reviewing use data sets referring to various moments over the last twenty years: they often use indicators which are specially constructed and which cannot readily be updated by reference to current generally-available statistics. It would be necessary to make very strong assumptions about path dependency and lock-in not to be worried about this vieuillissement.

As far as the old EU-15 is concerned, Table 1-1 summarises the main variables employed by the various studies discussed so far. Figure 1-1 then gives the results of an analysis of the various 'families of nations' that are proposed by the wider literature. This could provide a point of reference for the selection of EU15 countries in the eAccess4inclusion project.

More difficult is to establish any map of welfare regimes in the new accession countries. This is in part because of the processes of reconfiguration still under way after emergence from the communist regimes; in part because of the lack of appropriate data. Thus, for example, the Social Situation in the European Union 2004 (European Commission 2004) provides data

Table 1-1: Variables use in Regime Analysis

Author	Policy Field	Variables for Clustering Families of Nations	
Wilensky	Social Security	Welfare effort	Social Expenditure as %age GDP
Bonoli	Social Security	Welfare effort	Social Expenditure as %age GDP
		Coverage	Beveridge or Bismarckian model
Esping-Andersen	Social Security	Decommodification	Replacement Ratios Restrictions on entitlement
		Stratification	Beveridgian versus Bismarckian versus Occupational benefits
Gough	Social Assistance	Extent	Social assistance expenditure as %age of GDP SA recipients as %age of total population
		Structure	Composite of various indicators of administration
		Generosity	Benefit levels after housing costs
Kautto	Social Care	Service versus cash strategy	Expenditure on welfare services as %age of GDP Expenditure on cash benefits as %age of GDP
Estevez-Abe, Iversen and Soskice	Skill Profiles and protection	Unemployment Insurance	Replacement Ratios Restrictions on entitlement
		Employment Protection	Legislation Company-based protection
Ferrera et al	Social security and labour market	Shift towards 'flexicurity'	Synthesis of quantitative and qualitative materials

Source: The authors

for the accession countries on almost none of the variables listed in Figure 1-1, not even social expenditure as a %age of GDP. The only variable, indeed, is the organisation of social security – more specifically the first tier of pensions – on Beveridgean or Bismarckian principles or, as a third possibility, individual funded contributions without any tax supplement. As far as social policy regimes are concerned, this may then be the – very inadequate – point of reference for selecting from among the accession countries a broadly based sample for empirical study.

Figure 1-1: Welfare state regimes

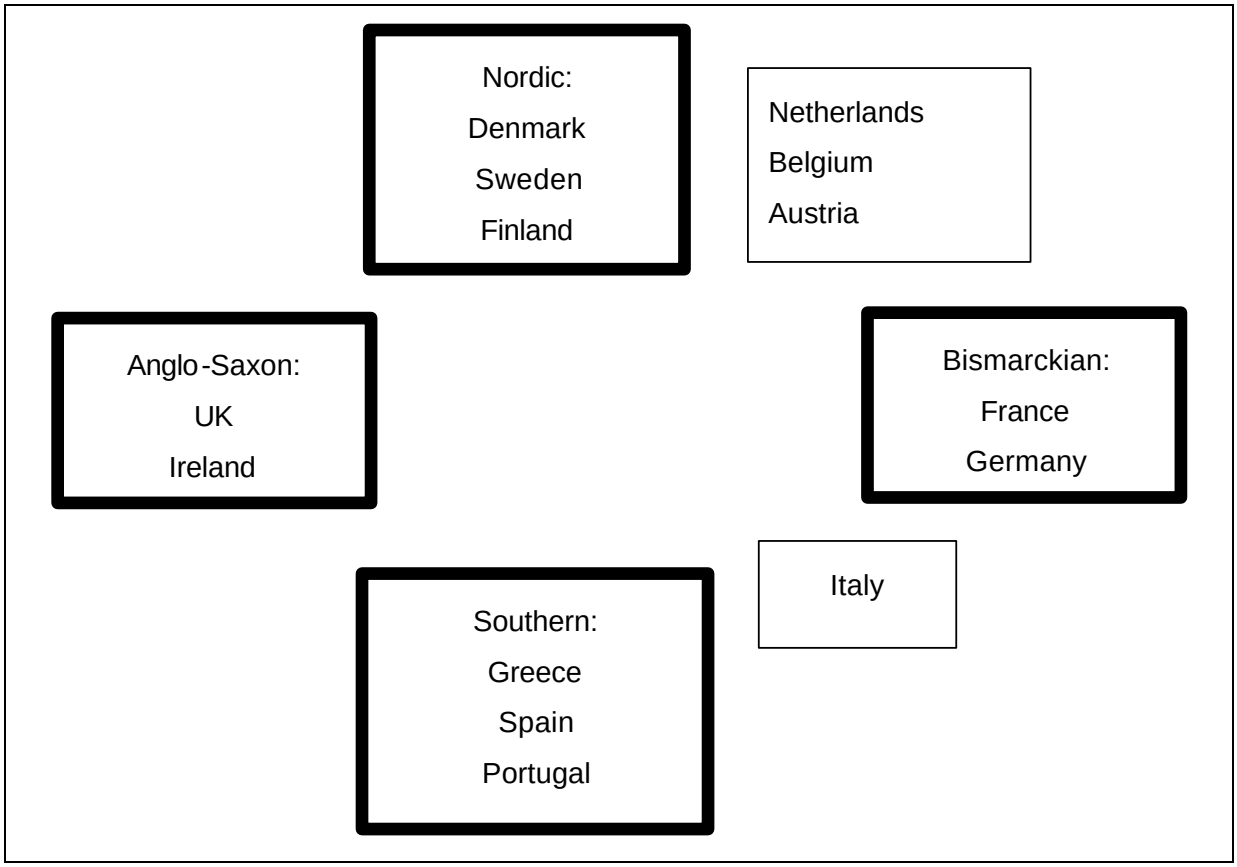


Table 1-2: Pensions regimes in accession countries

Beveridgean	Lithuania
Bismarckian	Czech, Estonia, Hungary, Slovenia
Individual funded contributions without tax supplement	Latvia, Poland, Slovakia (?)

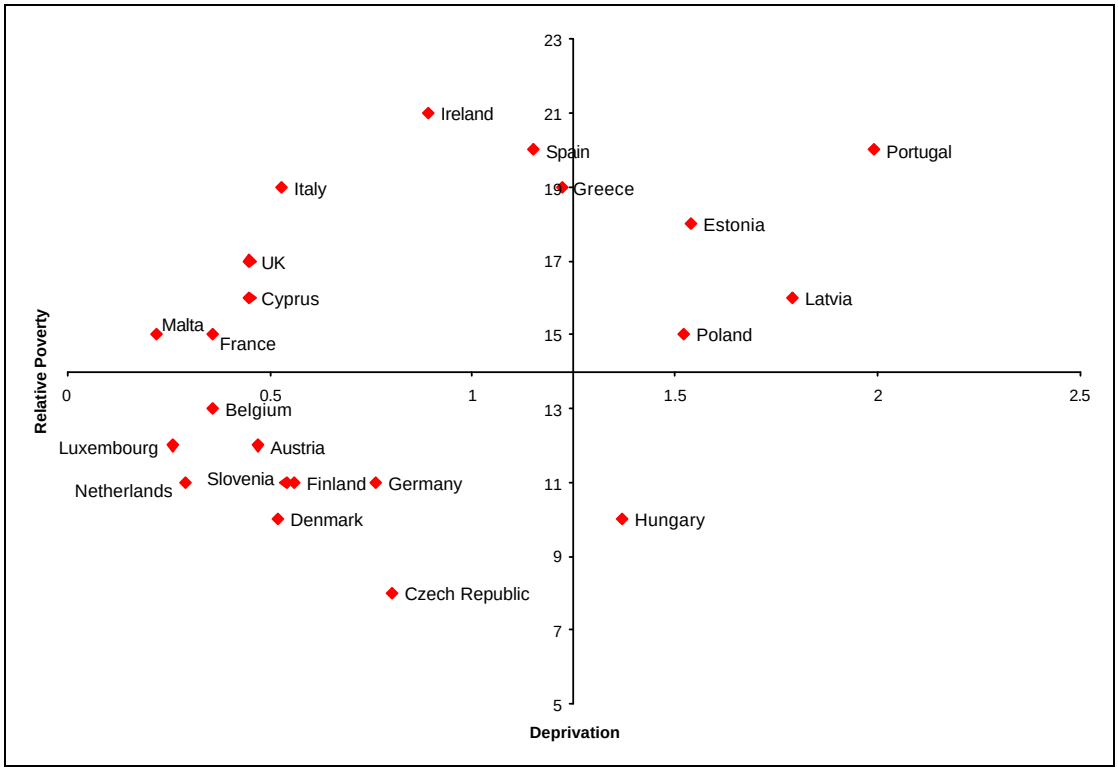
Based on: The Social Situation in the European Union 2004 (European Commission 2004)

I.I.III Profiling according to Measured Poverty and Deprivation

The alternative to looking at a broad spectrum of social policy interventions is to categorise countries by their anti-poverty programmes and or their effectiveness. The best studies in this field have done so to explain "US exceptionalism" rather than to explore differences between European states (Alesina and Glaeser 2004). However, specific studies of the redistributive effects of social transfers between EU states such as Kraus (2004) also provide

an opportunity to categorise potential counties specifically on their redistributive and anti-poverty profiles. The problem with using such studies is two-fold. As discussed previously in the preceding section, such studies of income transfers are poor at telling us much about the wider multi-dimensionality of social exclusion. Second, these studies do not include the new member states and accession countries. This second omission is particularly important because many ex-socialist countries had an in-built conservatism against poverty awareness that meant that they came late to developing anti-poverty programmes in the 1990s (European Commission 2003). Furthermore, accession countries with strongly demarcated industrial, civil service and agrarian labour markets, such as Turkey, tend to show regressive patterns of redistribution from transfers as the beneficiaries are predominantly waged urban workers and resulting pensioners (ibid).

Figure 1-2: Relative Poverty and Deprivation across 24 EU Member States



Source: Figures 2.1 and 2.2 above

Profiling on summary statistical evidence across the enlarged EU is thus best approached by combining the relative poverty line measure of 60% of median income and combining it with data on deprivation from recent analysis across the enlarged. Figure 1-2 shows the scattergram of the 24 countries for which there are values for both deprivation and relative poverty and places them in approximate quadrants according to high or low measures of both. Choosing a group of high relative poverty and high deprivation countries would give Portugal, Estonia, Latvia and Poland. Low Deprivation and low relative poverty countries are Denmark, Czech Republic, Netherlands, Luxembourg and Austria. High poverty low deprivation countries are Italy, UK, Cyprus, Malta and France. Obviously there are additionally countries such as Spain, Greece, Hungary and Belgium which are high on one score and in the middle on the other.

While this is not a perfect "regime" based profile it does provide a better way of choosing countries on their empirical measures of poverty and deprivation that avoids the bias if either measure is used independently.

I.II Profiling participation in the knowledge society

The final part of this chapter reports on new secondary analysis to profile member states according to current patterns of e-inclusion.

Figure 1-3: Conceptual framework for secondary data analysis

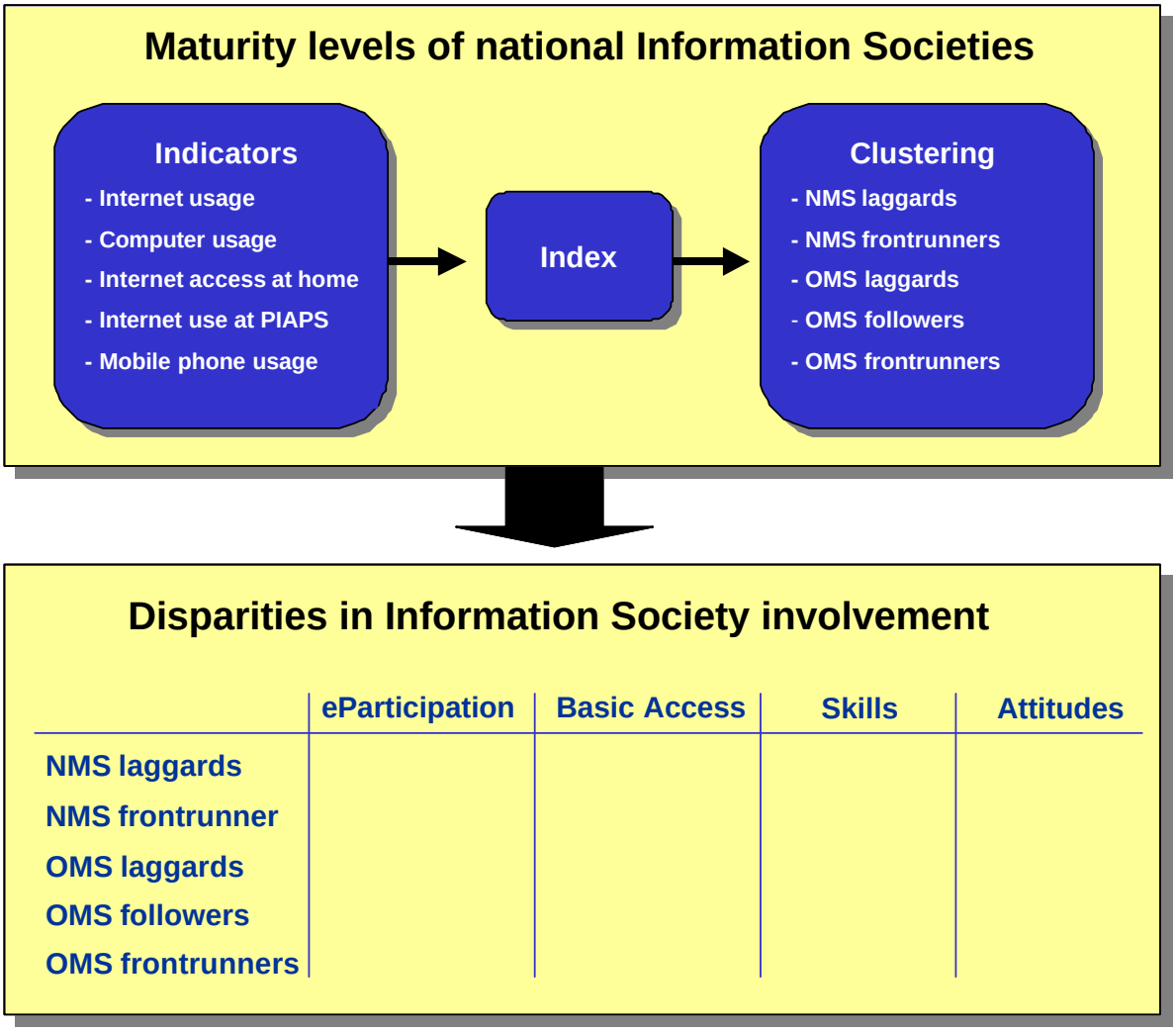


Figure 1-3 shows the conceptual framework for the secondary analysis. Starting from a set of statistical indicators on the Information Society (including data on internet and computer usage, internet access at various locations and mobile phone usage) an "ICT-Maturity-Index" was created ranking all researched countries according to their respective IS maturity level. Within this ranking, 5 different country clusters can be discerned. Those are:

- New member states (NMS) laggard countries
- New member states (NMS) frontrunner countries
- Old member states (OMS) laggard countries
- Old member states (OMS) follower countries
- Old member states (OMS) frontrunner countries

For these 5 country clusters, the disparities in Information Society involvement are than analysed along four dimensions

- **eParticipation.** Online interaction with the government, including measures like e-information, e-consultation and e-decision making with the aim of strengthening the participation of citizens in governmental processes.
- **Basic Access.** Disparities in ICT access and usage along socio-demographic variables like educational level, employment status, age and long-standing illness or disabilities.
- **Skills.** Disparities in levels of skills needed to access and use ICTs, such as use of computers and internet applications, creating personal web pages or doing e-commerce along socio-demographic variables.
- **Attitudes.** Disparities in the attitudes towards ICTs and their perceived costs and benefits along socio-demographic variables.

Our investigation relies upon secondary data collected by the SIBIS project, a unique single source of representative data on ICT access and usage covering all former EU15 Member States plus all NMS&CC with the exception of Cyprus, Malta and Turkey. The data has been collected through 22,000 successfully completed interviews in 2002/2003. Probability samples were used so that the resulting data set is statistically representative for the EU population aged 15 years and older living in private households. Moreover, statistics published by the World Economic Forums and data from the United Nations were used.

I.II.I Maturity levels of national Information Societies

As frequently highlighted in the literature, key e-Inclusion or digital divide issues are different at different stages of the evolution of the Information Society. In fact, countries differ in the stage of evolution of the Information Society and the issues of concern will differ accordingly. In addition, the so-called "second-order" digital divide among users (as opposed to between users and non-users) is typical at the late stage of internet diffusion and leads to a wide range of differentiation among users. For the purposes of this study, it is therefore useful to assess what stages the individual Member States have actually reached on their way towards an Information Society. From a policy perspective, it is however not only of interest whether ICTs have diffused to a noteworthy extent among a country's population. Also, it is of interest whether key stake holders in societal processes - such as government, businesses and the citizens themselves - are actually ready to participate in ICT developments, and whether Information Society services offered really meet their needs.

In this chapter, the current state of affaires concerning ICT-related developments in the individual Member States will therefore be sketched according to the following dimensions:

the level of ICT access and usage among the general population measured in terms of percentage of internet users, computer users and mobile telephony users. Moreover home access to the internet is investigated as well as regular internet use at public access points (PIAPs) and regular use of e-commerce offerings.

the degree to which the individual Member States are prepared to participate in and benefit from ICT developments measured as a compound index that builds on an 'environmental' dimension (market, regulatory/political, infrastructure), a 'readiness' dimension (individuals, businesses, government) and a 'usage' dimension (individuals, businesses, government)

This is described in more detail in the following subsections.

ICT access and usage among the general population

Looking at the diffusion of different information and communication technologies, e.g. internet usage, computer use, internet access at home within the EU15 and CEEC countries (Table 1-3: Access and usage of selected ICT applications in the CEEC and EU- 15) gives a plot of access and usage rates within Europe: On average within the CEEC, approximately 35.4% of the population aged 15 and above are using a computer, 27.6% are using the internet, and only 14.4% have internet access at home, whereas in the EU-15 countries approximately 55.6% of the population use a computer, 49% use the internet, and 46.5% have internet access at home.

However, the picture is obviously much diversified if statistics at country level are considered. Frontrunner within the New Member States with regard to internet use is Estonia, with more than one half of the total population using the internet. Estonia is followed by Slovenia with 37.3% and the Czech Republic with about 32.9% internet users. These figures are comparable to internet usage rates in Germany and Ireland. Being most behind, less than 15% of the whole population in Romania is using the internet. With regard to other basic ICT indicators like computer usage or e-commerce, Estonia is again the most advanced information society within the New Member States. Concerning computer usage, the figures are, not surprisingly, lying above those of internet usage. Estonia is again followed by Slovenia with nearly 49% of the 15+ population using a computer and Slovakia with 42.2%. The countries lagging most behind are again Romania with 22% and Bulgaria with 23.6% being the last but one within the CEEC. Similar patterns arise regarding the indicator 'Internet access at home". Here, Slovenia with a percentage of 34.1% is the leading country within the New Member States, followed by Estonia with 26.7% and the Czech Republic with 18,8%. Again, Romania is lagging behind (4.4% of the population 15+ having internet access at home).

All in all, laggards within the ten New Member States are Rumania, Bulgaria, Hungary and Poland. Admittedly, usage rates of Public Internet Access Points (PIAPs) are deviating from diffusion patterns of other information technologies. Altogether and in comparison to the EU-15 countries the CEEC show relatively high PIAP usage rates. In the EU 15, on average 6.5% of the adult population uses PIAPs, whereas the CEEC show a usage rate of 7.7%. Particularly the poorer countries like Estonia (11.9%), Latvia (9.3%), Lithuania (9.5%), Slovakia (8.9%), Bulgaria (10.5%) and Romania (7.8%) have considerably high PIAPs usage rates. Estonia has even more PIAP users than every EU-15 country. Lagging behind is especially Hungary with 2.3% using Public Internet Access Points. In recent discussions PIAPs are always intended to provide a first point of contact with the internet especially for disadvantaged groups. However, a recent analysis of HÜSING, GAREIS, KORTE, 2004 points out, that many of the disadvantaged parts of the society in these countries can not be reached by PIAPs. On the contrary, PIAPs are a student and younger generation phenomenon, leaving the unemployed and lower educated citizens. Nevertheless, PIAPs may play an important role to bring disadvantaged people to the internet and may serve as an entrance to the new information and communication technologies. Own Mobile Phone adoption rates are very high in Slovenia (75.5%) and the Czech Republic (75.7%) with Bulgaria (31.1%) and Romania (24.4%) being at the end of the scale.

In general, internet and Computer uptake in EU-15 countries is much more widespread in comparison to the adoption of ICTs in the New Member States: In EU-15, not surprisingly, the Nordic countries are the most advanced information societies being frontrunners with regard to the adoption and usage of new information and communication technologies. The Southern countries are left behind, with Greece being most behind.

If statistics at the country level are considered, the picture is obviously much diversified: Concerning 'Internet users' the highest adoption rates can be observed in Denmark (67.8% of the population aged 15 and above are using the internet), Sweden (65.6%), Finland

(63.3%) and the Netherlands (63.4%). On the contrary, in Greece 23.6% of the 15+ population is using the internet, thereby lagging behind six of ten New Member States. Greece is closely followed by Portugal with an average internet usage rate of 27.5%.

When is comes to the share of population using computers similar diffusion patterns can be observed: frontrunners are again Denmark (nearly 72%), Sweden (70%), the Netherlands (69.9%) and Finland (68.1%), leaving Greece (28.6%) and Portugal (32.8%) far behind. Regarding the indicator 'Internet access at home' the Netherlands with a usage rate of 72.4% allege the EU-15 countries, followed by, again, Sweden (66.4%) and Denmark (64.2%). Greece is the bottom of the table, with only 16.8% having internet access at home. The leading country concerning PIAPs users is again Denmark, this time followed by a Southern country, namely Spain with having 9.1% of the total population aged 15 and above using Public Internet Access Points. Most lagging behind are Germany (3.6%), Portugal (3.6%) and Italy with 3.3%.

Table 1-3: Access and usage of selected ICT applications in the CEEC and EU- 15

Percentages of total population

		Internet users	Computer users	Internet home access	PIAP users	Regular e-commerce users	Own mobile phone
CEEC	**CZ**	32.9	40.3	18.8	5.8	3.3	75.7
	EE	51.6	54.7	26.7	11.9	9.0	68.1
	LV	28.0	33.3	7.3	9.3	2.5	51.2
	LT	29.7	35.2	10.2	9.5	1.9	54.4
	HU	17.5	27.6	10.7	2.3	1.6	59.2
	PL	20.3	25.9	13.0	5.5	2.0	37.8
	SI	37.3	48.8	34.1	5.7	4.2	75.5
	SK	24.4	42.2	9.0	8.9	2.7	63.6
	BG	20.8	23.6	9.3	10.5	2.8	31.1
	RO	13.4	22.0	4.4	7.8	0.6	24.2
CEEC average		27.6	35.4	14.4	7.7	3.1	54.1
EU-15	**BE**	45.1	52.1	40.1	6.5	6.8	65.4
	DK	67.8	71.9	64.2	11.3	20.3	70.0
	DE	52.9	58.9	49.6	3.6	16.2	71.3
	EL	23.6	28.6	16.8	7.6	2.4	58.5
	ES	35.2	47.2	30.3	9.1	3.1	61.0
	FR	36.0	44.6	30.1	4.8	6.1	54.7
	IE	51.5	61.7	52.6	5.8	9.1	77.4
	IT	36.5	42.4	40.5	3.3	5.6	75.3
	LU	51.8	59.1	49.6	5.6	12.5	80.5
	NL	63.4	69.6	72.4	5.4	14.5	78.2
	AT	54.0	60.3	47.1	7.2	11.7	77.9
	PT	27.5	32.8	21.4	3.6	2.7	63.9
	FI	63.3	68.1	57.9	8.5	12.5	82.5
	SE	65.6	70.0	66.4	7.0	18.2	78.6
	UK	60.8	66.4	58.3	8.0	22.6	76.0
EU-15 average		49.0	55.6	46.5	6.5	11.0	71.4

Source: SIBIS data, 2002, the author's own calculations.

The United Kingdom is the leading country concerning regular e-commerce usage (22.6%) with Denmark (20.3%) holding the second and Sweden the third rank (18.2%). Greece,

again, is on the last position with 2.4% of the 15+ population stating to regularly use e-commerce, followed by Portugal (2.7%) and Spain (3.1%). Concerning 'Own mobile phone use' the picture is somewhat different: Highest diffusion rates of mobile phones have Finland (82.5%), closely followed by Luxembourg (80.5%), Sweden (78.6%) and Austria with 77.9% of the population 15+ owning a mobile phone. France and Greece (54.7% and 58.5%) are at the end of the scale.

Many of New Member States considerably lag behind the EU-15 with regard to ICT adoption and usage. Admittedly, with regard to internet usage at Public Internet Access Points as an average the CEEC exceed the EU-15. Not surprisingly, the highest diffusion rates in CEEC and EU-15 countries can be observed for own mobile phone usage and computer usage.

The ICT-Maturity-Index

The index is based on 6 variables: internet users, computer users, people with internet home access, PIAP users, regular e-commerce users and owners of mobile phones (each per hundred inhabitants). Each value is z-transformed using the original distribution of country percentages per indicator and the following weights are applied: (20%, 20%, 10%, 10%, 10%, 30%). The weighted sum equals the index value, ranging from -1.67 (Romania) to 1.27 (Denmark).

In order to give a comprehensive overview on the current state of affaires concerning ICT-related developments, we use a composite indicator, the ICT-Maturity Index. This allows for an easy comparison of the countries and their performance. The index also serves as a basis for the clustering of the countries into 5 distinctive groups. 4 shows the index scores for all 25 EU countries ranked in descending order.

Table 1-4: ICT-Maturity-Index

Country	Index
Denmark	1.27
Sweden	1.19
Finland	1.15
United Kingdom	1.11
Netherlands	1.06
Austria	0.73
Luxembourg	0.69
Ireland	0.64
Germany	0.50
Estonia	0.48
Belgium	0.13
Slovenia	0.09
Italy	-0.05
Spain	-0.14
Czech Republic	-0.15
Slovakia	-0.40
France	-0.42
Lithuania	-0.59
Portugal	-0.63
Greece	-0.70

Latvia	-0.71
Hungary	-1.03
Bulgaria	-1.25
Poland	-1.29
Romania	-1.67

Source: SIBIS data, 2002/2003, the author's own calculations.

Based on the analysis hitherto presented, the European Members States can be clustered into five groups, based on the following methodology: In a first step, the countries were divided into new member states (10 countries) and old member states (15 countries). Each group is than separated into two and three clusters respectively. For the new member states, these clusters divide 'frontrunners' (3 countries) and 'laggards' (7 countries), for the old member states they divide 'frontrunners', 'followers' and 'laggards' (5 countries each). The clustering coincides with increments in the index values (with some qualification for the border between follower and laggards). Among the CEEC, Estonia could have become a cluster of its own, judging from its being most distinct from all other countries. However, the sample size would not have permitted accurate statistical analysis for one country and hence it was decided to group together the three most advanced countries. It has to be admitted that the laggard cluster still contains rather heterogeneous countries as regard ICT maturity, though.

Table 1-5: 5 ICT- Frontrunners and Laggards

Laggard CEEC	LV	LT	HU	PL	SK	BG	RO
Frontrunner CEEC	CZ	EE	SI				
Laggard EU15	EL	ES	FR	IT	PT		
Follower EU15	BE	DE	IE	LU	AT		
Frontrunner EU15	DK	NL	FI	SE	UK		

Source: SIBIS data, 2002/2003, the author's own calculations.

As summarised in Table 1-5 above, laggards within the New Member States are Latvia, Lithuania, Hungary, Poland, Bulgaria and Romania, building a relatively heterogeneous group. Except Estonia, the Laggard CEEC cluster contains particularly the poorer countries of the CEEC. The laggards among EU-15 countries are, not surprisingly, the Southern European countries like Greece, Portugal or Spain. Frontrunners in the EU-15 are, comparable to the ranking in relation to maturity index, the Scandinavian countries and United Kingdom, followed by the EU-15 Follower cluster with Belgium, Germany, Ireland, Luxembourg and Austria.

I.II.II The Networked Readiness Index

The Networked Readiness Index (NRI) is an annually calculated index depicting a *"nations's degree of preparation to participate in and benefit from new ICT developments."* (World Economic Forum 2004, p4.) The 2003-2004 study covers 102 countries. The index' methodological approach can be summarized as follows: *"[…] the NRI is a composite of three components: the environment for ICT offered by a given country or community, the readiness of the community's key stakeholders (individuals, businesses, and governments) to use ICT, and finally the usage of ICT amongst these stakeholders."* (ibid., p. 4)

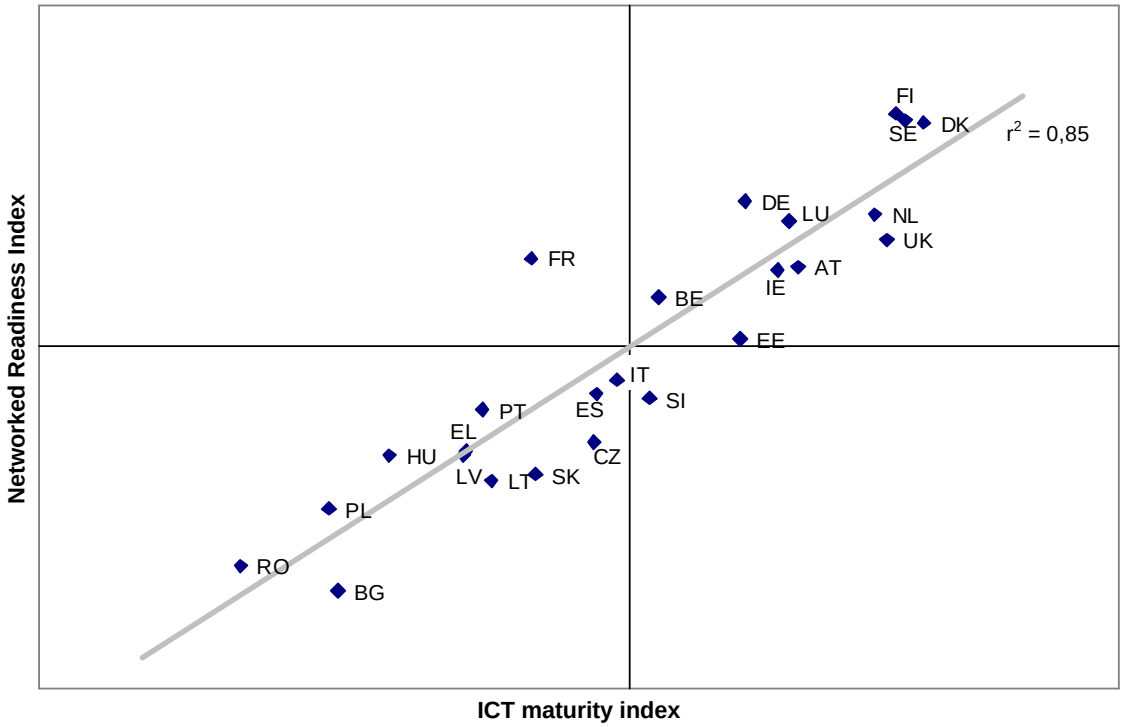
Table 1-6: 'Networked Readiness Index' 2003-200: European Countries

Country	Index
Finland	5.23
Sweden	5.20
Denmark	5.19
Germany	4.85
Netherlands	4.79
Luxembourg	4.76
United Kingdom	4.68
France	4.60
Austria	4.56
Ireland	4.55
Belgium	4.43
Estonia	4.25
Italy	4.07
Spain	4.01
Slovenia	3.99
Portugal	3.94
Czech Republic	3.80
Greece	3.76
Latvia	3.74
Hungary	3.74
Slovakia	3.66
Lithuania	3.63
Poland	3.51
Romania	3.26
Bulgaria	3.15

Source: Dutta/Jain 2004, p. 5

Table 1-1 shows the scores of the Networked Readiness Index for the EU Member States in descending order. Finland, Sweden and Denmark are leading the table, whereas Estonia is the frontrunner within the CEEC countries. Poland, Romania and Bulgaria are again the countries lagging most behind, within the EU-15, Greece and Portugal are most behind. The similarities compared to the results from the ICT-Maturity-Index are obvious. The correlation between the two indices is very high with r^2=0.85 (cf. Figure 1-4). When looking at single countries or country clusters, the picture is much diversified: EU-Frontrunners are, in general, frontrunners concerning both the ICT-Maturity-Index and the Networked Readiness Index. Especially the Scandinavian countries are on top of both rankings, whereas the Netherlands and United Kingdom show relatively low values for the Networked Readiness Index. Frontrunner CEEC countries are widely spread concerning ICT Maturity Index. With regard to the trend line, each country of the CEEC Frontrunner countries comparably low Networked Readiness scores. Within Laggard EU-15 countries, France can be observed as a outlier with a relatively low ICT Maturity score but scoring high concerning Networked Readiness Index.

Figure 1-4: ICT Maturity Index and Networked Readiness Index



Source: SIBIS data, 2002/2003, the author's own calculations.

I.II.III Socio-demographic disparities of Information Society involvement

After giving a general overview on the status-quo of the development of the Information Society in the EU member states and the their different maturity levels there follows now a more in-depths analysis of certain aspects of the IS, namely of the four dimensions identified in the conceptual framework:

- 1st Dimension: eParticipation.
- 2nd Dimension: Basic Access.
- 3rd Dimension: Skills.
- 4th Dimension: Attitudes.

For each dimension, the relevant statistical indicators are compared along socio-demographic variables (educational level, employment status, age, long standing illness / disability) for each of the five country clusters (new member states frontrunners and laggards, old member states frontrunners, followers and laggards)

eParticipation in governmental activities

The first dimension is measured by using the framework and index for measuring eParticipation of citizens in governmental activities developed by the United Nations. Within this framework, eParticipation is defined as a*" participatory, inclusive, deliberative process of decision-making"* (United Nations 2004, p. 16) using ICT to increase the supply of useful information, to enhance consultation and to support decision making by facilitating people's participation within the framework of G2C and C2G interactions. The 'e-Participation Index'

attempts to qualify, in contrast to the UN's 'Web Measure Index', how useful services provided online are and how frequently they appear. *"In particular, the index attempts to qualify if these tools and materials are conductive to an online deliberative and participatory process between the government and the citizen."* (ibid, p. 65). E-Participation as a qualitative measure employs proxy indicators for the **quality** of the services/products it offers on the websites for this purpose, the **relevancy** of the information and services provided, the **usefulness** to the citizens as a user and the **willingness** of the government to provide relevant information and services (ibid , p. 17).

The underlying methodology is as following: "An assessment of a total of 21 public informative and participatory services and facilities was undertaken for 191 countries in e-information, e-consultation and e-decision making across six general, economic and social sectors: general, education, health, social welfare, finance and employment. A scale of 0-4 was used in the assessment process. The index was conducted by standardizing the scores." (ibid , p. 17)

In general terms, e-Participation measures the extent to which online interaction with government like e-information, e-consultation and e-decision making can strengthen the involvement of citizens participating in policy-making, leading to more inclusive political processes. While it is clear that this online interaction can improve possibilities for citizen participation, it is now not clear under which conditions this promise can be turned into reality. There are different structural barriers which can be observed on the side of government which do not necessarily favour any opening up of decision-making to citizens. However, the motivations of citizens to get involved in processes related to policy-making show an enormous variety, and cannot be expected to improve just as a result of new online channels being opened up for communications.

According to the UNs report, the quality of what is provided and therefore the level of e-participation seems to have a relationship with the income level of the corresponding country. *" …64 percent of the high income and 36 percent of the upper middle income countries provided above average e-participation services."* (ibid , p.67) High income countries seem to invest in improving both the relevancy and quality of information and services provided.

Table 1-7 shows the e-Participation scores and rankings for the European countries (out of 191) for 2003 and 2004. Four European countries, the United Kingdom (rank 1), the Netherlands (rank 5), Denmark (rank 7) and Estonia (rank 9) are among the top 10 countries worldwide. Estonia and Hungary are the only representatives of the CEEC ranging within the top 20 countries. Spain, Greece and Lithuania show the lowest rankings not only among European countries but also in global comparison, as the index has 37 ranks in total. These three countries therefore show a performance comparable to many African and South American Countries like Ghana or Ecuador.

Special note should be given to the changes in ranking over time. It can be seen that in 2003, Estonia even had a higher ranking than in 2004, being among the top 5 countries (rank 4). The steep ascent of Austria and Belgium (14 and 10 ranks resp.) is noteworthy, as well as the equally steep descent of Ireland (minus 14 ranks), Italy and Portugal (minus 11 ranks each). This implies that e-participation is not simply on the advance in the EU countries, although it is changing rapidly. Rather there are some countries with increasing levels of e-participation and others where it plays a less important role now than it did in the past.

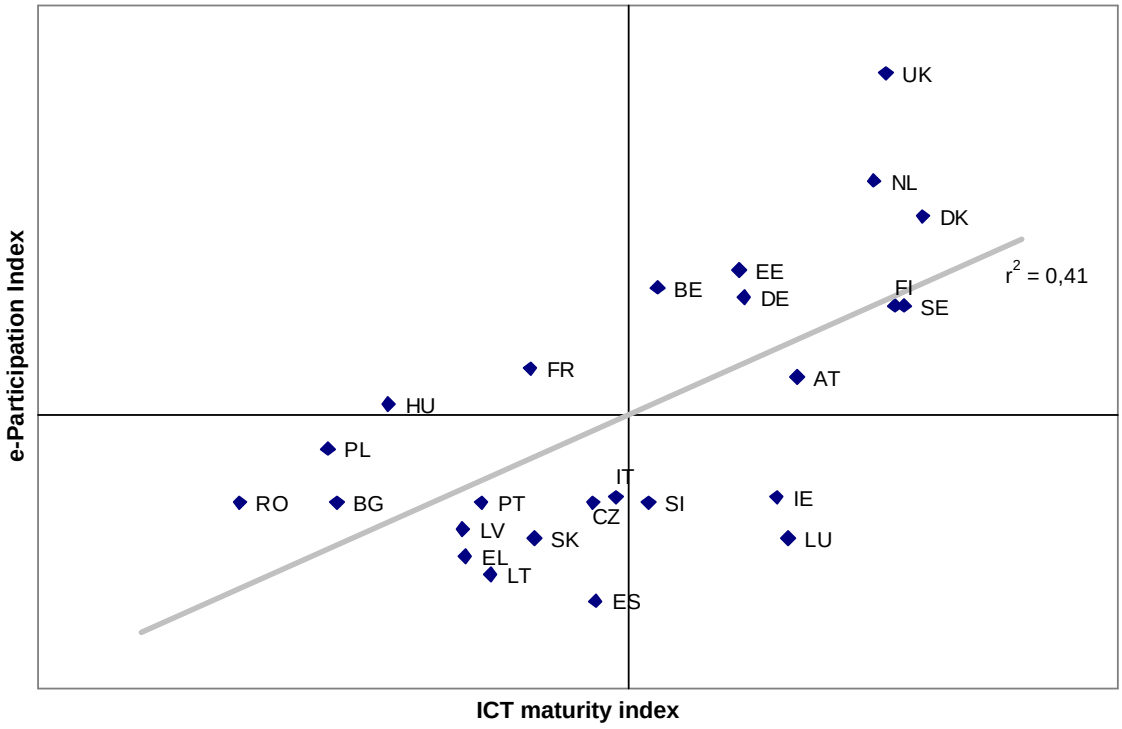
Table 1-7: E-Participation Index 2004: European countries

Country	Index	Rank 2004	Rank 2003	Change
UK	1.000	1	1	0
Netherlands	0.803	5	7	+2
Denmark	0.738	7	15	+8
Estonia	0.639	9	4	-5
Belgium	0.607	11	21	+10
Germany	0.590	12	11	-1
Finland	0.574	13	21	+8
Sweden	0.574	13	10	-3
France	0.459	14	7	-7
Austria	0.443	15	29	+14
Hungary	0.393	16	21	+5
Poland	0.312	19	16	-3
Ireland	0.223	24	10	-14
Italy	0.223	24	13	-11
Bulgaria	0.213	25	29	+4
Czech Republic	0.213	25	23	-2
Portugal	0.213	25	14	-11
Romania	0.213	25	34	+9
Slovenia	0.213	25	20	-5
Latvia	0.164	27	32	+5
Luxembourg	0.148	28	21	+7
Slovakia	0.148	28	27	-1
Greece	0.115	30	32	+2
Lithuania	0.082	32	31	-1
Spain	0.033	35	28	-7

Source: United Nations 2004, p. 66

Figure 1-5 gives a plot between ICT Maturity Index and e-Participation Index. There is a moderate association (r^2=0.41) between the two indices. This also holds true for each country cluster observed. Within the cluster of the OMS Frontrunners, the UK shows a considerably high e-Participation Index. Among the OMS Followers there is a wide range with Belgium scoring highest concerning e-Participation, but only a small ICT maturity score. Luxembourg, on the contrary, is relatively "mature", but shows low scores with regard to e-Participation. For CEEC Frontrunners, Estonia is again the leading country with high scores on both indicators.

Figure 1-5: ICT Maturity Index and E-Participation Index



Source: SIBIS data, 2002/2003, the author's own calculations.

The moderate correlation between the two indices confirms that eParticipation depends not simply on ICT maturity but also on other factors like income levels (cf. above). But both factors can only generate eParticipation *potential* whereas appropriate government measures (awareness raising, increasing of user-orientation of services etc.) and a general willingness (positive attitude) and preparedness (necessary skills) of the population are necessary to transform this potential into actual eParticipation.

Basic Access

Social disparities with regard to levels of income and access to jobs, education and basic infrastructures have been a basic feature of economic development in the European Union ever since the Treaties of Rome. Disparities are present, for example, across different regions, social strata, ethnic groups, age and genders. Whereas recent years have brought some degree of convergence among EU countries at least at the national level, the latest round of enlargement has brought social divides back on the top of the European agenda. Not only are gaps still existing; they are often even widening as a result of selective economic restructuring, the increasing significance of the capacity (of regions, companies, communities) to innovate, and differences in the ability to add value to the global networked informational economy. Against this background, our secondary analysis attempts to establish evidence about interrelations between social and digital exclusion issues by investigating disparities in basic ICT access and usage according to socio-demographic characteristics of the EU population including:

educational level

employment status

age

long-standing illness/ disability

Educational level

Education imparts human capital and is seen as the key to employability and social participation. Patterns of educational exclusion are deemed a precursor for social exclusion in other domains of life, such as labour market opportunities or health. In our analysis we try to identify differences between the country clusters with regard to access to and usage of basic information and communication technologies like internet, computers, mobile phones and so on.

Table 1-8: ICT adoption and use in Europe (by educational attainment)

Percentages of the respective groups.

		Internet users	Computer users	Internet home access	PIAP users	Regular e-commerce users	Own mobile phone
Laggard CEEC	secondary and less (TEA 16)	0.9	2.1	0.9	0.2	0.1	11.9
	higher secondary (TEA 20)	11.9	20.5	7.5	3.3	0.8	42.4
	tertiary (TEA 21+)	39.7	52.4	23.7	7.6	5.9	60.3
	still studying	66.3	75.2	20.3	37.2	3.3	60.2
	total	*19.0*	*26.3*	*9.7*	*6.6*	*1.7*	*38.7*
Frontrunner CEEC	secondary and less (TEA 16)	6.0	8.7	4.8	1.4	0.7	49.6
	higher secondary (TEA 20)	28.9	37.9	18.7	3.8	3.7	77.4
	tertiary (TEA 21+)	62.1	72.1	38.0	6.5	7.2	85.1
	still studying	83.0	88.0	45.7	25.6	5.5	91.8
	total	*35.2*	*42.7*	*21.7*	*6.2*	*3.8*	*73.8*
Laggard Eu-15	secondary and less (TEA 16)	7.7	11.7	13.7	1.2	1.1	45.8
	higher secondary (TEA 20)	35.4	47.0	37.1	2.6	6.3	70.0
	tertiary (TEA 21+)	51.4	64.7	42.5	3.9	7.7	72.9
	still studying	75.3	78.3	53.6	23.6	6.7	81.9
	total	*34.7*	*42.8*	*32.3*	*5.4*	*4.8*	*63.6*
Follower EU-15	secondary and less (TEA 16)	30.6	36.5	32.1	1.6	10.1	58.8
	higher secondary (TEA 20)	49.8	59.5	47.6	2.5	11.8	76.5
	tertiary (TEA 21+)	67.4	73.0	63.3	4.9	21.6	75.0
	still studying	87.7	86.9	65.8	15.3	20.3	87.9
	total	*51.8*	*57.9*	*48.1*	*4.2*	*14.6*	*70.7*
Frontrunner EU-15	secondary and less (TEA 16)	35.3	43.9	43.1	2.2	11.6	66.0
	higher secondary (TEA 20)	63.9	70.8	65.6	6.0	19.1	80.3
	tertiary (TEA 21+)	77.0	80.1	72.6	7.9	27.7	80.5
	still studying	92.1	92.4	76.7	23.0	26.5	87.0
	total	*62.2*	*67.6*	*61.7*	*7.7*	*20.1*	*76.5*

Source: SIBIS data, 2002/2003, the author's own calculations.

Table 1-8 shows ICT adoption and use for the five country clusters broken down by educational level. In all EU countries there is a general educational pattern, according to which basic ICT access and usage increases with the level of education. Highest access and usage rates are found among students with the only exception of regular e-commerce use, which is highest among people with tertiary educational level. The latter also holds true for

internet access at home among the CEEC Laggards, which is also highest among people with tertiary educational level. In the case of e-commerce use this is clearly a monetary effect, according to which people with completed tertiary educational attainment have more money to spend than students. Lowest adoption and usage rates across all country clusters are among people with secondary or lower educational level. However, a considerable difference arises if one compares adoption and usage rates within the clusters: within the CEEC Laggards group internet use among students is 66 times higher than among the lower educated, whereas within the EU-15 Frontrunner the factor of difference is only about 2.6. Similar observations can be made for computer usage (factor 35.8 for CEEC Laggards and 2.1 for EU-15 Frontrunners) and internet access at home (factor 22.6 for CEEC Laggards and 1.8 for EU-15 Frontrunners).

Regarding internet and computer use, PIAP use, and ownership of mobile phones, the CEEC Frontrunners on average reach or even exceed the levels of the EU-15 laggards.

The gap between the CEEC and the EU-15 Frontrunners is however still huge in all areas except PIAP use. Especially internet access at home evokes large differences, ranging from 9.7% for the CEEC Laggards to 61.7% for the EU-15 Frontrunners. When it comes to regular e-commerce use the situation is even worse, the usage rates being more than 10 times higher for the northern EU-15 countries than for the CEEC Laggards.

It can be seen that education really is one of the major keys to ICT access. This is true for all EU Member States, but much more so for the CEEC. On the practical side, this educational divide will be mainly due to a lack of necessary ICT skills (compare chapter 0) which are not learned by people of lower educational attainment, at least not to the same extent as by people with higher education. But basically it depicts a general lack of human capital in this socio-economic group, which keeps its members from accessing ICTs and New Media and ultimately from their benefits.

Age

Analysing adoption and usage rates of new information and communication technologies with regard to age cohorts provides evidence that access to and usage of ICTs still seems to be a matter of age. Table 1-9 shows basic ICT access and usage broken down by age groups.

Highest usage and adoption rates for all EU Member States and for all basic ICT indicators can be observed for the youngest age cohorts. Deviating from this patterns of internet usage and computer usage are again the rates for regular e-commerce users: Here, the middle aged (25-49) show highest usage rates within all country clusters. The second exception applies to the Indicator 'Internet home access' within Follower and Frontrunner EU-15 countries. Here, again, the middle aged have higher access rates than the youngest age cohort.

The age divide shows its strongest effect for people aged 65 and more. In all countries and for nearly all indicators there is a notable drop between that age group and people aged 50 to 64.Although there are similar *patterns* within the different country clusters, adoption rates for single age cohorts within the EU-15 Frontrunner are again considerably higher than those among the CEEC Laggards. It is noteworthy that the number of PIAP and mobile phone users among the youngest age cohort is higher for the CEEC Frontrunners than for the EU-15 Frontrunners.

Table 1-9: ICT adoption and usage in Europe (by age)

Percentages of the respective groups.

		Internet users	Computer users	Internet home access	PIAP users	Regular e-commerce users	Own mobile phone
Laggard CEEC	up to 24	48.8	56.0	14.3	27.3	2.0	56.8
	25 to 49	20.1	31.0	12.1	4.5	2.3	50.3
	50 to 64	9.3	15.0	8.8	0.4	1.7	26.2
	65 and more	0.9	1.3	0.8	0.2	0.1	8.5
	total	*19.1*	*26.4*	*9.7*	*6.6*	*1.7*	*38.8*
Frontrunner CEEC	up to 24	68.4	75.0	36.5	21.1	4.5	92.8
	25 to 49	41.8	50.6	27.0	5.0	5.7	85.6
	50 to 64	19.2	26.7	13.3	1.5	3.1	66.1
	65 and more	4.1	9.6	3.7	0.4	0.2	38.7
	total	*35.5*	*43.0*	*21.9*	*6.4*	*4.0*	*74.9*
Laggard EU-15	up to 24	67.6	71.2	47.5	20.3	6.4	82.7
	25 to 49	42.4	54.8	40.2	3.7	7.4	73.8
	50 to 64	16.9	23.4	24.4	0.6	1.9	55.0
	65 and more	3.1	6.7	6.6	0.1	0.2	30.0
	total	*34.8*	*42.8*	*32.3*	*5.1*	*4.8*	*63.8*
Follower EU-15	up to 24	84.2	83.0	62.4	15.6	16.4	91.0
	25 to 49	67.0	73.6	62.8	3.4	22.1	79.9
	50 to 64	38.0	48.8	41.7	1.7	9.7	68.8
	65 and more	7.5	12.9	10.0	0.9	1.0	37.7
	total	*52.2*	*58.5*	*48.6*	*4.2*	*14.7*	*71.5*
Frontrunner EU-15	up to 24	89.0	88.9	68.3	18.8	21.9	90.4
	25 to 49	75.4	81.5	73.7	8.4	30.2	83.6
	50 to 64	54.4	62.1	63.3	4.7	13.1	71.9
	65 and more	17.0	23.1	25.4	0.4	2.3	53.9
	total	*62.2*	*67.7*	*61.8*	*7.7*	*20.1*	*76.6*

Source: SIBIS data, 2002/2003, the author's own calculations.

With regard to adoption rates *within* country clusters one can observe the most homogenous diffusion within the EU-15 Frontrunners, the use of PIAPs being the only exception to this picture.

Employment status

Employment is seen as one of the best safeguards against social exclusion. Table 1-10 therefore provides an overview on access and usage rates for basic ICT indicators within the EU Member States broken down by employment status.

Table 1-10: ICT adoption and usage (by employment status)

Percentages of respective groups.

		Internet users	Computer users	Internet home access	PIAP users	Regular e-commerce users	Own mobile phone
Laggard CEEC	working	27.8	41.2	15.7	5.4	3.9	58.9
	unemployed	10.3	15.1	6.6	4.8	0.1	34.7
	other not working	14.9	18.0	5.9	8.3	0.5	23.7
	total	*19.1*	*26.4*	*9.7*	*6.6*	*1.7*	*38.8*
Frontrunner CEEC	working	44.1	54.6	27.3	4.9	6.0	86.5
	unemployed	19.2	25.1	12.5	8.3	2.2	83.2
	other not working	27.4	31.4	16.7	8.1	1.7	56.8
	total	*35.5*	*43.0*	*21.9*	*6.4*	*4.0*	*74.9*
Laggard EU-15	working	44.0	56.6	40.9	3.0	7.4	75.4
	unemployed	31.8	38.4	26.2	7.0	3.9	68.2
	other not working	26.9	31.2	25.5	7.3	2.7	52.9
	total	*34.8*	*42.8*	*32.3*	*5.4*	*4.8*	*63.8*
Follower EU-15	working	67.4	75.0	60.2	3.9	19.5	81.3
	unemployed	38.8	49.8	50.0	4.0	15.5	70.9
	other not working	36.8	40.8	35.1	4.7	9.2	60.2
	total	*52.2*	*58.5*	*48.6*	*4.2*	*14.7*	*71.5*
Frontrunner EU-15	working	73.8	80.3	71.3	7.1	25.4	83.0
	unemployed	51.2	59.7	62.6	8.7	26.0	70.0
	other not working	48.8	52.6	49.5	8.4	12.6	69.4
	total	*62.2*	*67.7*	*61.8*	*7.7*	*20.1*	*76.6*

Source: SIBIS data, 2002/2003, the author's own calculations.

Usage and access rates are particularly high among employees. This applies for internet usage, computer usage, internet access at home and own mobile phone usage across all country clusters. Again, diffusion patterns concerning Public Internet Access Points deviate from these findings: Here, especially unemployed and other not working are familiar in using PIAPs.

Among the EU-15 countries, particularly "other not working" citizens (i.e. people in retirement, on paternal leave etc.) are lagging behind. In contrast within the CEEC the unemployed are lagging most behind. With regard to differences *within* each cluster one can observe a more homogenous diffusion (for all ICT indicators) within the EU-Frontrunners than within EU-Laggards. However, differences are of considerable importance especially for the PIAP and Mobile Phone indicator. Within the CEEC Laggard cluster there are very high differences between highest rates (concerning regular e-commerce) among employees and low diffusion rates among the unemployed. More precisely, with 3.9% of employees being regular e-commerce users and only 0.1% among the unemployed there is a considerable gap.

Comparing totals between EU-15 Frontrunners and CEEC Laggards for each indicator, there are large differences concerning internet access at home (61.8% among EU-15 Frontrunners and 9.7% among CEEC Laggards) and e-commerce (20.1% and 1.7% respectively). However, the picture is much diversified if figures at different employment statuses are analysed: Within the EU-15 Frontrunners group internet usage rates are 6 times higher than within the CEEC Laggards group. In contrast the relation is 4.5 to 1 for employees and 9 to 1 for the unemployed.

Illness/Disability

ICTs are known to have a huge potential to help people with disabilities and those suffering from long-standing illness. In this context, analysis of SIBIS data indicates, that in general and across all country clusters the highest adoption and usage rates are among people who are not in one of those two at-risk groups. Table 1-11 shows the data for the basic ICT access and usage indicators broken down by health status:

Table 1-11: ICT adoption and usage (by health status)

Percentages of the respective groups.

		Internet users	Computer users	Internet home access	PIAP users	Regular e-commerce users	Own mobile phone
Laggard CEEC	No illness /disability	23.8	32.0	11.5	8.3	2.1	45.8
	Long-standing illness or disability	5.4	10.0	4.5	1.8	0.7	18.1
	total	*19.1*	*26.4*	*9.7*	*6.6*	*1.7*	*38.8*
Frontrunner CEEC	No illness /disability	40.7	48.1	24.8	7.1	4.5	79.9
	Long-standing illness or disability	15.4	23.6	10.7	4.0	2.0	55.7
	total	*35.5*	*43.0*	*21.9*	*6.4*	*4.0*	*74.9*
Laggard EU-15	No illness /disability	37.7	46.2	34.2	5.9	5.1	66.4
	Long-standing illness or disability	13.9	18.8	19.2	1.9	2.9	44.9
	total	*34.8*	*42.8*	*32.3*	*5.4*	*4.8*	*63.8*
Follower EU-15	No illness /disability	56.4	63.5	52.3	4.5	15.9	75.6
	Long-standing illness or disability	32.7	35.5	31.6	2.8	9.3	52.5
	total	*52.2*	*58.5*	*48.6*	*4.2*	*14.7*	*71.5*
Frontrunner EU-15	No illness /disability	67.0	72.7	64.7	8.4	22.0	79.6
	Long-standing illness or disability	42.2	46.9	49.7	4.6	12.4	64.4
	total	*62.2*	*67.7*	*61.8*	*7.7*	*20.1*	*76.6*

Source: SIBIS data, 2002/2003, the author's own calculations.

- The factor of difference between the members of the two at-risk groups and the general population ranges from 4.6 for PIAP users in the CEEC Laggard countries to 1.2 for mobile phone users in the EU-15 Frontrunner countries. The differences are lowest in all country clusters for ownership of mobile phones.
- Among the EU-15 Frontrunners with their high usage levels, the number of internet users is thrice as high as among the CEEC Laggards. With regard to internet access at home the relation is even 6 to 1. Differences peak with regard to e-commerce with a relation of 12 to 1.
- CEEC Frontrunners are considerably lagging behind EU-15 Frontrunners, except with usage rates of PIAPs and mobile phones. Here, rates rather balance each other.
- Again, differences between highest and lowest usage and access rates tend to be lower within the EU-Frontrunner country cluster. Therefore, one can assume a more homogenous (and inclusive) diffusion within the EU-15 Frontrunners. However, this is not true for PIAP usage. Here, EU-15 Followers seem to be more inclusive than EU-15 Frontrunners. With regard to e-commerce, EU-15 Laggards show a more homogeneous spread than EU-15 Frontrunners.

In interesting link is that between ICT adoption/usage and state of health when controlling the age effect as an influencing variable. When doing so, the correlation between illness/disability is getting slightly negative, which means that people with long-standing illness or disability show higher usage rates than healthy people within the same age cohort. Although usage rates of the latter are not significantly lower these are rather interesting findings, showing that ICTs can have a potential to help people with disabilities.

Skills

In order to analyse differences across European Information Societies, it is no longer sufficient to look at disparities in ICT access and usage according to socio-demographic characteristics of the EU population. Access to and usage of information and communication technologies require a certain amount of adequate skills. Simply knowing how to use an internet browser will not suffice to gain any advantage. Moreover, specific skills are needed, like knowing how to use a search engine or how to use e-mail to communicate with others. This section shows differences in internet skills between and within the country clusters in general as well as differences broken down by socio-demographic characteristics (employment status, educational level and age).

In an Information Society, acquiring, generating, and exploiting knowledge are key determinants of success for enterprises and for people participating in work life. Also a lack of adequate skills and competences has always been seen as a major barrier for social participation and inclusion. In addition to that, ICT skills and knowledge become even more important as online services increase and services offered offline decrease. Thus, skills and especially ICT skills are becoming an important topic in terms of social inclusion. Therefore, our analysis here will describe what disparities can be observed across countries in relation to relevant ICT skills. Table 1-12 shows the amount of ICT skills for the 5 country clusters:

Table 1-12: Internet Skills per country cluster

Percentages of Internet users feeling very confident in …

	Using search engine	Using e-mail to communicate with others	Creating a personal web page	Downloading/installing software
Laggard CEEC	28.3	43.6	8.3	14.6
Frontrunner CEEC	40.6	49.5	11.9	19.3
Laggard EU15	32.5	44	11.1	25.3
Follower EU15	38.4	57.1	10.2	30.4
Frontrunner EU15	44.5	64.7	10.3	28.9
EU average	*36.9*	*51.8*	*10.4*	*24.7*

Source: SIBIS data, 2002/2003, the author's own calculations.

On average, the most widespread internet skill is using e-mail as a means of communication with other people, followed by using search engines, downloading and installing software, and creating a personal web page. This pattern also holds true for the single country clusters.

There is, however, some variance between the clusters, as regards the average level of computer skills. Thus, within the EU-15 Frontrunner cluster about 45% of internet users are very confident in using a search engine to find information on the web or understand content of web pages written in English. Within Laggard CEEC there are only 28.3% of internet users very confident in using a search engine.

Yet, all things considered, the differences in skills levels are not as great as the differences between on- and offliners. The relation between the country cluster with highest figures and the one with lowest figures is about 1.5 to 1 for the indicators analysed here.

A break down by ***employment status*** provides a more diversified picture (Table 1-13): Of note is that unemployed within the group of the EU-15 Frontrunners show particularly high skills, which is, however, also an age effect. The same can be observed for the EU-15 Laggards with the exception of using e-mail and also for the EU-15 Followers for the indicators 'using e-mail' and 'using search engines'. At the same time, the unemployed among the CEEC Laggards show on average the lowest skills rates of all countries.

Table 1-13: ICT skills (by employment status)

Percentages of Internet users feeling very confident in …

	Labour Market Participation	Using search engine	Using e-mail to communicate with others	Creating personal web page	Downloading/Installing Software
Laggard CEEC	working	32.2	49.7	9.5	17.0
	unemployed	11.1	25.6	3.9	10.7
	other not working	27.3	39.6	7.7	12.2
Frontrunner CEEC	working	40.0	49.6	12.3	19.3
	unemployed	38.9	39.0	6.6	18.1
	other not working	42.1	51.4	12.2	19.4
Laggard EU-15	working	28.9	44.0	10.0	25.6
	unemployed	35.0	41.3	13.3	26.5
	other not working	37.3	44.4	12.2	24.7
Follower EU-15	working	38.5	57.0	11.3	31.3
	unemployed	39.1	58.2	10.4	26.7
	other not working	38.2	57.2	8.1	29.3
Frontrunner EU-15	working	45.3	65.2	10.8	29.3
	unemployed	47.4	66.4	13.2	36.5
	other not working	42.7	63.7	8.9	27.0

Source: SIBIS data, 2002/2003, the author's own calculations.

Concerning ***educational level*** (Table 1-14) students and people with tertiary educational level tend to be those with the highest skills rates. The pattern among those two groups differs, however. Usually, the skills rate of students is higher than that of people with tertiary education. In the CEEC Laggard countries this pattern is reversed for all indicators, although there are only slight differences.

Table 1-14: ICT skills (by educational level)

Percentages of Internet users feeling very confident in …

	Educational attainment proxy	**Using search engine**	**Using e-mail to communicate with others**	**Downloading/Installing Software**
Laggard CEEC	Secondary and less (TEA 16)	17.3	19.0	12.1
	Higher secondary (TEA 20)	17.8	31.2	8.8
	Tertiary (21+)	34.4	51.0	17.7
	Still studying	31.9	47.7	16.3
Frontrunner CEEC	Secondary and less (TEA 16)	11.2	13.4	6.8
	Higher secondary (TEA 20)	34.6	44.7	16.4
	Tertiary (21+)	47.3	55.3	22.2
	Still studying	50.5	58.9	22.8
Laggard EU-15	Secondary and less (TEA 16)	18.7	27.1	10.7
	Higher secondary (TEA 20)	28.2	42.9	24.9
	Tertiary (21+)	33.8	46.1	28.3
	Still studying	40.3	48.6	27.6
Follower EU-15	Secondary and less (TEA 16)	29.3	48.6	25.0
	Higher secondary (TEA 20)	28.8	54.6	24.6
	Tertiary (21+)	44.4	60.0	33.8
	Still studying	54.5	66.8	39.5
Frontrunner EU-15	Secondary and less (TEA 16)	30.6	53.5	24.1
	Higher secondary (TEA 20)	42.2	61.1	23.5
	Tertiary (21+)	48.9	70.4	32.4
	Still studying	55.1	72.0	35.6

Source: SIBIS data, 2002/2003, the author's own calculations.

A further break down by ***age*** (Table 1-15) reveals that skills also tend to be a matter of age (within each country cluster) with the younger people showing higher skill levels. However, within the EU-15 Laggards group the generation 65+ seems to be more knowledgeable about 'using search engines' and 'using e-mail' than people aged 50 to 64.

Table 1-15: ICT skills (by age)

Percentages of Internet users feeling very confident in …

	Age	Using search engine	Using e-mail to communicate with others	Downloading/Installing Software
Laggard CEEC	up to 24	29.4	43.4	14.3
	25 to 49	28.9	45.6	17.1
	50 to 64	21.5	37.6	6.4
	65 and more	24.5	29.0	4.4
Frontrunner CEEC	up to 24	48.0	56.9	22.6
	25 to 49	40.6	48.5	19.2
	50 to 64	27.2	39.3	13.7
	65 and more	1.8	16.7	#
Laggard EU-15	up to 24	39.5	51.0	28.5
	25 to 49	30.1	42.1	23.8
	50 to 64	21.9	31.5	23.4
	65 and more	31.4	37.5	22.5
Follower EU-15	up to 24	53.2	65.8	35.9
	25 to 49	39.4	58.6	33.9
	50 to 64	21.8	48.4	18.0
	65 and more	21.7	31.2	9.3
Frontrunner EU-15	up to 24	58.5	74.1	36.3
	25 to 49	46.4	67.4	30.1
	50 to 64	31.8	53.6	22.2
	65 and more	22.7	46.4	16.4

Source: SIBIS data, 2002/2003, the author's own calculations.

In chapter 2 we pointed out that education is a key factor of access to ICTs. The same can be said of the different more specific skills needed to make use of the New Media and their advantages. The analysis showed that skill levels still vary among the country clusters, although differences are not as great as along the first two dimensions. More specifically, the digital divide for ICT access along socio-demographic characteristics is not the only pattern when it comes to ICT skills. Here, some of the usual at-risk groups perform somewhat better, especially the unemployed and older people. One implication of this observation could be, that if members of certain at-risk groups have managed to gain access to ICTs and New Media, they might be quite able to make use of this advantage.

Attitudes

In addition to the assessment of skills at using new ICTs another important factor is people's attitudes towards that kind of technologies. For example, if senior citizens are comfortable in using the old media and see no interest in acquiring new media, should we still define this as a digital divide or as an informed choice?

Table 1-16: Attitude barriers to internet use

Percentages of non-users within respective groups.

	Internet…					
	requires advanced computer skills	not easy enough to get access to	too time consuming	too expensive to use	lacks useful/interesting information	is not something for me
Laggard CEEC	34.1	24.8	21.0	44.7	4.9	22.1
Frontrunner CEEC	43.5	22.7	37.1	44.9	7.9	26.9
Laggard EU-15	27.4	15.4	23.6	20.6	8.5	36.7
Follower EU-15	40.2	13.0	21.2	25.3	12.9	45.1
Frontrunner EU-15	24.8	18.8	25.9	24.6	15.0	49.6
EU average	*34.0*	*18.9*	*25.7*	*32.0*	*9.9*	*36.1*

Source: SIBIS data, 2002/2003, the author's own calculations.

An shown by Table 1-16, within the two CEEC clusters, about 45% of the non-users state that the internet is too expensive to use, which makes this the most important attitude-based barrier (which has, of course, also a socio-economic dimension). This is followed by the statement that the internet requires advanced computer skills, relating attitude barriers to the question of specific ICT skills as analysed in the previous chapter. The assessment that the internet is 'too time consuming' to use holds off 37.1% of the CEEC Frontrunner non-users. The factor of the internet being 'not easy enough to get access to' is somewhat more important in the CEEC than in the EU-15.

Within the three EU-15 clusters the most frequent attitude barrier is the assumption that 'the internet is not something for me'. Nearly one half of the non-users in the EU-15 Frontrunners group give this as a reason for their not being online. Although this statement is of a vague nature it can be regarded as a general indicator for voluntary offliners, who choose not to use the internet for various intrinsic reasons that are not (at least not directly) related to monetary constraints, a lack of skills etc. However, an in-depth analysis of this intrinsic category is missing. One part of this group might be the adamant offliners, people not intending to ever use the internet. Another part might be people who have, up to now, not found, what they are looking for. The latter reason would imply that a broadening of the information and services provided via the internet could motivate those people to go online.

Costs are not perceived as a major barrier to internet use by about 75% of the EU-15 offliners, particularly in comparison to the CEEC clusters. Interestingly, they are considered least important in the EU-15 Laggard countries, where at the same time internet use among people of low social status (secondary and less educational level, unemployed) is lower than in the other EU-15 cluster (cf. chapter 0).

A further break down by ***employment status*** (Table 1-17) reveals that the unemployed and other people not working on average tend to perceive relatively more barriers than the working people. The most important barrier for unemployed within the CEEC clusters and among the EU-15 Frontrunners is costs. More than 50% of the unemployed CEEC and about 34% of the unemployed EU-15 Frontrunner non-users state that the internet is too expensive to use. In contrast, for unemployed people in the EU-15 Laggard and Follower countries the most important barrier is the intrinsic assumption that "the internet is not something for me". The strongest barrier for employees within the CEEC Laggard group seems again to be high costs. Within the CEEC Frontrunner and EU-15 Follower group, a huge barrier among employees is the assumption that the internet requires advanced computer skills. EU-15 Laggards and Frontrunners employees tend to assume that 'the internet is not something for me'.

Table 1-17: Attitude barriers to internet use (by employment status)

Percentages of non-users within respective groups.

	Labour Market Participation	requires advanced computer skills	not easy enough to get access to	too time consuming	too expensive to use	lacks useful/interesting information	is not something for me
Laggard CEEC	working	30.3	21.9	21.5	42.6	4.7	12.8
	unemployed	32.6	27.0	20.4	53.8	4.0	17.5
	other not working	38.6	27.1	20.7	43.6	5.6	33.8
Frontrunner CEEC	working	41.5	19.2	38.1	41.2	6.7	19.0
	unemployed	43.9	28.2	41.5	51.5	7.7	22.1
	other not working	46.7	26.7	34.2	49.0	9.9	40.8
Laggard EU-15	working	22.3	15.2	26.7	20.9	9.7	28.4
	unemployed	38.1	19.2	26.0	25.7	12.5	38.6
	other not working	29.6	15.0	21.1	19.9	7.3	42.0
Follower EU-15	working	33.2	9.0	21.4	19.8	9.4	29.9
	unemployed	25.5	2.7	19.0	21.4	12.0	39.6
	other not working	46.6	16.8	21.4	29.1	15.1	54.8
Frontrunner EU-15	working	15.6	13.5	19.6	16.3	12.1	36.1
	unemployed	22.1	9.7	14.8	33.9	11.0	28.9
	other not working	31.1	23.3	31.4	28.9	17.3	60.8

Source: SIBIS data, 2002/2003, the author's own calculations

With regard to ***educational level*** (Table 1-18) a lack of formal education can again be seen to be a huge stumbling block. Especially within the CEEC clusters, the less-educated people are excluded due to the fact that the internet 'requires advanced computer skills'. In contrast, well-educated people name cost as the most important barrier, again particularly within both CEEC clusters. Students in the EU-15 Laggards and Followers group also often perceive the

internet as too expensive to use. The most important obstacle for both well and less well-educated non-users among EU-15 Laggards and Frontrunners is again the statement that 'the internet is not something for me'.

Table 1-18: Attitude barriers to internet use (by educational level)

Percentages of non-users within respective groups.

	Educational attainment proxy	**requires advanced computer skills**	**not easy enough to get access to**	**too time consuming**	**too expensive to use**	**lacks useful/interesting information**	**is not something for me**
Laggard CEEC	Secondary and less (TEA 16)	52.3	35.1	22.7	48.7	5.4	47.0
	Higher secondary (TEA 20)	33.9	25.3	21.3	47.1	5.2	20.4
	Tertiary (21+)	23.9	19.4	19.9	41.2	4.1	14.3
	Still studying	23.0	15.8	18.6	35.5	4.7	2.2
Frontrunner CEEC	Secondary and less (TEA 16)	60.4	38.8	43.5	58.9	9.0	59.4
	Higher secondary (TEA 20)	45.4	22.8	38.8	45.0	7.4	27.6
	Tertiary (21+)	32.5	16.1	30.5	38.0	8.8	13.3
	Still studying	24.9	13.3	29.3	35.6	9.5	0.5
Laggard EU-15	Secondary and less (TEA 16)	31.7	18.5	24.7	22.3	9.5	46.7
	Higher secondary (TEA 20)	22.9	11.5	20.5	16.9	8.0	28.2
	Tertiary (21+)	22.3	14.3	26.6	20.4	7.4	30.6
	Still studying	25.0	11.2	21.4	26.7	6.3	9.6
Follower EU-15	Secondary and less (TEA 16)	42.3	13.4	23.1	27.9	17.3	56.6
	Higher secondary (TEA 20)	41.3	12.7	18.4	24.0	7.7	38.0
	Tertiary (21+)	36.8	9.2	19.9	17.0	7.5	33.3
	Still studying	22.4	29.1	25.2	38.0	33.4	11.3
Frontrunner EU-15	Secondary and less (TEA 16)	22.6	19.0	26.2	24.4	19.8	52.7
	Higher secondary (TEA 20)	27.8	18.9	24.1	26.3	11.6	48.0
	Tertiary (21+)	29.0	20.3	26.0	23.3	5.5	41.9
	Still studying	14.7	6.6	39.2	20.9	10.1	47.1

Source: SIBIS data, 2002/2003, the author's own calculations.

With regard to ***age*** (Table 1-19), costs again are a huge barrier within each age cohort of the CEEC except the oldest within CEEC Laggards and oldest and 50-64 cohort within CEEC Frontrunners. Elderly people often fear that usage of internet requires advanced computer skills. In the EU-15 clusters patterns deviate considerably: Here, the most important barrier (independently from age) is the assumption that "the internet is not something for me". Within the EU-15 Frontrunners, nearly 70% of non-users do not think that the internet might be an appropriate medium. However, since non-users form the base of our calculations, caution should be exercised in interpreting the data.

Table 1-19: Attitude barriers to internet use (by age)

Percentages of non-users within respective groups.

	Age	requires advanced computer skills	not easy enough to get access to	too time consuming	too expensive to use	lacks useful/interesting information	is not something for me
Laggard CEEC	up to 24	27.5	20.9	20.4	38.0	4.8	6.5
	25 to 49	32.1	23.7	21.6	46.1	4.5	15.4
	50 to 64	39.0	27.9	20.3	49.3	5.3	35.1
	65 and more	44.8	31.3	20.4	42.1	6.4	55.0
Frontrunner CEEC	up to 24	30.0	15.7	32.4	38.8	8.3	4.6
	25 to 49	38.8	18.6	36.8	43.3	6.8	18.2
	50 to 64	57.1	29.3	39.6	45.9	9.1	41.4
	65 and more	58.3	36.5	41.1	58.0	9.4	67.2
Laggard EU-15	up to 24	29.7	10.8	19.9	29.9	8.9	12.8
	25 to 49	24.4	15.8	26.5	20.4	9.9	29.3
	50 to 64	29.3	16.4	23.9	19.7	8.2	40.5
	65 and more	29.3	15.3	20.0	18.7	6.6	51.7
Follower EU-15	up to 24	13.5	14.0	16.2	14.6	7.0	23.2
	25 to 49	30.4	7.1	19.9	21.6	11.7	24.5
	50 to 64	44.0	15.8	21.5	28.1	13.0	46.2
	65 and more	49.5	15.7	22.8	27.5	14.8	66.0
Frontrunner EU-15	up to 24	5.9	14.4	17.7	17.2	13.5	23.3
	25 to 49	16.3	12.7	18.3	24.5	12.4	29.8
	50 to 64	24.4	15.2	22.6	20.0	12.5	46.7
	65 and more	33.3	26.0	34.5	28.4	18.7	68.7

Source: SIBIS data, 2002/2003, the author's own calculations.

Apart from analysing the barriers to new information and communication technologies, the SIBIS data allow an investigation of perceived benefits of the internet. This analysis adds additional value to the analysis of attitude-barriers to internet use. Again, the indicators are broken down by country clusters and by socio-demographic variables in order to give in-depth information about different kinds of benefits in relation to socio-demographic characteristics of the EU-population.

Table 1-20: Assessment of Benefits of Internet

Percentages of respective groups (base: people having used the Internet in the last four weeks)

Life without Internet…	Less well informed as a consumer	Feel socially excluded	Not receive some of job-related information	Less communication with job-related contacts	Less private contacts	Less fun
Laggard CEEC	22.5	10.0	20.7	14.6	23.4	21.9
Frontrunner CEEC	25.8	8.2	29.1	22.4	23.7	22.8
Laggard EU-15	19.3	7.3	23.1	23.6	17.1	11.7
Follower EU-15	26.5	6.2	35.2	29.7	18.9	14.8
Frontrunner EU-15	19.9	8.4	27.0	29.2	20.8	13.9
EU average	*22.6*	*8.1*	*26.5*	*22.9*	*20.8*	*16.9*

Source: SIBIS data, 2002/2003, the author's own calculations.

Within the CEEC Laggard group most internet users state that they would have less private contact without using the internet. This is followed by the assumption that they would feel less well informed as a consumer and would, all in all, have less fun. Among the CEEC Frontrunners and in all EU-15 countries, job-related benefits are considered most important.

For each country cluster the assumption of feeling socially excluded without access to and usage of the internet is of least importance. 6.2% of internet users in the EU-15 Follower group and 10% in the CEEC Laggard group would feel socially excluded without the internet.

On average, most frequently mentioned are benefits of receiving job-related information, communicating with job-related contacts and receiving information as a consumer.

A breakdown by ***employment status*** (cf. Table 1-21) shows that among unemployed internet users the most important benefits are related to private purposes, such as consumer information, private contacts and fun. Whereas on the other hand employees, not surprisingly, benefit most from job-related purposes. The fear of being socially excluded without access to and usage of the internet is particularly high among unemployed and other not working citizens. This applies to all country clusters.

Table 1-21: Assessment of Benefits of Internet (per employment status)

Percentages of respective groups (base: people having used the Internet in the last four weeks)

	Labour Market Participation	Less well informed as a consumer	Feel socially excluded	Not receive some of job-related information	Less communication with job-related contacts	Less private contacts	Less fun
Laggard CEEC	Working	24.3	10.3	30.1	22.1	21.7	17.2
	unemployed	9.3	6.5	5.8	3.5	12.5	15.8
	other not working	23.9	10.6	11.0	6.5	29.0	30.7
Frontrunner CEEC	Working	29.4	8.1	36.0	28.8	22.1	18.3
	unemployed	18.0	4.9	10.2	8.3	19.7	12.1
	other not working	19.5	8.9	18.2	11.4	28.0	34.8
Laggard EU-15	Working	19.0	5.8	23.1	23.6	13.9	10.5
	unemployed	19.3	11.2	#	#	17.8	9.0
	other not working	19.7	8.8	#	#	21.7	13.8
Follower EU-15	Working	26.6	5.8	35.2	29.7	16.6	13.3
	unemployed	20.5	10.6	#	#	38.3	20.0
	other not working	27.1	6.1	#	#	20.7	17.0
Frontrunner EU-15	Working	20.1	7.2	27.0	29.2	18.2	13.9
	unemployed	24.6	7.7	#	#	18.8	25.1
	other not working	18.9	10.8	#	#	26.2	12.5

Source: SIBIS data, 2002/2003, the author's own calculations.

With regard to ***educational level*** (cf. Table 1-22 in Annex B) the majority of secondary and less educated people (within both CEEC clusters and Laggard EU-15) would especially feel less well informed as a consumer if not using the internet. Higher educated people within all country clusters particularly benefit from job-related advantages, whereas students state to lack private contacts or fun without internet access. Within the framework of the eAccess4Inclusion project special attention deserves the statement of feeling socially excluded without access to the internet. Concerning educational level the feeling of social exclusion tends to increase with rising educational level in the CEEC countries. There is no such clear pattern among internet users in the EU-15 countries, except that among the Frontrunners the feeling of social exclusion is higher among people with low educational level, but still is highest among students.

Table 1-22: Assessment of Benefits of Internet (per educational level)

Percentages of respective groups (base: people having used the Internet in the last four weeks)

	Educational attainment proxy	Less well informed as a consumer	Feel socially excluded	Not receive some of job-related information	Less communication with job-related contacts	Less private contacts	Less fun
Laggard CEEC	Secondary and less (TEA 16)	18.2	4.3	9.4	1.9	7.5	11.4
	Higher secondary (TEA 20)	21.1	9.5	19.3	14.3	17.4	18.6
	Tertiary (21+)	22.5	8.7	28.4	20.6	22.5	14.9
	Still studying	23.6	12.0	13.9	8.4	30.2	32.7
Frontrunner CEEC	Secondary and less (TEA 16)	15.7	5.9	12.0	9.5	6.1	13.0
	Higher secondary (TEA 20)	25.9	6.3	26.0	22.8	20.1	19.0
	Tertiary (21+)	31.4	10.6	46.0	33.3	24.3	15.0
	Still studying	21.2	9.1	22.6	13.1	31.4	38.4
Laggard EU-15	Secondary and less (TEA 16)	19.0	9.7	8.3	15.2	15.6	10.5
	Higher secondary (TEA 20)	20.7	7.1	18.6	20.9	14.2	11.7
	Tertiary (21+)	17.6	5.9	30.6	28.0	14.7	11.2
	Still studying	19.8	8.4	#	#	22.8	12.5
Follower EU-15	Secondary and less (TEA 16)	26.5	6.5	30.3	22.1	18.6	21.7
	Higher secondary (TEA 20)	25.2	7.0	28.9	22.2	15.5	11.6
	Tertiary (21+)	27.1	4.9	42.5	39.4	18.5	12.7
	Still studying	27.1	7.2	#	#	25.9	15.9
Frontrunner EU-15	Secondary and less (TEA 16)	16.9	9.9	18.2	29.2	17.5	11.4
	Higher secondary (TEA 20)	17.8	8.8	20.7	#	16.5	14.0
	Tertiary (21+)	22.9	5.3	35.4	#	19.5	13.6
	Still studying	20.1	11.8	#	#	31.3	16.4

Source: SIBIS data, 2002/2003, the author's own calculations.

A further break down by ***age*** (cf. Table 1-23 in Annex B) reveals that within the youngest age cohort the assessment of different benefits of the internet rather deviates within different country clusters: In the CEEC countries the majority of young internet users states to have less fun without internet use. Of considerable interest is again the question to which extend internet users would feel socially excluded without access to and usage of the internet: Within CEEC country clusters the share of people stating to feel socially excluded without the internet decreases as age increases. The EU-15 countries show a deviating pattern: Here, the feeling of being socially excluded tends to increase as age increases. This especially holds true for the EU-15 Frontrunner cluster.

Table 1-23: Assessment of Benefits of Internet (per age)

Percentages of respective groups (base: people having used the Internet in the last four weeks)

	Age	Less well informed as a consumer	Feel socially excluded	Not receive some of job-related information	Less communication with job-related contacts	Less private contacts	Less fun
Laggard CEEC	up to 24	20.7	11.5	12.6	8.1	27.8	32.6
	25 to 49	24.0	10.3	27.4	19.6	22.0	15.8
	50 to 64	25.3	3.8	23.6	17.2	13.0	8.5
	65 and more	9.7	2.8	22.6	21.8	12.2	5.5
Frontrunner CEEC	up to 24	20.8	9.2	21.5	15.1	30.3	33.9
	25 to 49	28.4	7.3	32.8	27.8	21.2	17.9
	50 to 64	28.7	9.7	35.4	24.5	15.0	13.1
	65 and more	27.2	3.2	29.0	1.8	28.7	15.6
Laggard EU-15	up to 24	21.1	9.0	19.7	23.6	22.8	14.7
	25 to 49	18.8	6.1	24.1	23.4	14.4	9.4
	50 to 64	15.8	7.1	17.8	24.2	11.1	11.3
	65 and more	21.2	10.4	43.7	43.7	21.7	24.9
Follower EU-15	up to 24	25.2	4.8	34.3	20.0	27.2	20.4
	25 to 49	27.1	6.8	33.1	27.4	16.1	11.7
	50 to 64	25.5	6.7	43.3	43.0	19.8	18.0
	65 and more	29.4	#	#	#	5.4	15.0
Frontrunner EU-15	up to 24	16.7	8.4	23.7	21.5	30.7	16.5
	25 to 49	22.6	8.5	29.6	30.9	18.8	15.0
	50 to 64	15.7	7.6	20.9	27.7	15.7	10.9
	65 and more	19.4	10.2	3.7	3.7	19.5	3.0

Source: SIBIS data, 2002/2003, the author's own calculations.

I.II.IV Conclusive Summary of Secondary Data Analysis

The ICT-maturity levels the individual EU member states have gained vary greatly according to our operationalisation. Many of the new member states still lag behind the former EU-15 countries. However, some countries of the new member states such as Estonia and Slovenia have reached maturity levels that equal those observed in countries like Germany, Belgium and France, or they even surpass these. A universal west-east gradient replacing the north-south one among the former EU-15 countries – as is had been observed by several benchmarking studies during recent years - does not emerge from our data. Simplistic concepts of the process of the European Union's maturation in relation to Information Society developments thus seem misplaced.

When it comes to basic access to the internet , in the sense of being technically connected. It will not come as a surprise that socio-demographic factors play a crucial role across all Member Sates. Access disparities are especially influenced by educational level, age (mainly for the 65+ age group) and health/disability status (mostly in the CEEC countries, less so for the EU-15 countries). However, disparities according to these factors are much stronger pronounced among the New Member States and – although to lesser - among the EU-15 "laggards" when compared with the remainder of the EU15 countries. For example, the ratio of internet users with tertiary educational level to those with secondary or lower level is about 40:1 in the CEEC Laggard countries, about 6:1 among the EU-15 "laggard" group and only about 2:1 in the EU-15 "frontrunner" countries. While in the latter county groupings the access divide seems to start closing across different socio-economic groups this seems to remain the dominant issue for most of the Eastern European countries. In relation to policy intervention, measures directed towards closing the access divide may thus be seen as a priority in these countries.

On the contrary, in the EU15 "frontrunner" countries the so called second order divide, i.e. disparities in relation to ICT-related skills and actual usage, may gain in relevance. Here again, education seems to be a key determinant. In all of the researched country groupings, people with low levels of education show lower usage rates when compared with other group characteristics such as unemployment or old age. Also, access and usage rates are generally higher among people who are in employment when compared with those who are unemployed. A cross country comparison of the ratios of internet usage among the employed and the unemployed suggests however that employment status is a stronger determiner in the new Member and in the EU15 "laggard" countries when compared with the EU15 "frontrunners" and "followers" respectively. In the latter labour relationships seem to loos in importance as a primary source of online involvement, in terms of both physical access and usage. This may also be illustrated by the fact that half of the unemployed in the EU15 "frontrunner" countries are internet users whereas only 10% of the unemployed in the New Member States' "laggard" countries use this technology. Disparities in relation to online skills possessed by those already connected to the online world seem generally less pronounced across the investigated country groupings, when compared with disparities in basic access. This concerns in particular more specific skills such as using search engines or e-mail.

Our analysis of the offliners' *attitudes* toward the internet revealed that, besides skills and education, costs considerations play a crucial role in relation to non usage particularly in the new Member States. Many people in these countries refrain from using the internet for the reason of costs. This finding may explain the higher usage rates for PIAPs in these countries, as these offer cost free or low cost access opportunities. A comparatively high share of non-users responding that the internet is "lacking useful information" or is "not something for me" can be observed in the more advanced EU-15 countries. Here, large parts of the non users seem to voluntarily decide not to use the internet, whereas in the New Member states more people tend to be deterred from considering usage through their economic situation.

When it comes to the perceived benefits of internet use, most people state that they would not feel socially excluded in general if they could not use the internet. Rather they find the internet useful to do certain things such as job-related communication, contacting friends, and gathering consumer information more easily. The majority of both users and non users do not seem not to perceive the internet as a key source of social participation. Rather, most people seem to take a utilitarian approach to it.

Online delivery of public services, in particular eGovernment, has frequently been highlighted as a key driver towards an inclusive Information Society. When compared to commercial service providers public actors cannot choose their 'customers' and need to address all population segments. Relying on the United Nations' eParticipation index, our analysis shows that there are considerable differences in relation to the extent to which national governments are taking a participatory approach towards eGovernment. Values of this index differ greatly between the researched countries, ranging from the United Kingdom (rank 1, worlds best performer) to Spain (rank 35 of 37). Here, Estonia outrivals all other EU countries except United Kingdom, Netherlands and Denmark. The worst performers are Lithuania and Slovakia together with Luxembourg, Greece and Spain. Strong positional changes have been observed over the time for some of the countries. This finding may point into the direction of successful implementation of participatory policy strategies. Most notably, the ICT-maturity levels in the researched countries correlate only moderately with their performance in relation to eParticipation. This points into the direction that participatory approaches in online delivery of public services must not be regarded as a "luxury" that can only be afforded by those countries that are anyhow more advanced in relation to Information Society developments. Hungary and Poland may serve as good examples here showing high index values in relation to eParticipation despite rather low ICT-maturity levels.

Annex II: Detailed Tables for Chapter 4

Table A4.1 Awareness-raising / motivation

Country	*Activity*
AT	Some activity (especially at regional level) but seems not to be a core focus at this stage of the development of the Information Society in Austria
BE	Was extensive national campaign in 2000 and 2001; ongoing targeted initiatives, for example, addressing disadvantage women, older people
DE	Various awareness raising activities in the past and some ongoing, both general and targeted, especially addressing older people, also women
DK	Various awareness raising activities in the past; some ongoing targeted awareness-raising, for example, older people
EE	Some efforts in the context of drive to increase digital literacy
ES	Various activities, including using NGOs to spread awareness and motivation
FI	Various awareness raising activities in the past; some ongoing targeted awareness-raising, for example, older people
FR	Through multimedia centres in many areas
GR	Awareness raising at national and regional levels still an important activity
HU	Through PIAPs in local communities
IE	Was a significant media and road show campaign in the earlier stages of the Information Society; targeted initiatives ongoing, for example, addressing older people and various local initiatives addressing disadvantaged groups
IT	TV-based awareness raising and provision of basic digital literacy skills
LV	Is an element of eLatvia initiative
LT	Through PIAPs in local communities
MT	Recent national awareness campaign addressed to general public; also, ongoing programme to target late adopters at the local level
NL	Various initiatives in the past and some ongoing, including targeted ones addressing older people and disadvantaged families with children
PL	Encourage awareness and participation amongst “middle generation” and disabled
PT	Ongoing national awareness-raising campaigns, both general and targeted (e.g. addressing people with disabilities)
SE	Targeted initiatives addressing older people, for example
SK	Initiatives to increase awareness and digital literacy of disadvantaged groups (Roma, disabled, older, isolated rural)
SL	Initiatives to raise awareness amongst young people, older people, unemployed
UK	Range of ongoing initiatives, including targeted ones addressing disadvantaged groups

Table A4.2 Availability and Affordability

	Activity
AT	Internet cheque subsidy for Internet connection, modem and Internet PC Tax subsidy for broadband access (rural / less-favoured areas) PIAPS in key locations – municipality offices, employment agencies (facilitate job search for unemployed)
BE	PIAPs in libraries, NGOs and training centres eTelevision / digital TV as interactive service provider NGO agreements with internet providers Allowance to help purchase ICTs and Internet access, including target groups in NAPs (young people, single-parent families, people suffering extreme deprivation), registered job-seekers in vocational training, low income families with dependent children, older people
CY	Initiative to reach wider part of the workforce with ICTs
DE	PIAPs Financial supports for NGOs to access ICTs (Free Internet connections for schools)
DK	PIAPS in all libraries; Cybercafes targeting older people Tax incentive for employers to provide PCs to staff, tax exemption
EE	Nation-wide PIAP initiative (Planned initiative to make broadband available to all households)
ES	PIAPs through Red.es Rural internet access units (isolated rural communities)
FI	(Annual subsidy for small municipalities for networking and ICT support) Trade Union initiative giving subsidies to members buying ICT equipment Telecottages Multimodal access through digital TV
FR	PIAPs – in post offices, libraries, employment agencies (free usage for first hour; free and permanent mailbox) Tax exemption for employers giving ICT equipment to employees
GR	Grants to young farmers in rural areas to help purchase computers and Internet links
HU	Initiative to have PIAP in every settlement (priority to small settlements); target of 4,000 by 2005 – libraries, post offices, telehouses, cultural places: also dedicated ones for older people, disabled, monorities Subsidies and tax breaks for ICT access for disabled people Sulinet programme giving state subsidies for computer purchase and Internet access (Use of structural funds to bring broadband to less favoured regions)
IE	PIAPs in libraries etc. Financial support for disabled people to access ICTs for work Laptops for students with dyslexia
IT	PIAPs in centres for youth; PIAPs in south of Italy (2,500); various regional PIAP initiatives Interest free loans for students buying PCs 200 euro contribution to low income families towards PC purchase Tax incentives for suppliers of ICTs to prisons, schools, also for employers
LV	PIAPs through PPPs – particular focus on small settlements Envisaged that Internet access will be included within the general services of the Public Services Regulation Commission – this will determine the user range and ensure access for all at a reasonable price to a unified public information system
LT	(Broadband for schools, libraries, municipalities) Cheaper Internet / phone services for disabled people PIAPs in rural areas
MT	PIAPs in local areas Free e-mail address for each citizen
NL	Heavily subsidised PCs for long-term unemployed on successful completion of training Tax incentives and interest free loans for people in employment Financial support free PCs for low income groups (with children), benefit claimants Internet cafes for older people e-mail address for homeless and ICT access at centres where they gather Fibre to the home initiatives with pricing packages aiming to attract everyone to connect

Table 4.2 Availability and Affordability (continued)

PL	PIAPs (Infomats in various public locations – e.g. employment offices where have e-mail address, prepare CV etc. Financial assistance for people with visual impairments (Broadband for schools and libraries, especially rural areas)
PT	Municipal PIAPs – 500 by 2005; also digital inclusion centres targeting disadvantaged young people Long-standing fiscal incentives for PC purchase – available to all (Financial support for teachers to purchase PCs)
SE	PIAPs in post offices (high bandwidth, design for all features) Fiscal incentives to employers to provide staff with own PC, also Trade Unions and NGOs (for older people) Tax deduction for costs of a broadband connection (General policy that all households and enterprises throughout Sweden to have access to high bandwidth infrastructure)
SK	(Programme to have ICTs and Internet in all schools, so all children will have access)
SL	PIAPs in libraries, cyber cafes, infoterminals, multimedia centres, schools
UK	PIAPs in UK Onlone centres (6,000), employment centres etc. Provision of recycled PCs at nominal price to low-income families; also subsidies for ICT equipment and phone charges for Internet access for late adopters in disadvantaged areas Financing to support parents to buy laptops for their children's school work Fiscal incentives for employers to provide staff with home PCs Use of digital TV to provide access Local initiatives giving e-mail access to all within 10 minutes walk from home

Table 4.3 Access to employment

	Activity
AT	Access to Internet in employment agencies for job search purposes EJobmarket for people with disabilities; ICT training for employment of people with visual impairments; promotion of employment access for people with disabilities ICT skills for women to support access to ICT jobs; equal opportunities for girls and boys in accessing IT jobs ICT training for immigrants to increase employability
BE	Online support services for unemployed – website for young adults aiming to prevent long-term unemployment, online job search for job seekers Training in intermediate ICT skills to facilitate job placement of unemployed Loaning ICT for home use to facilitate job search for unemployed
DE	FAZIT project in Berlin to combat unemployment, especially amongst those with mental illness REHADAT database supporting vocational rehabilitation for people with disabilities Increasing women's access to IT professions by increasing their share in IT training Portal providing information on vocational training and qualifications for unemployed and other disadvantaged people; online services supporting job seekers to develop ICT skills and finf work Telementoring service to help young people find jobs Digital literacy and eLearning for prisoners to facilitate access to employment
DK	Promotion of ICT-related business start-ups amongst women Promotion of teleworking, inclusing employer payment of communication costs
ES	Use of new technologies in training to encourage teleworking Training women in ICTs and teleworking to increase employment opportunities Online job searching for disabled people Employment opportunities for disabled people through ICT, remote training and teleworking ICT training for unemployed to increase employment chances
FR	Diploma in Internet surfing for unemployed, integrated into vocational training
GR	Large-scale programme to provide digital literacy to unemployed – target of 40,000 Positive discrimination in favour of women (70:30) in programmes to develop ICT skills for new professions
HU	Improvi ng ICT skills to increase employability of Roma, people with low education, older working people, disabled

Table A4.3 Access to employment (continued)

IE	Industry-led and other initiatives providing IT skills training, certification and job placement to fill vacancies in IT jobs (focus on long-term unemployed)
IT	Training for young unemployed in South in ICT skills
LT	Increasing employability amongst young and long-term unemployed – increasing skills with focus on languages and ICT literacy
MT	Technology skills for women wishing to return to work (focus on transferable skills in customer service – internationally recognised)
NL	ICT training and job opportunities for low skilled job seekers
PL	Basic ICT training in employment offices Training in ICTs and teleworking
PT	Promote use of ICTs to encourage adaptability of workers in the face of economic change Promoting access to telework for disabled people
SE	Training in ICT skills for unemployed; certificate based; combined with job seeking activities PPP with positive discrimination for disadvantaged in access to IT training and job opportunities (SwIT) – unemployed, women, immigrants, people with occupational disabilities ELearning – education in Swedish and IT to facilitate access to employment for immigarnts Online job search and jon seeking support for unemployed
SL	ICT training to provide employment and new business opportunities in rural areas e.g. unemployed farmers ("Wandering e-School") Establishment of teleworking centres (give access to wider employment market)
UK	Ambition Initiative (part of New Deal) – aims to help disadvantaged people gain ICT and other skills for employability in key sectors PPP providing skills training and fast-tracking to call centre jobs Online learning and support for carers to gain employment

Table A4.4 Digital Literacy

	Activity
AT	ICTs and internet in all (types of) schools ICT courses for women Internet introduction courses for older people Pilot ECDL for people with disabilities ECDL for migrant women
BE	ICTs in schools Basic ICT skills training for workers in collaboration with sectoral interests Digital literacy programme targeting unemployed, low skilled, and low income – target of 100,000+ Various initiatives targeting older people
CY	Integration of computers in initial and continuing education Reaching wider workforce with ICTs
CZ	National programme for computer literacy
DE	Skills on new media is part of the focus of future-oriented education and family policy, for example, in all youth welfare facilities Focus on encouraging equal engagement with ICTs by women; also digital skills for women in rural areas Plan of action on "Innovation and jobs in 21st Century" includes digital literacy Provision of opportunity for ECDL qualification for unemployed Digital literacy amongst older people Programme providing ICT skills training for older people and disabled people in their own homes
DK	Educational Computer Licence for school teachers
EE	General policy objective to raise digital literacy and extend opportunities for computer studies at all levels of education Large-scale initiative to promote digital literacy amongst disadvantaged / late adopters – 100,000 targeted

Table A4.4 Digital Literacy (continued)

ES	All public centres of education and training to have access to Internet and multimedia resources; teachers and trainers to be trained in ICTs Promotion of digital literacy in broad segments of the population through granting laptops to NGOs Particular focus on digital literacy of disabled people ICT skills training for older people
FI	National programme to promote digital literacy – older people, unemployed, immigrants University for older people – ICT skills
FR	Courses in PCs and internet, with 'internet browsing certificate' for those at risk of social inclusion and unskilled young people
HU	Programmes offering computer literacy, especially for those who have left school a long time ago
IE	Identification and targeting of late adopters – women on home duties, retired people, tradesmen / skilled, agriculture / forestry / fishery workers, unemployed Equalskills initiative to provide ECDL for late adopters – target of 50,000 Digital literacy for Travellers Back to Education Initiative includes digital literacy component
IT	Online training in digital literacy for prisoners
LV	Programme to ensure ICT literacy for students at all levels of education
MT	ECDL certificate for all public school leavers Basic ICT skills training (20 hours) for late adopters
NL	Digital playgrounds for ICT literacy for residents of poor neighbourhoods
PL	Basic ICT training in employment offices; access to ICT training in other PIAPs and IT centres
PT	Aim to certify ICT skills for 2 million citizens by 2006 Increase ICT content in schools; obligatory ICT training in primary and secondary education (ages 10-18) ICT content to be included in 50% of training activities ICT skills for disadvantaged young people
SE	Various initiatives on digital literacy, for example, targeting unemployed people, older people
SK	Targets set in Information Society plan to increase computer literacy of disadvantaged groups – Roma people, disabled, older people, people living in remote excluded regions ICTs and Internet in all schools to ensure all, including children from poor or excluded households have access
SL	Free access for all to ICT skills training (eSchools) – content for self-learning Large-scale ECDL initiative, open to all but special focus on disadvantaged, including unemployed Senior 60+ - digital literacy for older people
UK	Basic digital literacy through free taster courses (105,000 attended) – partnership between broadcaster and government Network of 700 centres for ICT training and basic digital literacy for late adopters in disadvantaged areas Basic digital literacy for homeless in 49 Uplink centres in deprived areas Digital literacy programme for disadvantaged / late adopters Silversurfer – digital literacy for older people

Table A4.5 Second order digital divide

	Activity
BE	Click Sharp programme to teach children about risks of the Internet
PL	Kidprotect – awareness of online safety for children; children's website certification system

Table A4.6 eAccessibility

	Activity
CZ	Obligation on all central and local government to ensure accessible websites
DE	Disabled Equality Act requires Federal institutions to design accessible web sites
ES	Programme to promote accessibility of online public information
FI	Web site in various formats to be accessible for people with speech impairments and illiteracy
GR	Working group on universal access and ease of use for disabled – focus on educational content and equipment, health information systems, telecoms services, etc.
IE	IT Accessibility Guidelines for public web sites, procurers etc.
NL	Various quality marks and accessibility evaluation schemes for public web sites
SE	Strong focus on accessibility for disabled people

Table A4.7 Usability

	Activity
CZ	Public administration portal for easy citizen access
FI	Plain language initiatives for web sites to meet the needs of people with limited literacy
IE	User friendly access to very wide range of citizen information (OASIS)
LV	(Unified online information system for municipalities to be implemented); life events approach to online public services
SE	Usable online services in each Swedish and all major EU and immigrant languages

Table A4.8 Alternative (technological / traditional) modes of access

	Activity
BE	eTelevision / Digital TV for interactive service provision
FI	Multimodal access through digital TV
UK	Digital TV for access to public services SMS for eParticipation and other public services

Table A4.9 Avoiding social isolation

	Activity
-	-

Table A4.10 Distance bridging

	Activity
ES	Promotion of the use of the Internet as tool for permanent connection between isolated rural communities and important nearby towns and social service centres
FI	Networked interpretation service for deaf and deaf-blind Remote communication by sign language (web cam) for deaf people and those with speech impairments Access to IT employment in remote areas
PL	Polish Internet Library – facilitate access to knowledge for people in small villages and towns, distant from

	academic and cultural centres), also Poles living abroad
SE	Online access to key services in rural areas

Table A4.11 Relevant content / services

	Activity
AT	Online support for weak readers, school children for whom German is not first language etc.
BE	Online support services for unemployed – website for young adults aiming to prevent long-term unemployment, online job search for job seekers
DE	Senior@s online – content and information for older women; Seniors on the Net Internet information system for disabled people Online information system on social services / assistance Portal for people with difficulties in reading and writing – eLearning, employment etc. Call centre for deaf people providing relay / interpretation
DK	Useful Content on the Net – broad national initiative focusing on various target groups
ES	Online services and content for people with disabilities; also observatory of disability digital divide; online job searching
FI	Development of It resources for disabled people, especially aids and safety equipment Access to online services for older people to facilitate independent living Networked interpretation service for deaf and deaf-blind
FR	Multimedia facilities to facilitate access to culture for disadvantaged
GR	Portal providing content and services for people with disabilities, including access to educational materials
HU	
IE	Online portal providing comprehensive information for citizens
LV	Increased availability of technical aids for disabled people
LT	Online information system for citizens by Citizens Advice Union
MT	
NL	Online services and content for older people (SeniorWeb); portal for older people Portal with comprehensive information for immigrants; also information kiosks with this type of information (easy to use, touch screens etc.) ICT application to help social welfare recipients calculate their entitlements Online accommodation reservation for homeless; e-mail address for homeless and ICT access at centres where they gather Technology and society programme examining how ICT can contribute to solving social challenges – crime prevention, employment etc. AMS alerting to parents to reduce truancy
PL	Accessible and wide ranging site for people with disabilities
PT	Online content and services to support independent living for older people Online content and services for immigrants from Africa Online content and services for people with disabilities
SE	Strong focus on supporting disabled and older people through practical applications of ICTs for independent living
UK	Development of digital content to support life-long learning, cultural heritage and citizenship Online content and services for homeless people

Table A4.12 Networking

	Activity
BE	Electronic networking of social economy players
ES	Creation of multimedia networks of NGOs
NL	Online platform for networking of children / parents with chronic illness Virtual community of Moroccan immigrants
PL	Website supporting networking of Roma community

Table A4.13 eDemocracy

	Activity
BE	Programme encouraging NGOs to develop online education and promotion of democracy and civic engagement
DK	Empowering excluded to propose initiatuves for use of ICTs for inclusion
PL	Online access to activities of parliament, including interactive element Online debating forum on local issues
SE	Portal to facilitate eDemocracy, especially civic engagement of those with low interest / levels of political engagement; also local community initiatives
UK	Various initiatives by local authorities to engage citizens, including disadvantaged and youth, in policy formulation and democratic processes (using “push” technologies such as e-mail and SMS, web sites, etc.)

Table A4.14 eLearning

	Activity
AT	ICTs to make educational content available to adults independent of time and place, including focus on disadvantaged people ICTs to provided learning materials for disabled people; also CD-ROM courses for sign language teachers ELearning for prisoners with ultimate aim of employment
BE	ELeaning in training centres
IE	Flexible ICT-based learning opportunities for disadvantaged who have constraints attending traditional courses (lone parents, disabled) eLearning for Travellers
SE	ELearning for people in remote areas or with time constraints
SL	Free access for all to ICT skills training (eSchools) – content for self-learning; eLearning for continuing adult education and Elearning for people with disabilities – deaf (web-based video), visual impairment
UK	LearnDirect to enable continuing vocational education

Table A4.15 Content creation

	Activity
BE	Content creation for self expression, digital literacy and civic engagement of young people from ethnic minorities
FR	Multimedia cultural centres
IE	Public support for communities to set up own web sites (MoBhaile)
IT	Civic TV, including local content and interactivity Local portals with local content Online content and services for prisoners
NL	ICT-based production of news agencies in schools – focus on disadvantaged children
SL	Multimedia centres promoting access to culture and opportunity for creative uses of ICTs

Table A4.16 NGO support

	Activity
BE	Electronic networking of social economy players
DE	Initiative to support NGOs get started with ICTs
ES	Incentives (including granting laptops) to NGOs – to act as intermediaries in promoting digital literacy etc. Pilot RTDI projects in field of NGOs and ICTs Promote access to information and training by supporting access to equipment and creation of multimedia networks of NGOs Train NGO managers in ICTs; training the trainers
FI	Subsidies to NGOs in relation to ICTs for their work
FR	ICT support for NGOs by third level students
IE	Capacity building of NGOs and their client groups through CAIT programme Training of local community workers as local ICT champions

Table A4.17 Online communities

	Activity
DE	Support for community building, networkink and discussion for a for disadvantaged neighbourhoods – Soziale Stadt
IE	Public support for communities to set up own web sites (MoBhaile) Online space for interaction between public bodies, NGOs and schools
NL	Online infrastructure and support services for disadvantaged communities (Knowledge Neighbourhood)
PT	Digital Cities programme fostering local communities in cities
SL	Pilot “e-Village” in rural village
UK	Support for local communities to develop online presence and services, various initiatives including links with local schools

Table A4.18 Cohesion oriented

	Activity
AT	Intergenerational initiative (Youth instructs Old) – targeting older people and their younger relatives Online promotion of positive images of people with disabilities
SE	Connecting schools to combat ethnic segregation

Annex III: National Action Plans – E-Inclusion Content

eInclusion in the NAPs 2003

	Priorities / principles	Specific targets / measures	
		General (but relevant)	Targeted at (high) risk group(s)
AT	**Not a main target, although some relevant activities are included**	• ICTs and Internet in all types of schools • Open and flexible learning supported by ICTs to make educational content accessible to adults independent of time and place, with focus on integrative measures for disadvantaged groups (e.g. Elopa I and II to extend and further develop the preparatory courses for the adult population to enter university) • ICT courses for women	• ICTs to support disabled people – learning materials, CD-ROM courses for sign language teachers
BE	**eInclusion but features quite strongly in various aspects and is specifically referenced under one theme (section 8.2.4)**	• Low cost access to Internet for schools, libraries and hospitals (Belgacom) • Allowance to help purchase ICTs and Internet access for certain groups • Cyberschools project for ICTs in schools • 'Click Sharp' project to educate children on the risks of the Internet • Implementation of eLearning in Training Centres • Basic ICT skills training for workers in collaboration with sectoral interests	• Allowance to help purchase ICTs and Internet access for certain groups: o Target groups in NAPs (young people, single-parent families, people suffering extreme deprivation) o Registered job-seekers in vocational training courses o Low income families with dependant children o Older people • Online support services for unemployed o website for young adults aiming at preventing long-term unemployment; o online job search for job seekers (Brussels Regional Office for Employment)
CY	**Some (limited) reference to ICTs in relation to re-entry to the labour market for the long-term unemployed**	• Utilisation of IT so that a wider part of the workforce is reached, general services to citizens are facilitated and the monitoring of the labour market is improved • Integration of computers in initial and continuing training programmes	
CZ	**Not mentioned as a main target**	• National programme for computer literacy • Public Administration Portal for easy citizen access	• Obligation on all central and local government institutions to ensure accessible web sites

	Priorities / principles	Specific targets / measures	
		General (but relevant)	Targeted at (high) risk group(s)
DE	**Not a main target, although quite a lot of relevant activities are included**	• Access to new media and teaching media skills is part of the focus of future-oriented education and family policy; for example in all youth welfare facilities ("Young People Online"); also in existing Internet accesses in schools and public libraries (encouragement programme – "New Media in Education" • Federal government has set target to have 70% of the population over 14 using the Internet by 2005, with equal participation of women being ensured • Schools can connect to Internet free of charge; IT equipment of part-time vocational schools much improved • Plan of action "Innovation and Jobs in the 21st Century" has a large number of objectives aiming to prevent digital divides	• Internet information system for disabled people • Promotion of participation of disabled people in Information Society; Disabled Equality Act requires Federal institutions to design accessible web sites • Berlin "FAZIT" project to combat unemployment in eastern Berlin districts, especially with mental illness
DK	**Accessibility and access to the knowledge society for disabled people is mentioned as a target**	-	-

EL	**Access for disabled people – both physical and digital – is mentioned amongst the main targets**	• Women and the Information Society
		  o positive discrimination (70:30) on favour of women in programmes to develop ICT skills for new professions
		• Participation of disabled people – "Working Group on Universal Access and Ease of Use in the Information Society" set up; areas of focus:
		  o Educational content and equipment
		  o Health information systems
		  o Telecommunications services
		  o Etc.
		• New technologies in education (equipment, content, training of teachers)
		• Rural areas:
		  o Grants for young farmers to enable them to purchase computers and Internet links	

	Priorities / principles	Specific targets / measures	
		General (but relevant)	Targeted at (high) risk group(s)
ES	**Specific target set to strengthen access to new technologies by the population in a situation of or at risk of social exclusion and related NGO and professionals**	• Recognises that difficulties in gaining access and the lack of a minimal level of knowledge and familiarity with new technologies can translate into exclusion that is larger than the group of people excluded for the various causes provided for in the NAPincl; for this reason is an action "Internet for Everyone" o PIAPs (through Red.es) • New technologies for training and work o All public centres of education and training to have access to Internet and multimedia resources (through Red.es) o Teachers and trainers have training in ICTs o Use if new technologies in training to encourage teleworking o Promotion of spread of digital literacy in broad segments of the population by granting laptop computers to NGOs • New technologies and NGOs: o Provide incentives for development of NGOs that act as spreaders and suppliers of knowledge for high-risk groups o Pilot RTDI projects in field of NGOs and IVTs o Promote offers of information and training by supporting access to equipment and the creation of multimedia networks between NGOs (RED CONECTA and RED SORDA III projects) o Train NGO managers through FORINTEL programme • New technologies and rural areas: o Rural Internet programme – units for access to new technologies in especially disadvantaged and rural areas o Promote the use of the Internet as a tool for permanent connection between isolated rural communities and the most important towns nearby and social service centres	• Disabled people: o Promotion of digital literacy amongst disabled people o Accessibility of online public information • NGOs to facilitate transfer to disadvantaged groups (see previous column) • Isolated rural communities

	Priorities / principles	Specific targets / measures	
		General (but relevant)	Targeted at (high) risk group(s)
ET	**Not mentioned as a main target but various related aspects are mentioned under long-term objectives**	• Long-term objectives to: o Raise continuously the level of computer literacy and Internet access o Extend opportunities for computer studies at all levels of education o Diversify the range and availability of public e-services o Exploit the potential of information and communication technology to increase employment o Promote the information society at regional and local levels in order to prevent and decrease regional poverty and exclusion o Develop participatory democracy through ICT solutions • Specific actions: o Develop the network of public Internet access points o Extend the opportunities for electronic communication with the state o Support local projects promoting the development of the information society	
FI	**Not a main target, although some relevant activities are included**	• Recognition given to the fact that the rapid propagation of the Information Society in Finland has created new competence needs that may contribute to greater social exclusion in groups without the potential to use ICT-based services; therefore, safeguarding the availability of online services without regard to where a person lives is essential • A lot of attention to ICTs in schoold	• Development of IT resources for disabled people, with particular reference to aids and safety equipment
FR	**Not mentioned as a main target**		• Initiative to mobilise ICTs to allow populations facing specific difficulties to have greater independence and acquire new knowledge o Courses in PCs and Internet – issues an 'Internet browsing certificate' for people affected by social exclusion and unskilled young people

	Priorities / principles	Specific targets / measures	
		General (but relevant)	Targeted at (high) risk group(s)
HU	**Not a main target** **Accessible information environment for people with disabilities is one priority target**	• Reference is made to the EQUAL programme and its activities in relation to lifelong learning and inclusive workplace practice o Programmes focus especially on Roma, people with low education, older working people and people with disabilities, with a focus on training to improve employability o Includes developing basic skills and expanding knowledge through the use of new technologies and procedures, and information and communication technologies • Hungarian Information Society Strategy has set target of enabling all residents to access easily reachable, affordable and reliable quality Internet services in all communities within Hungary by 2004: o Gives high importance to reducing inequalities, giving equal opportunities in access and promoting such access amongst disadvantaged groups o Measures: - public access points in every settlement (4,000 by 2005), with priority to small setlements (eHungary Points), to give access to people without own equipment – programme offering computer literacy, especially for those who left school a long time ago o Sulinet programme offering state subsidies for computer purchase and Internet access o Use of structural funds to bring broadband to economically backward regions	• Disadvantaged groups given high priority in Information Society strategy (see previous column): o People with disabilities o Roma o Rural residents o Older people

	Priorities / principles	Specific targets / measures	
		General (but relevant)	Targeted at (high) risk group(s)
IE	**Inclusion of everyone in the Information Society is mentioned as a target**	• Groups targeted for attention in developing a more inclusive Information Society, especially those most at risk of exclusion: o Women on home duties o Retired people o Tradesmen / skilled workers o Workers in agriculture, forestry and fishng o Unemployed • Action Plan "New Connections" to raise level of access and participation in Information Society by increasing the numbers using ICTs: o Awareness raising o Provision of Internet access o Capacity building of organisations and citizens o IT accessibility guidelines	• Particular focus on o People on low income o Late adopters
IT	**No reference to eInclusion**	-	-
LT	**Use of the Internet to inform society about the activities of NGOs is one of the objectves under the "strengthening the abilities of NGOs" theme** **Accessible information environment for people with disabilities is also priority target**	• Development of employment abilities amongst the young and long-term unemployed, unemployed without qualifications and those at risk of long-term unemployment o Includes financing of training and improvement of professional skills for jobseekers with special focus on basic knowledge, including raising language and ICT literacy • Online Information system for citizens by Lithuanian Citizens Advice Union • Public Internet centres (public-private partnership); particular focus on small settlements	• ICT literacy of long-term unemployed and those at risk of long-term unemployment
LU	**Not specifically mentioned**	-	-

	Priorities / principles	Specific targets / measures	
		General (but relevant)	Targeted at (high) risk group(s)
LV	**Not a main target, although a lot of relevant activities are included** **Improving the supply of technical aids for people with disabilities is a priority target**	• Recognizes the importance of inclusion of all groups in the information society in order to take advantage of it and improve the quality of life – aspects mentioned include development of e-services, improving long-distance study and telework. Linked to eEurope 2005 and ESF funded activities. To achieve this: o Provide broadband Internet access (schools, libraries, municipalities,…) o Increase availability of public e-services; unified online information system for municipalities to be implemented o Envisage Internet inclusion in general services package of the Public Services Regulation Commission and determine the Internet user range – access for everyone at reasonable price to the unified public information system • E-Latvia socio-economic programme envisages improving access to the Internet and global and local information for everyone • Increased availability of technical aids for people with disabilities	
MT	**Not specifically mentioned**	• Technology Skills for women who wish to return to work project under ESF – focus on transferable skills in customer service leading to internationally recognised qualifications in ICT and customer service, as well as entrepreneurship and employability skills • ICT training and certification of teachers	
NL	**No reference to eInclusion**	-	-

	Priorities / principles	Specific targets / measures	
		General (but relevant)	Targeted at (high) risk group(s)
PL	**Not specifically mentioned**	• One of the aims of the national (e-Poland) strategy for IT development is to prevent social exclusion by ensuring possibilities for participation in the Information Society for: o 'middle generation' requiring training o disabled people • Methods: o eLearning, teleworking, implementing good practice o PIAPs (Ikonka programme) o Polish Internet Library (PIL) – facilitate access to knowledge for people in small villages and towns, and areas distant from academic and cultural centres (also Poles living abroad to keep in touch) o Internet in all schools o Broadband for schools and libraries, especially in rural areas • Role of EQUAL programme in eInclusion activities is also mentioned	

	Priorities / principles	Specific targets / measures	
		General (but relevant)	Targeted at (high) risk group(s)
PT	**One of the main strategic axes is the integration of the objective of social cohesion into the diverse sectoral policies, giving particular attention to policies regarding the information and knowledge society**	• 4.2: Prevent the risks of exclusion: o exploit the potential of the information and knowledge societies and new ICTs and guarantee that nobody will be excluded, with special attention to people with disabilities o guarantee access to ICTs citizens with specific needs, ethnic minorities, migrants and those living in deprived regions o promote more access for students on low income to ensure political equality and high quality education o incorporate a gender perspective to facilitate the participation of women in the information and knowledge society o promote a digital culture, enhance the skills of Portuguese citizens and apply this knowledge to the lives of citizens o Guarantee easily accessible public services centred on the citizen • Link up all steps into the 'big picture' of digital cohesion and universal participation • Develop a national programme for inclusion in the information and knowledge societies • Create 500 Internet access points by 2005; 10,00 diplomas in basic ICT skills by 2005 • Education: o ICT training in education (certify 2 million citizens by 2006; ICT in schools; include ICT relevant content in 50% of training activities; include obligatory IT training in primary and secondary education) o Financial support for teachers to wish to purchase computers o Proposal for basic training in ICT for children between 10 and 18 • Labour market: o Encourage the ability of workers to adapt to economic change by promoting the use of ICTs	

	Priorities / principles	Specific targets / measures	
		General (but relevant)	Targeted at (high) risk group(s)
SE	**Not mentioned as a main target, but are some elements addressed**	• Government policy to ensure that all households and enterprises throughout Sweden have access to IT infrastructure with high transmission capacity within next few years; aim is to guarantee the welfare of the individual and make IT a tool for improving quality of life of vulnerable groups • Main focus of measures for eInclusion should be primarily within the framework of education and labour market policies; focus to date on disabled people to be broadened in the future	• Main focus of targeted measures so far has been on people with disabilities
SK	**Not a main target, although some relevant activities are included**	• Goal of providing access to ICT for groups threatened by poverty and social exclusion is mentioned, and to increase the computer literacy and availability of ICT for these groups – part of the Slovak Information Society strategy • Target to increase the computer literacy (by 2005) of certain groups (women returners, also disadvantaged groups – see next column) • ICTs and Internet in all schools	• Target to increase the computer literacy of disadvantaged groups by 2005: o Roma people o Disabled o Elderly o People in remote excluded regions • ICTs and Internet in all schools will ensure that all children (including those from poor or excluded families) will have access

	Priorities / principles	Specific targets / measures	
		General (but relevant)	Targeted at (high) risk group(s)
SL	**Not specifically mentioned**	-	-
UK	**Not mentioned as a main target**	• Ambition Initiative (part of New Deal) – helping disadvantaged people gain ICT and other skills in key sectors	

Annex IV: Review of Benchmarking Indicators

The Lisbon strategy uses benchmarking indicators to track the progress of the different member states towards commonly agreed objectives, as part of the Open Method of Coordination (OMC).

The Social Inclusion OMC employs the indicators agreed at the Laeken Summit at the end of 2001. These indicators are a key point of reference in the National Action Plans (NAPs), discussed in section 2 above. They include ten primary, and eight secondary indicators, all concerned with population outcomes at the level of individuals and households, in terms such as low income, unemployment and ill health (Social Protection Committee 2001; Atkinson 2002). As noted earlier, the Joint Reports on Social Inclusion produced by the European Commission and Council (European Council 2002; European Council 2004) present the performance of different member states by reference to these indicators (albeit with an accompanying commentary which refers to the non-comparable aspects of different national situations and the statistical difficulties in drawing comparisons). The same indicators have also been used in reports relating to the accession countries (European Commission 2004).

Judged against the conceptualisation of social exclusion offered in Annex I to this report, and taking into account the limitations of existing statistics available on a comparative basis, the indicators chosen seem not inappropriate. They capture many of the risks of multi-dimensional disadvantage at the level of persons and households. They also deal with the persistence of poverty over time – and thus some of the inter-temporal and dynamic aspects of social, exclusion. The Social Protection Committee envisages further work on indicators of access to collective services, and the relational aspects of social participation (Social Protection Committee 2001).

None of these indicators relates however to e-inclusion or e-exclusion. Countries were encouraged to use a variety of tertiary indicators, chosen at the national level to supplement these common indicators, but only in a few cases do these make reference to e-inclusion or e-exclusion. Nevertheless, as seen earlier, the Joint Reports on Social Inclusion highlight the new opportunities and risks associated with the new information technologies and gather together such data as the individual NAPs provide (European Council 2004, para 6.1). Indicators of e-inclusion and e-exclusion would therefore seem obvious elements within the future development of the NAPs.

There are number of possible indicators are in general currency. They are, indeed, included in EU benchmarking: in particular the eEurope indicators 2005, tracing the progress of member states in extending access to the new technologies. The US Department of Commerce studies of *A Nation On-Line,* specifically concerned with the digital divide, make use of a number of indicators which are of interest for the present study (US Department of Commerce 2002). Most recently, the SINE (Statistical Indicators of the New Economy) projects (funded under FP5 by DG Information Society through Eurostat) have take stock of a wide range of indicators, appraised their quality, piloted new indicators and used them for conducting surveys.

We now review the literature dealing with these indicators of e-inclusion or e-exclusion. This should provide a useful point of reference later in this project, when assessing how e-inclusion could be appropriately benchmarked within the EU social inclusion process.

IV.I Sources

The **eEurope 2005** indicators which would seem of potential interest for e-Inclusion are in the main concerned with access to the internet and with the roll-out of on-line public services.

Among the **SINE** projects, some are of particular interest: SIBIS, BISER, STILE and NESIS.

SIBIS (www.sibis-eu.org) was an IST Programme project aiming to produce new methods and data that would contribute to the European effort to measure and benchmark the Information Society. It included a stocktaking and review of existing indicators, followed by the production of a core set of new indicators which have been tested and applied in surveys in EU Member States, the USA and Switzerland. SIBIS is organised into nine topic domains, several of which have relevance to e-Inclusion: telecommunications and access; security and trust; education; work, employment and skills; social inclusion; eGovernment and eHealth.

The **BISER** project aimed to develop, define and pilot statistical indicators for measuring and benchmarking the impact of the Knowledge Economy on Europe's regions, based on a model of factors influencing regional development. Part of the BISER methodology was a general population survey, which because of the background data collected from respondents, has interesting possibilities for benchmarking e-inclusion. Background variables for the general population survey include age; educational attainment; employment status; occupation; type of organisation; main working place.

The **STILE** project explored how ICTs were transforming work and how existing statistical sources could be utilised or extended to provide indicators of eWork. Thus for example it used administrative and survey data to reveal determinants of the mobility of ICT workers, paying particular attention to the effects of gender, age and educational attainment on intersectoral mobility.

The **NESIS** project undertook an appraisal of all of these indicator sets – and others – with particular reference to their conceptual resonance with theoretically informed accounts of new economy development. Some of these indicators sets were appraised with specific reference to social inclusion and eInclusion.

Going outside Europe, there are further sources of indicators of potential interest for e-Inclusion. The **US Department of Commerce** publishes a biannual report on ICT take-up, based on a survey of approximately 57,000 households and 137,000 individuals. The survey contains a range of items that deepen the socio-demographic analysis of digital divides.

OECD reports such as *Measuring The Information Economy* (OECD 2002) also deal ICT diffusion and the digital divide. This is essentially secondary analysis, drawing on indicators derived from a variety of published sources including national statistics offices and private sources (e.g. Netsizer). Other reports similarly utilise statistics

relating to ICT access which were compiled by national statistical offices, and a proposal has emerged for a core list of indicators for ICT measurement, focusing on readiness and intensity, although this latter list is directed at developing countries (Schaaper 2003).

Global initiatives to monitor the information society include the **International Telecommunication Union** (ITU)'s digital access index. This goes beyond access to technology infrastructure, to include affordability and literacy. Other global indicator initiatives include **UNCTAD**'s ICT development indices. These initiatives seldom collect their own survey data, but rather gather statistics from national statistical offices and make them comparable.

IV.II Indicators of e-Exclusion and e-Inclusion

From among the wide array of indicators which jostle for attention in the foregoing literature, any attempt to select those of particular interest from the perspective of social exclusion policies depends on how we conceptualise social exclusion. Our selection here is contingent on our own efforts to make sense of the social exclusion debates - but it might therefore be challenged by those taking an alternative approach.

Social exclusion as involving multi-dimensional disadvantage

Access to the new information technologies is a resource whose absence can, on the one hand, constitute an additional dimension of deprivation, but whose possession may, on the other hand, serve to compensate for, and override, other deprivations (see also DiMaggio et al. 2004). The literatures under review offer plenty of indicators of the digital divide, and its changing contours, as these new technologies diffuse: initially they reflect gender, income, education, but as diffusion progresses and a larger proportion of the population gains access to the innovative media, age becomes the predominant fault line.

However, the digital divide is more complicated than simple access: it also involves digital literacy and the skills to cope effectively in the emerging information society. These skills are assets whose absence is a further line of multi-dimensional deprivation. One recent study distinguishes three layers of information skills that are relevant for the emerging information society (Steyaert 2000):

- *Instrumental skills*: the ability to use technology, to handle the basic functionality of the hardware and/or software involved. These instrumental skills are similar to the notion of informacy and are targeted by initiatives such as the European Computer Driving Licence (http://www.ecdl.com/).
- *Structural skills*: the ability to handle the new formats in which information is communicated. These involve, for example, the skill to look for information interactively or to make good use of the hyperlink structure of electronic information. These skills are relatively new and are induced by the technology.
- *Strategic skills*: the ability to use information as a basis for decision-making. This level of strategic skill is not new: however, new technologies have provided the foundations for a society that is very information-intensive and where these strategic information skills are becoming of paramount importance.

These various indicators of access and skills can therefore be taken as indicators of advantage and disadvantage: resources whose possession shapes economic and social participation by an individual or a community. Indicators of access are commonplace, although the demographic variables employed would merit further refinement and disaggregation; indicators of digital literacy skills are still being developed.

Social exclusion in relation to collective amenities and resources

Access to the new information technologies - and to the skills which are required in order to make effective use of them – is a matter not just of personal and household resources but also of the collective IT-related resources on which people can draw, within their local and occupational communities. For example, the location at which people access the new information technologies – home, work, public information access points - is likely to affect how they are used: internet use at work is likely to discourage the search for health-related information, while use at the local library is practically incompatible with file sharing (US Department of Commerce 2002).

Access to IT resources in the workplace tends to be differentiated according to occupational status. However, indicator systems appropriate to these developments are only slowly being put in place. One example is the EU-wide enquiry into working conditions, regularly undertaken by the European Foundation for the Improvement of Living and Working Conditions (and most recently applied to the new accession states) (European Foundation for the Improvement of Living and Working Conditions 2001). The indicators generated by these surveys cover a range of relevant issues – use of ICT, involvement in training, contribution to discussions of organisational change: they also break them down by gender and employment status, as well as country. Using these indicators, the European Foundation is able to highlight a number of trends and cross-sectional contrasts: for example, the higher levels of learning and training at work enjoyed by 'core workers' – males, higher grade workers - but the evidence also that some of these differentials are reducing, as atypical workers are given greater access to training. It is also evident that there are strong cross-national variations, with the Scandinavian countries, for example, well ahead in terms of inclusion within discussion of organisational change. Indicators of access such as these give insight into the IT resources embedded within such occupational communities.

Social exclusion in regards to social relationships

The new information technologies can lead to a reconfiguration of social relationships and forms of community, key constituents of human well-being. Indicators of social capital and civic engagement have been used in various of the sources noted above, and elaborated with particular reference to the new patterns of relationships engaged by the new technologies. Among indicators deployed for this purpose are those relating to time use: time on line and time spent with family and friends for example (Breedveld and van den broek 2001; Nie and Hillygus 2002a; Nie and Hillygus 2002b).

Other indicators of relational transformations could include indicators of teleworking and telelearning (see, for example, di Martino 2001).

Social exclusion as a dynamic process

The knowledge society involves socio-economic transformations which can send individuals, households and communities along new trajectories, positive or negative, in what may be an increasingly dynamic and unstable world, leaving public policies lagging behind.

Some individuals and communities are re-configuring their mode of consumption and production - their livelihood strategies – in response to the new knowledge-based economy. These interrelated changes and lifestyle transformation might be captured and measured in terms of the changes in time use, the displacement of activities, the changes in face-to-face relationships. As people make use of more applications, there are incentives to improve their access to the technology still further: in short, dynamic feedback loops.

Equally, however, for those without access to these technologies, there are accelerating risks and costs of exclusion, as traditional services lose viability and are withdrawn. The declining availability of such services or their greater expense provide indicators of the progressive marginalisation of their users.

Nevertheless, indicators of these dynamic transformations are not yet well-established.

Annex V: Sampling Approach for National-level Information Gathering

According to the terms of reference of this study, 12 countries were to be selected for the purposes of national-level investigation of eInclusion measures. In view of the rather explorative nature of this study, a pragmatic sampling approach was required to be adopted. It relied upon two basic principles:

(b) the sample was to reflect a good coverage of variation in terms of information society maturity, digital divides, social regimes and socio-economic situation;

(a) the focus was to be on those countries from which lessons can be learned in relation to the aim of this study – it was felt that there was no value in spending extensive effort (by subcontracting a national correspondent) on countries for which we already knew that there was a low likelihood to come across any eInclusion activities.

This generic approach was operationalised in terms of the following sampling dimensions:

- level of IS maturity according to a typology empirically derived from survey data available from SIBIS (laggard countries, follower countries, front runner countries)
- rank on the Worlds Economic Forum's so called 'Networked Readiness Index' (this index measures a "nation's degree of preparation to participate in and benefit from new ICT developments.")
- rank on the United Nation's so called 'eParticipation Index' (this index attempts to qualify if ICT services/tools available in a country "are conductive to an online deliberative and participatory process between the government and the citizen.")
- the overall digital divide according to the so called 'Digital Divide Index' developed by the SIBIS project (this index measures the level of equability in ICT uptake/usage across different population segments)
- risk of poverty according to the joint report on poverty and social inclusion
- the level of income inequality according to the GINI index calculated by Eurostat
- the generic type of social regime pursued according to a typology derived from literature (transfer approach, Bismarkian model, Anglo Saxon model, Nordic model, individual founded contribution without tax supplement)

Based on these dimensions, the following countries were selected for further investigation: Austria, Belgium, Estonia, Finland, Germany, Ireland, Italy, Netherlands, Poland, Slovenia, Sweden, United Kingdom as summarised in the sampling sheet presented overleaf.

	Frontrunner CEEC	Laggard CEEC	Frontrunner EU15	Follower EU15	Laggard EU15	Networked Readiness	ePartication	Digital divide	Poverty	social cohesion	social regime	Previous knowledge on eInclusion activities
Austria				X		medium	low	low	medium	Low	Transfer approach	Sufficient level of eInclusion initiatives, most of which stem from EFit Austria; - a host of initiatives, which are also integrated with NAPs, (the scope, design, and implementation of the initiative could also be linked with the corporatist social regime and the approach to tackling an important socio-economic issues). Noted are initiatives seeking to promote employment options - ISIS (job opp. For disadvantaged), and Elopa I and II (facilitating access to mainstream ed. Using ICT for offering preparatory courses)
Belgium				X		medium	low	high	medium	medium	Transfer approach	Sufficient level of eInclusion initiatives, link with pressing problem (i.e. unemployment) e.g. The Waloon mobilising Plan ICT (promoting digital literacy amongst unemployed) and a similar plan in Flanders region, ICT competence centres, VDAB training and supply-demand matching service etc. Other relevant initiatives are in the area of Community Informatics and eInclusion. via novel technologies (etelevision Public TV as a network for tele-distribution)
Estonia	X					medium	high	medium	high	high	Bismarkian	Some evidence on eInclusion activities is available (e.g. PIAPS in libraries).
Finland			X			high	medium	low	low	medium	Nordic	A range of eInclusion initiatives linking with pressing problems (e.g. unemployment, care). Strong focus on employing technology with respect to economic/social problems
Germany				X		high	medium	low	Low	medium	Bismarkian	Some initiatives reflect the nature of the above regime (e.g. Info System on Social Service/Assistance seeks to facilitate obtaining all due social benefits / entitlements, while Information Society Forum, stemming from Internet for all Programme, an be seer as an attempt to reach social consensus)
Ireland				X		medium	high	low	high	low	Anglos Saxon	Broad, large scale, such as - CAIT initiative, based on public funding for selected projects, with an active involvement of voluntary / NGO sector local initiatives, such as Colaiste Ide, using ICT opportunities for flexible education for disadvantaged Initiatives with tangible outcomes in terms of gaining and holding employment – FIT initiative (Recognised as a model of good practice since inception , at EU level, featuring a holistic approach (e.g. social welfare criteria used for enlisting candidates, national industry led - incepted to address IT skill shortage; Certification body via national

	Frontrunner CEEC	Laggard CEEC	Frontrunner EU15	Follower EU15	Laggard EU15	Networked Readiness	ePartici pation	Digital divide	Poverty	social cohesion	social regime	Previous knowledge on eInclusion activities
												training authority, evolving – spin off initiatives to facilitate progression to 3rd level etc. "community Informatics initiative such as Muintir na Tíre
Italy					X	medium	medium	high	high	medium		Digital divides relatively pronounced, However strong on social purpose use of ICTs, some interesting examples in this regard include use of local TV e.g. Siena civic TV (online content & services, content on demand, advanced interactive applicati on being a feature), also some specific targeted initiatives such as ICTs for prisoner population.
Netherlands			X			high	high	low	low	low	Transfer approach	High proportion of emigrants, was held (still is?) as a model of their successful integration (some eInclusion initiatives specifically deal with / and some smaller ones even apparently designed for this purpose - Knowledge neighbourhood (Kenniswwijk) - Provision of high quality ICT infrastructure for disadvantaged urban communities; Portal for minorities – integration being the aim, etc.)
Poland		X				low	medium	medium	medium	high	Individual founded contribution without tac supplement	There is some activities in relation to computer training for people with disabilities. Also , during 1999-2000 there was an initiative providing computer courses for women, with the priority to the aged and elderly women Interesting to see (whether there are) the limitations of eInclusion initiatives against less favourable background e.g. merits of ICT up-skilling in the context of high unemployment and relatively low level of KBS
Slovenia	X					medium	medium	medium	Low	Low	Bismarkian	Initiatives with a focus on elearning feature prominently e.g. ESchools (initiative for content for elearning, etc.). Also there was some activity in relation to promoting ICT in remote rural areas.
Sweden			X			high	high	low	Low	medium	Nordic	Interesting in term of whether a more "evolved "initiatives an be found e.g. already an example could be tax reductions for high quality connections as opposed to basic connection incentives mostly fond elsewhere
United			X			high	high	low	high	low	Anglo Saxon	A lot of emphasis on community and ICTs e.g. Wired up Communities Initiative; also a

	Frontrunner CEEC	Laggard CEEC	Frontrunner EU15	Follower EU15	Laggard EU15	Networked Readiness	ePartication	Digital divide	Poverty	social cohesion	social regime	Previous knowledge on eInclusion activities
Kingdom												lot of PPP types, some level of integration with ALMP and eInclusion e.g. new Deal for Young New Deal for young people ICT strand; while fairly good potential to use new technologies such as Digital TV also exists

Annex VI National-level Information Gathering Instruments and Instructions

Thematic Study to Analyse Policy Measures to Promote Access to Information Technologies as a Means of Combating Social Exclusion

Research Instructions

21 December 2005

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1. Introduction

This document is intended to be a supportive resource when investigating eInclusion policy measures and programmes in your country. It starts with an outline of the research context of this study explaining it's point of departure in terms of research questions addressed as well as theoretical concepts and terminology adopted. This is followed by methodological instructions. Please read this text carefully before starting to use the research templates, i.e. the so called "eInclusion Measure Assessment Sheet" and "eInclusion Policy Assessment Sheet", both provided as a separate document.

1 Research context

What is this study about?

The transformation of industrialised societies into the so called Information Society (IS) or Knowledge Based Society (KBS) has frequently been highlighted as one of the most significant socio-technological trends since the Industrial Revolution. Involving the widespread application of Information and Communication Technology (ICT), this trend is supposed to create new risks but also to open new opportunities, not least in relation to social cohesion. To understand these developments is an urgent priority, if policies and programmes are to be set in place that are actually suitable to minimise the risks that new patterns of social exclusion could develop, and to enable those groups already at risk to find new opportunities for full integration into society.

This study aims to identify the risks and opportunities that come with so called IS developments – i.e. with increasing relevance of ICT based products and services all spheres of life – in relation to poverty and social inclusion. In particular it aims to take stock of existing eInclusion related policies and programmes and to consider how – in the light of experience across the EU – these policies and programmes might be made more effective and coherent in promoting social inclusion. To this end, a multi method approach will be applied including literature analysis, re-analysis of secondary data available from previous research and gathering of policy-related information / data with help of national experts. The evidence base currently being collated by means of these methodological work steps will be fed into a comparative policy analysis. The outcomes of the various work tasks will flow together in a comprehensive report to be discussed at an expert seminar that will be held in Brussels later this year.

A particular work task The attached research templates have been developed to collate the information required for this purpose. The countries included in the sample are: Austria, Belgium, Estonia, Finland, Germany, Ireland, Italy, the Netherlands, Poland, Slovenia, Sweden and the United Kingdom.

What do we mean by 'social inclusion' and 'eInclusion'?

Although both terms are frequently used in scientific and political debates, no commonly shared definitions are available for being utilised in the context of information gathering on national eInclusion approaches. Therefore, the following sections describe in an explanatory manner what notions of "social inclusion" and "eInclusion" have been adopted for the purposes of this study.

This project's notion of social inclusion and its relation to the Information Society

During the 1970s and 1980s, the European Community in its anti-poverty programmes operated with a notion of poverty defined in terms relative to the living standards customary in the society concerned, and the resources required for social participation. By the 1990s, however, the EU authorities were increasingly couching their concerns in the language of 'social exclusion'. In part this was a semantic shift: nevertheless, there was also some shift of

substance, not only in EU policy community but also in the wider research debate. This involved several main elements:

- it re-affirmed the importance of adopting a multi-dimensional notion of inadequate living conditions;
- it recognised that people's living conditions depended not just on their personal and household resources but also on the material and cultural collective resources to which they had access, for example within their local and occupational communities;
- it focussed attention on the relational as much as the distributional dimensions of stratification, recognising that relationships are themselves a component of human well-being, and that their breakdown or absence can therefore be a deprivation;
- it acknowledged that much existing research involved a 'snapshot' of the poor at a given moment of time: what however was needed was to track the changes in the population at risk of deprivation between one time period, and the dynamic processes and trajectories involved.

Many of these elements are reflected in the indicators of social exclusion that have been adopted for the National Action Plans (NAPs) on poverty and social inclusion in the context of the European Union's so called Open Method of Coordination (OMC) in the field of poverty and social inclusion.[2] These indicators embrace aspects of disadvantage ranging from financial resources to health and education: the Social Protection Committee envisages further work on indicators of access to collective services, and of the relational aspects of social participation.

The 1980s produced awareness across the European Community that the risk of poverty and deprivation is neither confined to marginal groups of the population nor destined to disappear as the by-product of economic progress. It is, instead, integral to the development of a dynamic urban-industrial economy and requires therefore the continuing re-fashioning of social protection policies. To understand the novel features of social exclusion in the knowledge society, the processes that drive it and the implications for policy, are among the central tasks of the present project.

Taking as our point of departure the notion of social exclusion sketched in the preceding section, we can consider how, according to the existing literature, the knowledge society and the widespread application of ICT involve a reconfiguration of the associated risks and opportunities:

1. Access to the new information technologies – and to the skills which are required in order to make effective use of them – is a resource whose absence can, on the one hand, constitute an additional dimension of deprivation, but whose possession may, on the other hand, serve to compensate for, and override, other deprivations. Thus, for example, recent studies of developments both within the EU and in other OECD countries offer such findings as the following:
   - During the initial phases of diffusion, there are various faultlines including income, educational level, gender, age, employment status, ethnicity and type of household (e.g. single-parent) along which utilisation of the Internet varies. As diffusion progresses and a larger proportion of the population have access to the innovative media, age and education appear to become the predominant faultlines.
   - The digital divide is far more complicated than access. It also involves digital literacy (both on an instrumental level, knowing which buttons to hit, and on a strategic level,

[2] The NAPs of all Member States can be downloaded from the CEC's web site: http://europa.eu.int/comm/employment_social/social_inclusion/naps_en.htm

knowing upon which information to rely) as well as content preferences and content relevance.

2. Access to the new information technologies – and to the skills which are required in order to make effective use of them – is a matter not just of personal and household resources but also of the collective IT-related resources to which people have access, within their local and occupational communities. Thus, for example,
   - Higher levels of access to ICT and training are enjoyed by 'core' workers, even if some of these differences are reducing, as atypical workers are given greater access to training: significant cross-national variations are evident;
   - There is increasing concern about the differential deployment of innovative network services across geographical space, with rural areas having less access to broadband (although it is also necessary to take account of wireless networks and the availability of e.g. GPRS and UMTS services).
3. The new information technologies are leading to a reconfiguration of social relationships and forms of community, key constituents of human well-being. Thus, for example,
   - There is conflicting research on whether internet increases or decreases loneliness;
   - Virtual communication seems to strengthen bridging social capital, social networks outside the traditional social contacts one already has. This could be good news, as in a pre-internet society poor households specifically lacked bridging social capital (as opposed to bonding social capital).
4. The knowledge society involves socio-economic transformations which can send individuals, households and communities along new trajectories, positive or negative, in what may be an increasingly dynamic and unstable world, leaving public policies lagging behind. Thus, for example,
   - New information and communication technologies may permit outsourcing of jobs to other parts of the global economy, posing new threats to the employment and livelihoods of communities within EU countries;
   - New information and communication technologies may enable new virtual agglomerations of innovative expertise to be established, generating new economic dynamism and livelihoods where none previously existed.

This project's notion of eInclusion

During recent years a variety of eInclusion-related policy measures and approaches have emerged across the European Union and beyond. As already mentioned above there is however no commonly shared definition of eInclusion. For the purposes of identifying national eInclusion measures and approaches we have therefore decided to consider all forms of interventions that have the potential to support any type of policy strategy that is directed towards the notion of eInclusion outlined in the remainder of this section (c.f. also 2.2.1). Such strategies may be pursued by various stakeholders usually involved in policy making and/ or implementation processes (e.g. governmental bodies/ agencies, municipal bodies/ agencies, ecclesiastic/ welfare organisations, lobby groups and other NGOs). For the purposes of this study, eInclusion strategies can be categorised as follows:

- *Avoiding/ removing barriers to access to and usage of ICTs and Information Society services*
  Here, the focus is on facilitating access to and usage of ICTs across all population groups, with a special focus on the most-at risk groups. Access/ usage barriers tackled by specific measures may concern different aspects in relation to the demand off and the

supply with ICT-based services such as the motivation to engage in ICTs and the availability and/ or affordability of the required technical infrastructure. Examples of eInclusion measures that can be mentioned in this context include awareness raising campaigns to raise interest in ICTs (particularly the Internet) among particular population groups, measures fostering the deployment of public access infrastructures (e.g. public internet access points, donating ICT equipment to social organisations working with at-risk groups) or measures focusing on the development of ICT-related skills among disadvantaged population groups in order to enable them to access the Internet. Finally measures aiming to promote accessibility / make ICTs more accessible for, and usable by specific groups, such as people with disabilities also fall under this heading.

- *Avoiding new types of risk in relation to poverty and social exclusion associated with the Knowledge Based Society*
  Here, the concern is with the more obvious direct risks to new forms of exclusion that can be directly traced to ICTs and the so called KBS. For instance, traditional modes (e.g. face-to-face, telephone) of interacting with services providers in areas of public interest (e.g. administrative bodies/ agencies, health care providers, saving banks and so on) have started to decline as ICT-based service delivery is gaining in ground (e.g. eGovernment, eHealth, ICT-enabled self-service). Those who are unable or unwilling to utilise online media may increasingly experience disadvantages. Policy interventions (e.g. regulations or sectoral obligations) facilitating multi modal service delivery in areas of public interest may serve as an example for relevant eInclusion measures here. Also, measures avoiding outdating of employment related skills within working contexts that are increasingly being steeped in ICTs (e.g. through providing access to ICT training and eSkills) may serve as an example for addressing risks that are "newly" emerge from IS developments.

- *Exploiting the practical opportunities of the Information Society to increase social inclusion*
  Here the main focus is on using ICTs and the applications and services of the IS to directly provide opportunities for increasing social inclusion of at-risk groups. eInclusion measures may address certain inadequate living conditions of social at-risk groups respectively. For instance, ICTs may be utilised to facilitate access to employment for disadvantaged groups such as long term unemployed, single parents and people with disabilities (e.g. by providing training and fast-tracking to ICT jobs or utilising ICTs for making "traditional" work more accessible). Also, ICTs may be used to bridge constraints of distance and time faced by certain groups (e.g. enabling access to key services - such as specialist health services - in remote areas who would otherwise remain underserved or for people who are constrained with regard to time and places such as people with child/ home care responsibilities or immobile persons). Further examples would include measures directed towards providing social at-risk groups with ICT-enabled services and online content/ information that is practically useful with respect to improving their living circumstances (e.g. online services geared towards the specific information needs of people living on low income, long term unemployed, ethnic minorities/ migrants and so on).

- *Empowerment of individuals and/ or groups at risk of poverty and social exclusion*
  Here, the focus is on actively using ICTs and the services and applications of the IS to empower at-risk individuals to take their own steps to improve their situation. In this context, specific eInclusion measures may be directed towards exploiting the inherent networking capabilities of ICTs (e.g. by promoting bonding networks for those at-risk facilitating social linkages with family, friends and the community). Also, eInclusion measures may be directed towards facilitating the influence of at-risk groups in politics and governance (e.g. under headings such as eDemocracy or Active Citizenship). Other examples that can be mentioned here include measures facilitating self-directed development of at-risk individuals, e.g. through formal or informal eLearning, and

measures facilitating at-risk individuals to become content creators in the virtual space instead of just being consumers of content create by others (e.g. under heading of the "voice divide").

- *Facilitate social inclusion of at-risk groups through impacts at the community and wider societal level.*
  Here, the focus is on using ICTs and the applications and services of the IS to achieve impacts at the community and the wider societal level in relation to social inclusion. Examples would include measures aiming to encourage the deployment and utilisation of ICTs amongst at-risk communities (e.g. under the heading of "social capital" building) and measures geared towards facilitating the emergence of local social movements with the support of ICTs (e.g. through setting up community networks, wiring local communities or establishing local online services). Also cohesion-oriented measures using ICTs for spreading knowledge and appreciation of different sub-cultures across the society (e.g. general awareness rising measures) could be mentioned here.

The typology of eInclusion strategies presented above should however be regarded as an indicative listing rather than a definite classification. Its intention is to facilitate the search for different types of eInclusion measures and approaches rather than to provide a framework for analytical purposes. In practice, the inherent policy goals of a specific eInclusion measure may – explicitly or implicitly – span across more than one of the generic categories described above. At this stage of the study, it is important to gain a good overview of the variety of eInclusion measures that are pursued in your country. Therefore it will be important that you try to identify as many different types of eInclusion measures as possible - in terms policy goals / strategies pursued, target groups addressed and living conditions or social at-risk factors concerned. Thus, the typology provided above aims at supporting you in searching for the broadest possible variety of eInclusion measures.

To further facilitate this process some examples of eInclusion measures as they emerge from literature reviewed so far are elaborated in more detail. As indicated by these examples, we are interested in identifying eInclusion measures with a practical impact and significant committed resources, not in broader visions or aspirations without any practical follow-through. We are not interested in measures addressed to the economy or population of a country as a whole, such as "low cost internet"; the measure must explicitly address at least one segment of the population which is in some way at risk of social exclusion. Expressions such as "for all" may exceptionally be accepted if it is clear that disabled groups, poor families or other specific at-risk groups are really the target. Please note, that eAccessibility measures are not to be reported.

Table 1-1*: Examples of eInclusion measures*

Labelling	**Explanation**	**Examples**
Awareness/ Motivation raising	These measures / programmes are usually aiming to raise awareness and encourage interest amongst late adopters and are inevitably demand side oriented. Some could have 'evolved' into other ICT initiatives over time, although they are more likely to be of a certain duration and not 'open ended'.	• Media campaigns, roadshows, and similar, seeking to raise awareness of, provide an incentive for engaging with and utilising ICTs.
Promoting affordability and availability of ICTs	These measures aim to remove tangible, practical barriers (cost of access, cost of relevant equipment, lack of access opportunities etc.) that at risk groups face.	• Public access points (PIAPS) – those not commercial in nature, but wide in access. Can differ in terms of additional services offered (such as basic introduction to the Internet and other support), while can also be linked to additional services such as

Labelling	Explanation	Examples
		employment services, libraries, post offices and so on, and provided from these places. • Financial / fiscal policy measures (discounted prices, direct subsidies, financial incentives to taxpayers, financial incentives to employers). • Roll-out of ICT infrastructure measures that make broadband or other infrastructures more available to at-risk groups, but not blanket, general initiatives. • Utilisation of more ubiquitous technologies (mobile, digital TV etc. that are widely available) to deliver eServices.
Promoting digital literacy amongst disadvantaged population groups	These measures aim to provide / improve eSkills endowment. They are usually demand side in nature, and they can range from informal skilling / re-skilling to measures incorporating some certification. The certification can be organised with a third party, such as industry, etc.	• Basic eLiteracy training, could be targeted at specific at-risk group, e.g. the long term unemployed. • Training in higher order eSkills, i.e. those more likely to be appreciated by employers.
eAccessibility *NOT INCLUDED*	*NOTE: this type of service is not included in the study and should not be reported. Please try to match the measure with another category within this table.* Measures aiming to ensure that people with disabilities and others with functional difficulties (e.g. declining dexterity due to the ageing process) can access ICTs and ICT-based services including broadcasting.	• Measures making ICT-based services and products accessible for people with disabilities (e.g. online services, information, self-service kiosks, alarm services, broadcasting programmes), e.g. through guidelines conformity initiatives or the adoption of standards. • Design-for-All initiatives aiming at making mainstream ICT products / services accessible and usable for the broadest possible range of users.
eService – usability and multi-modality	Such measures aim to ensure that all population groups - especially at-risk groups - can make gainful use of online services, and / or that alternative modes of access to services of public interest, such as government and health services remain available and accessible via different channels and platforms, e.g. by face-to-face or phone, Internet and so on. Thus, they aim at ensuring that less advantaged are not placed in the position of further disadvantage by the virtue of not being able to access online information.	Usability examples include: • Multilingual sites (for minorities, immigrants). • Use of clear and plain language, utilisation of scenarios pertinent to at risk group (e.g. to make a service more relevant). Multi-modality / service equivalence examples include: • Regulations requiring multi-modal service delivery for government/ public administration services. • Equivalent service aim initiatives.
Access to services – overcoming constraints of time and place	Such measures seek to exploit the inherent properties of ICTs to bridge constraints, mainly of distance and time.	• (A dedicated provision of) Access to key services in remote areas. • Access to relevant services in the home for those with mobility difficulties. • Access to services at convenient times and places for those who are constrained in these regards.
Online products and services –	Ensuring that low income groups can avail themselves of cost advantages now being made available through the Internet/ i.e. have	• Services effectively acting as mediators to provide access to lower prices on behalf of low income groups.

Labelling	Explanation	Examples
access for disadvantaged	access to the lower prices becoming available through online services.	
Access to employment	Measures aiming to give at-risk groups better opportunities in employment, both in terms of access to it and in terms of maintaining it / accessing more opportunities. These measures would include training in using ICTs and gaining eSkills, the emphasis being on occupational aspects, as well as. incentives for employers to take on ICT trainees / those completing their courses.	• Training and fast-tracking towards ICT jobs (e.g. for a specific subgroup at risk). • Exploitation / utilisation of ICTs in new forms of work and work organisation (e.g. eWork for groups that might otherwise be excluded from labour market). • Making work more accessible for people with disabilities or more suitable for older workers, use of ICTs for rehabilitation of returning workers. • Avoiding outdating of employment-related skills by providing eSkills. • Measures for those whose skills were made obsolete, e.g. by the arrival / advancement of the IS.
eLearning	Measures to facilitate self-directed personal development and lifelong learning of at-risk groups	• Targeted measures to provide appropriate content for at-risk groups and to encourage at-risk groups to exploit the new forms of access to information and education on the Internet. • Designing and promoting use of eLearning as a facilitating tool for returning to mainstream education (for those who have not competed it, disadvantaged groups etc).
Content/ services – creation and relevance	Supply side measures to develop content and services that are really relevant to the needs of those at-risk of exclusion. Measures can feature co-opting of those at risk into the content creation, and target specific communities / neighbourhoods.	• Practically useful content and services (local information. • Culturally relevant content and services. • Providing at-risk groups with access to the content production and distribution resources, and the skills to use these.
eDemocracy / eParticipation	Measures to facilitate and support active citizenship, more (effective) engagement and promote enfranchisement of at-risk groups in all aspects of politics and governance; and promote engagement and influence of at-risk groups in political and governance processes at local, regional, national level.	• Measures promoting web sites and e-mail access to local and national politicians / relevant decision makers. • Measures facilitating and supporting the emergence of new/ stronger social movements, supported by ICTs, and participation of the disadvantaged in these, public resourcing of these activities. • Use of multiple channels in / for public consultations – e.g. use of text messaging as a tool of public consultation, but also utilisation of phone, fax, e-mail, web-chat, discussion for a and so on.
Networking	Measures to exploit the networking capabilities of ICTs to empower at-risk groups to address their own needs. While similar in nature to the above, these should be more bottom up, and with more focus on 'community' rather than individuals (this distinction is relevant for the initiatives under Community networks below too).	• Measures to promote bonding networks for those at risk – facilitating social linkages with family, friends and community. • Measures to promote bridging networks for those at risk – facilitating links outside one's usual community of contacts.

Labelling	Explanation	Examples
Community networks	Measures to encourage the deployment and utilisation of ICTs amongst at-risk communities (mainly those communities that already exist/ are defined in some form).	• Community Informatics – enabling/ empowering relatively disadvantaged communities with ICTs ("connecting community space and cyberspace"). • Wiring of local communities. • 'Wiring' of NGOs and voluntary organisations representing disadvantaged. • Establishment of local services (CATV, online etc.). • Encouraging participation of all in local activities, utilising ICTs.

Target groups addressed by eInclusion "measures"

As already mentioned, we are interested in identifying eInclusion measures with a practical impact and significant committed resources, and not in broader visions or aspirations without any practical follow-through. In particular, we are interested in measures that have an impact in relation to the social inclusion process pursued in your country, as it is outlined in the National Action Plan on poverty and social inclusion. Here, we want to learn whether – and if yes how and with what success – eInclusion measures actually reach those who are most at risk of social exclusion in your country, and ultimately (how does it) benefit them. Such measures should have an intended impact on a given target and seek to address or redress a specific issue or a set of these. Please note, that eAccessibility measures are not to be reported. The risk factors associated with poverty and social exclusion which were identified in the 2003 NAPs[3] include:

- Poverty low / inadequate income,
- Unemployment (e.g. long-term unemployment, absence of employment record),
- low quality of employment (e.g. low skill employment / precarious employment as a result of low skill endowment),
- low level of education and training and illiteracy,
- age - particular age group (e.g. older),
- gender and family status (e.g. lone parenthood),
- growing up in a vulnerable family,
- disability,
- health problems,
- living in an area of multiple disadvantage,
- housing problems and homelessness, and
- immigration, ethnicity, linguistic minorities, racism and discrimination.

To enable the categorisation of target groups addressed by a certain eInclusion measure in relation to social exclusion we have derived a list of individual characteristics linked to the

[3] C.f. COUNCIL OF THE EUROPEAN UNION: Joint report by the Commission and the Council on social inclusion, Brussels, 5 March 2004, 7101/04

social threats listed above – the so called "risk-enhancing characteristics". These are listed in the eInclusion Measure Assessment Sheet (eIMAS). There is however a possibility to add additional ones in case those that are provided are not applicable / adequate in relation to a certain measure.

3. Methodological instructions

3.1 What would we like you to do?

We would like you

→ to identify as many eInclusion measures as possible in your country,

→ to select 15 measures and describe each of them with help of a separate eInclusion Measure Assessment Sheet (eIMAS), and

→ to, based on your knowledge and the information gained through the previous steps, assess the policy on eInclusion with respect to coherence and adequacy with help of the eInclusion Policy Assessments Sheet (eIPAS).

3.1.1 Criteria for selecting eInclusion measures

The selection criteria for measures are as follows:

- Each measure selected should be clearly intended to have an impact on social inclusion and / or the measure should be clearly able to have such an impact. The emphasis should be on those with practical, tangible outcomes / impacts.
- The measures you select and assess should focus on covering all good practice in eInclusion in your country, i.e. they should cover as many different types of eInclusion measures as possible in terms of eInclusion strategies pursued, target groups addressed and living circumstances concerned (c.f. section 2.2.2 and 2.3). As far as possible, the selection should be led by the following: 1) a variety in terms of target audience / coverage; 2) likelihood of the intended / desired impact being realised; 3) effectiveness of the measures. If you are unsure whether you have captured all best practice in eInclusion measures in your country, please get in touch at as early a stage as possible.
- While aiming to find as many as possible different measures (e.g. in terms of target audience etc.), there may be a case for presenting more than one example of similar initiatives. For example, if the unemployment is a major issue in a country (and especially if it has been for example prioritised in the NAP), more than one initiative dealing with this could / should be presented.

3.2 How should this be done?

Taking into account both time and resources available for completing the task at hand, some general guidelines and instructions on how to apply this research are specified in the following.

3.2.1 Take a pragmatic approach

It is clear that a pragmatic approach is to be adopted for information collection, given the resources available. An appropriate mix of information gathering methods is to be selected. This may include some or all of the following:

Collation of information / data from published or publicly available material, e.g.:

- web sites, policy papers, literature, research reports and so on;
- queries to researchers, policy bodies, statistical offices and so on;
- any other information source you may find useful for completing the task at hand.

If relevant information is not readily available from such sources, please find a national expert, e.g.

- from the research field;
- from the relevant Ministry / Government, pressure groups, occupational associations or the like;
- from a journal specialising on social inclusion / eInclusion themes;

who can provide you with an informed opinion on the issue in question or who can indicate possible information sources to you.

3.2.2 Indicate the source of the information reported

Please indicate for each question where the information / data used stem from. If there is no information available on a particular item, please indicate this. Accordingly, where information / data do exist, these should be referenced. The description of the source must make clear if the source is:

a) paper publication - please provide a complete reference using a recognised style, e.g., author, title, publisher, place / year of publication, journal title, vol. no., page numbers, etc.;

b) web publication - please provide a complete reference using the following style: URL (WWW address), access date;

c) expert interview - please provide complete contact information (full name, address, organisation, tel., fax, email, etc.), the experts function/ role and occupation and the date of telephone call/ meeting

d) own estimate / assessment

If any figures are given, the source should make clear in addition whether the estimate is your own estimate (write "own estimate") or if the estimate comes from the source listed (no further explanation needed).

If a given topic / box is not applicable in a specific case, please indicate this with a short, clear sentence: no topic / box is allowed to remain blank!

3.2.3 Concentrate on national information sources

Please use any national source of information deemed most appropriate by you or your expert colleagues. As already mentioned, this may include national information available in the WWW, reports and studies readily available, journal articles and related material, national statistics, data from occupational associations, or industry and trade associations, information from national authorities / Ministries / Institutions, experts and researchers, and so on.

Please note: We have attempted to identify as many supra-national sources of information as possible. Therefore, we strongly suggest you concentrate on national sources and national

experts so as to not waste limited resources. Please exploit supra-national information sources only where you are readily aware of them and where they contribute to a better understanding of the situation in your country.

3.2.4 Type directly into the electronic version of the provided reporting sheets

To describe the measures selected, please use the eInclusion Measure Assessment Sheet.

In doing this, please

- use one eInclusion Measure Assessment Sheet for each of the selected measures;
- consecutively number the measures described with help of the eInclusion Measure Assessment Sheet on the cover page ("1" for the first measure, "2" for the second and so forth);
- type directly into the grey boxes (text boxes will expand automatically when typing text into them) provided in the eInclusion Measure Assessment Sheet (eIMAS) and the eInclusion Policy Assessment Sheet (eIPAS);
- do not create a new document;
- when saving the document to your hard disk, make sure the name of the file ends with your country abbreviation and the measure number, for example for the fifth measure recorded in Germany a valid name would be 'Access4I_eIMAS_DE05.doc'. Accordingly a valid name for the eInclusion Policy Assessment Sheet would be 'Access4I_eIPAS_DE'.

3.3 Get in touch

Do not hesitate to get in touch at any stage of the information gathering process!

We are fully aware that the nature of the information to be gathered makes high demands on the mutual understanding between the study team and the national correspondents.

Whenever you face any problems in completing the research template or if you have any questions on what information is expected under the individual subsections / boxes do not hesitate to get in touch with:

Alexander Mentrup at

Access4Inclusion@empirica.com

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Oxfordstrasse 2

53111 Bonn

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Thematic Study to Analyse Policy Measures to Promote Access to Information Technologies as a Means of Combating Social Exclusion

eInclusion Measure Assessment Sheet

Country:

Sequential number in country:

21 December 2005

? **Name of measure:**

Source of information:

? **<u>Short</u> description of measure (what is the measure about):**

Source of information:

? **What was the starting date of the measure and has it already been completed?**

Start date (☐) don't know

Completion date if fixed (☐) don't know

(☐) no completion date fixed

Source of information:

? **In your view, was the initiative for starting the measure more "top down" e.g. responding to prior government policy or rather through grass-roots action "bottom up"?**

(☐) was initiated more "top down", e.g. in response to a government policy, welfare programme, legal obligation on government or similar

(☐) was initiated more "bottom up", e.g. by individual social workers, a self-help group etc.

Please briefly describe your assessment:

(☐) don't know

Source of information:

? **If "top-down" initiation, give name of policy/ programme/ law etc. as applicable:**

Source of information:

? **Who was / is involved in initiating, running or evaluating the measure? Please use the *Table of stakeholders involved* below to provide the names of all those involved in the measure.**

? **Who is the lead institution/organisation responsible for initiating and/or running the measure - please tick the column "Key actor" in the *Table of stakeholders involved* below.**

? **Please use the codes from the following list to complete the column "Type of actor" in the *Table of stakeholders involved*.**

<u>Codes for actor types:</u>

(1) national government

(2) regional / local government, municipalities, public / non for profit social service providers

(3) private / commercial social service providers

(4) public-private partnership

(5)religious / charity

(6) self-help groups, associations, community, neighbourhood

(7) other, please specify:

? **What role does/ did each stakeholder play? Please indicate in the column "Specific role" in the *Table of stakeholders involved* below whether the role was one or more of the following: initiating, planning, financing, implementing, maintaining, evaluating, or an other role (please specify).**

Table of stakeholders involved:

	Name of actor	Key Actor	Type of actor	Specific role of actor
1		☐		
2		☐		
3		☐		
4		☐		
5		☐		
6		☐		
7		☐		
8		☐		
9		☐		
10		☐		
11		☐		
12		☐		
13		☐		
14		☐		
15		☐		

Source of information:

? **Please provide an adequately detailed description of the measure covering at least the following questions:**

What are the **objectives**?

Which **groups** are targeted?

What **threats** of exclusion are to be countered?

Which **problems** are to be addressed?

What is being done, i.e. what **action** does the measure comprise?

What is expected to be achieved, i.e. what **outcome** at what **scale** and to what **timescales**?

Source of information:

? **In your view, which of the following categories apply to this measure?**

	Type of measure	Description
☐	Awareness/ Motivation raising	These measures/ programmes are usually aiming to raise awareness and encourage interest amongst late adopters and are inevitably demand side oriented. Some could have 'evolved' into other ICT initiatives over time, although they are more likely to be of a certain duration and not 'open ended'.
☐	Promoting affordability and availability of ICTs	These measures aim to remove tangible, practical barriers (cost of access, cost of relevant equipment, lack of access opportunities etc.) that at risk groups face.
☐	Promoting digital literacy amongst disadvantaged	These measures aim to provide/ improve eSkills endowment. They are usually demand side in nature, and they can range from informal skilling/ re-skilling to measures incorporating some certification. The certification can be organised with a third party, such as industry, etc.
☐	eService – usability and multi-modality	Such measures aim to ensure that all population groups - especially at-risk groups - can make gainful use of online services, and/ or that alternative modes of access to services of public interest, such as government and health services remain available and accessible via different channels and platforms, e.g. by face-to-face or phone, Internet and so on. Thus, they aim at ensuring that less advantaged are not placed in the position of further disadvantage by the virtue of not being able to access online information.
☐	Access to services – constraints tackling	Such measures seek to exploit the inherent properties of ICTs to bridge constraints, mainly of distance and time.
☐	Online products and services – access for disadvantaged	Ensuring that low income groups can avail themselves of cost advantages now being made available through the Internet/ i.e. have access to the lower prices becoming available through online services
☐	Access to employment	Measures aiming to give at-risk groups better opportunities in employment, both in terms of access to it and in terms of maintaining it/ accessing more opportunities. These measures would include training in using ICTs and gaining eSkills, the emphasis being on occupational aspects, as well as. incentives for employers to take on ICT trainees/ those completing their courses
☐	eLearning	Measures to facilitate self-directed personal development and lifelong learning of at-risk groups
☐	Content/ services – creation and relevance	Supply side measures to develop content and services that are really relevant to the needs of those at-risk of exclusion. Measures can feature co-opting of those at risk into the content creation, and target specific communities/ neighbourhoods.
☐	eDemocracy/ eParticipation	Measures to facilitate and support active citizenship, more (effective) engagement and promote enfranchisement of at-risk groups in all aspects of politics and governance; and promote engagement and influence of at-risk groups in political and governance processes at local, regional, national level.
☐	Networking	Measures to exploit the networking capabilities of ICTs to empower at-risk

	Type of measure	Description
		groups to address their own needs. While similar in nature to the above, these should be more bottom up, and with more focus on 'community' rather than individuals (this distinction is relevant for the initiatives under Community networks below too).
☐	Community networks	Measures to encourage the deployment and utilisation of ICTs amongst at-risk communities (mainly those communities that already exist/ are defined in some form).
☐	Other	

? **What characteristics do targeted individuals have? Please tick all relevant characteristics in the table below, adding items as need be. Please use direct translation of words used in documents and / or interviews (categories are provided for convenience only).**

Risk Enhancing Characteristics (RECs), a person targeted (is)	
Age, gender and parenthood	
old (older people)	☐
a child (children)	☐
has children	☐
single and a parent (single parent)	☐
other age, gender, parenthood, please describe:	☐
Education, abilities, origin and background	
has low educational level	☐
grew up in vulnerable family	☐
not native speaker = first language not the same as host country majority	☐
belongs to ethnic minority	☐
not born in host country (immigrant)	☐
other, please describe:	☐
Health or disability	
hard of hearing	☐
has poor eyesight	☐
mobility impaired	☐
poor tactile/ manipulation ability	☐
in poor health	☐
other disabled or poor health, please describe:	☐
Living and social conditions	
homeless	☐
lives alone (single household)	☐
lives in area of multiple disadvantage	☐
lives in a poor neighbourhood	☐
lives in household with unemployed person / people	☐
subjected to discrimination	☐

other, please describe:	☐
Employment	
has been unemployed long-term (long-term unemployed)	☐
unemployed	☐
has poor employment record	☐
other, please describe:	☐
Income, financial situation	
subjected to persistent poverty	☐
on low income	☐
poor	☐
has large debts (over-indebted)	☐
other, please describe:	☐

Source of information:

? **How many people are currently reached by the measure? Please specify the total number or provide either an estimate of the total number reached by the measure.**

Total number of individuals reached

not applicable/ statable

Source of information:

? **Nationwide, how many people are there in the groups targeted? Please provide either an estimate of the total number which could be reached by the measure or the proportion of the country population as a whole.**

Total number of individuals in target group(s)

or

Proportion of the population in target group(s) in percent

not applicable/ statable

Source of information:

? **What is the geographic reach of the measure?**

(☐) limited to one specific city area or small region of the country

(☐) limited to a number of specific areas or smaller regions

(☐) specific to one or more large regions, areas (e.g. rural, coastal) or cities

(☐) not limited in reach; covers the whole country

Other (please describe):

(☐) don't know

Source of information:

? **In your view, how successful has the measure been in terms of achieving its stated / intended objectives in general and in relation to its target group(s) in particular?**

Source of information:

? **Have any effects / impacts been achieved that were not anticipated/ intended and / or desired?**

Source of information:

? **Were any problems encountered, did the approach have to be modified or are there any other lessons that can be learned?**

Source of information:

? **Do you consider the measure to be good practice in combating social exclusion using ICT, that is worth repeating in your country and elsewhere, and if so, why?**

Source of information:

? **Is this measure one of a number of measures of similar content and target groups in your country? If so, please enter the approximate total number of similar measures including this one, if not enter "1".**

Source of information:

? **Has the measure been evaluated by a third party, by the promoter of the measure or not at all?**

(☐) by third party

(☐) by the promoter

(☐) not at all

(☐) don't know

Source of information:

? **If applicable, please describe the evaluation outcomes, and check the evaluator was listed in the table of stakeholders above.**

Source of information:

Thematic Study to Analyse Policy Measures to Promote Access to Information Technologies as a Means of Combating Social Exclusion

eInclusion Policy Assessment Sheet

Country:

21 December 2005

Introduction: In this part of the data gathering we are seeking to gain an overall perspective on eInclusion / digital divide policy / programmes in your country, and on their links with social inclusion policy / programmes. Here we would like you to provide an overall assessment of the situation in your country in relation to the following three dimensions.

? **Overall, to what extent is *eInclusion / tackling digital divides* currently on the public policy agenda in your country? Is it a big issue or a more marginal one?**

Source of information:

How is it on the agenda (what are the main policy contexts and programmes)?

Source of information:

What levels of resources are being allocated to this area?

Source of information:

What are the main themes and emphases in current eInclusion policy and programmes?

Source of information:

To what extent and in what ways are social inclusion issues and objectives being explicitly targeted or addressed in these main eInclusion policies and programmes?

Source of information:

? **To your knowledge, has there been a systematic effort to address *eInclusion issues and objectives* in *the main social inclusion policies and programmes* in your country.**

Source of information:

? **In your view, what could be done to develop more coherence and inter-linkage between eInclusion policies and programmes and social inclusion policies and programmes in your country?**

Source of information: