Harnessing ICT for social action, a digital volunteering programme (Spain, 25 March 2014)

Digital Inclusion in Europe: Evaluating Policy and Practice[1]

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Introduction: Background and Context

Purpose of this discussion paper

This discussion paper reviews the Digital Inclusion policies in the European Union. The purpose is to give an independent assessment of the effectiveness of the Digital Inclusion policy and to discuss transferability across Member States and its possible contribution to European Policy development in other areas (e.g. Europe2020 and the Social Investment Package).

Digital Inclusion is defined in this discussion paper as an individual's effective and sustainable engagement with Information and Communication Technologies (ICT) in ways that allow full participation in society in terms of economic, social, cultural, civic and personal well-being. A digitally inclusive Europe is therefore a Europe in which all individuals, independent of their socio-cultural and socio-economic background, have equal opportunities to engage with ICT in such a way that a trend for increasing social inequality is halted if not reversed.

Development of digital inclusion debate

Before discussing current Digital Inclusion policy, it is important to understand that the focus within digital inclusion debates has shifted from digital divides to gradations of inclusion (Van Dijk, 2005; Warschauer, 2004). This accompanied a shift in focus from universal access as the central aspect of digital inclusion to an emphasis on digital literacy and awareness around the benefits of ICT use for economic, social, cultural, civic and personal well-being among the general population. The latter asks for the incorporation of not only access, skills, and motivation indicators of digital inclusion but also a broad spectrum of uses of digital content and platforms so that citizens can engage with ICT to achieve tangible outcomes in these areas of everyday life (see figure 1).

Each of these 5 areas of focus in the digital inclusion debate has a body of literature and thinking behind it (see Appendix I). For classification and evaluation purposes it is important to understand *access* in terms of quality, ubiquity and mobility; *skills* as having technical, social, critical and creative elements; *motivation and awareness* of the benefits as being determined by both individual and social circumstances; and *engagement* as driven by the everyday life needs of individuals through *content* created by and for them so that engagement with ICT is effective and sustainable.

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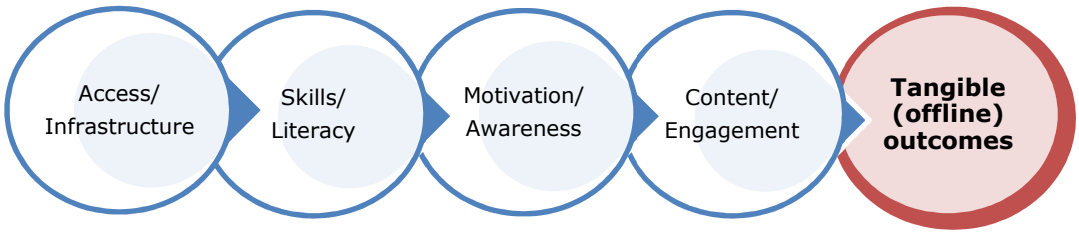
Figure 1 Thematical development in the focus of digital inclusion debates



Tangible outcomes and targets for evaluation

Current thinking in this area argues for a need to refocus the debate around the tangible, 'real' outcomes that digital inclusion policies and interventions can address (Helsper, 2012). In the end it is not digital engagement or skills that matter but the narrowing of inequality in relation to everyday social challenges like employability and general well-being. European scholarly work on digital inclusion has therefore shifted to look at what the key areas of social exclusion and deprivation are that need to be addressed and which types of digital inclusion interventions and policies are most effective in reaching these (Eynon, Helsper & Van Deursen, 2014). Another complicating factor for digital inclusion policy debates is that those truly at risk of digital exclusion are those who suffer compound social exclusion who are simultaneously economically, socially and personally disadvantaged (Helsper, 2011). Identifying these individuals is difficult but fundamentally important for effective policy and interventions at a national level.

Any programme that aims to tackle digital exclusion should take these key steps to be successful and sustainable:

1. Identify what the *main social challenges* are and what the *desired outcomes* in terms of social inclusion and equality are;
2. Identify which *socio-demographic and socio-cultural groups are marginalised* in terms of the economic, social, civic, cultural and personal well-being outcomes identified under 1;
3. Identify to what extent these groups' *digital exclusion in terms of access, skills, motivation and content/engagement* inhibits reaching the desired outcomes;
4. Identify *the best organisations and locations* to reach and help those most in need;
5. Provide *resources* to organisations and individuals in these locations to lift the barriers to digital inclusion as identified under 3 for the specific challenges faced by these groups;
6. *Evaluate* the implementation and success of these initiatives by noting whether the groups *improved* their economic, social, civic, cultural and personal *well-being as a result of their increased digital engagement*.

In conclusion, sustainable and successful digital inclusion initiatives start and end with the tangible (offline) outcomes and use access, skills, motivations and engagement with ICT to alleviate challenges encountered in the 'real' lives of disadvantaged groups.

Brief overview of the state of play in Europe

This section uses data from Eurostat to show that there are significant inequalities in Europe in the key areas of the digital inclusion debate (i.e. access, use, literacy) and that the extent of these inequalities differs by gender, age, household

composition and socio-economic status (See appendix for detailed country level data).

Household Access: Infrastructure

In 2013, around 80% of EU households had access to the internet at home, making Europe top of the international league tables in terms of diffusion, in comparison to other world regions.

Table 1 Percentages of households with internet access

	European Union (28 countries)	European Union (15 countries)
Households	79	81
Income in first quartile	55	60
Income in fourth quartile	95	96
Δ Income groups	40	36

Source: Eurostat, 2013

However, this overall good performance masks significant differences between countries in Europe and, within individual countries, between different types of households. There is considerable inequality between households in internet access within all countries. Between country differences are stark in terms of household infrastructure: in Europe the difference between households within the first income quartile and the second income quartile is 40% points[2], almost all highest income quartile households are connected while only just over half of lower income households are.

Individual Access

According to Eurostat 77% of Europeans have used the internet in the last year but this again masks differences between and within countries.

Table 2 Individual internet use in the past 12 months (in percentages)

	European Union (28 countries)	European Union (15 countries)
All Individuals	77	80
25 to 34 years old	93	94
65 to 74 years old	39	45
Δ age groups	54	49
Males	79	83
Females	75	78
Δ gender groups	4	5
No or low formal education	54	57
High formal education	96	96
Δ education groups	42	39

Source: Eurostat, 2013

Overall in Europe the differences between men and women are small (4%), but considerable differences exist according to age (54%) and education levels (42%). How stark these differences are varies per country, there are significant differences between men and women, between older and younger persons and between those with high and low levels of education especially in Southern and Eastern European countries.

Literacy and engagement

A problem with the available data for skills at the European level is that the indicators measure different types of use rather than skills.

[2] In this section % is used to indicate percentage point differences when comparisons between groups are made.

Table 3 Skilled uses by individuals (in percentages)

	Search engine	Email attachment	Chat	VOIP	File sharing
All Individuals	75	65	37	33	14
16 to 24 years old	95	88	73	54	34
65 to 74 years old	37	29	6	11	2
Δ age groups	58	59	67	43	32
Males, 16 to 74 years old	78	67	39	35	18
Females, 16 to 74 years old	73	62	35	31	10
Δ gender groups	5	5	4	4	8
Individuals with no or low education	52	40	26	20	9
Individuals with high formal education	95	90	49	50	21
Δ education groups	43	50	23	30	12

Source: Eurostat, 2013

There are considerable differences between age (32% to 67%), gender (4% to 8%) and education groups (12% to 50%) in the ways in which they engage, these differences in general are larger for more common uses. These differences again mask large differences between European countries as well as between groups within countries where inequalities tend to be larger in the Southern and Eastern European countries and smaller in the Nordic countries.

Digital inclusion: the status quo in Europe

There is some indication that high levels of socio-economic inequality are related to high levels of digital inequality (Helsper & Galacz, 2009). While more digitally inclusive societies (i.e. with smaller differences between socio-demographic and socio-cultural groups) tend to have high levels of diffusion, high levels of diffusion do not guarantee high levels of digital inclusion across different socio-demographic groups. Similarly, overall wealth in a country does not seem to automatically lead to greater levels of digital inclusion. More research is underway in this field to understand how traditional social exclusion and digital exclusion are linked to national levels of inequalities, wealth and infrastructures.

Part A: Setting the scene – overview of the related policy developments at European level

A1: Digital inclusion on the European agenda

From the above we should conclude that the idea is that by making sure that all citizens of Europe have equal access to ICT and digital skills, some of the existing inequalities based on unequal access to information, education, services and other opportunities might be countered or at the very least that the trend for increasing gaps between rich and poor, between those who have resources and those who have less, will be countered.

There is one current policy framework at European level that addresses the topic of digital inclusion in a direct manner: "The Digital Agenda for Europe" (DAE). The "Road Map for Digital Inclusion: a Hub for social innovation" was established after a working group came together under the DAE programme and established key priorities for digital inclusion in particular.

The Digital Agenda for Europe: Targets and Objectives

Within the DAE, 3 pillars are the most important for digital inclusion: pillars 4 (Fast and ultra-fast Internet access), 6 (Enhancing digital literacy, skills and inclusion) and 7 (ICT-enabled benefits for EU society). These largely overlap with the development of the debate as described in the background section, ranging from

access (pillar 4), to skills and literacy (pillar 6) and digital engagement and tangible outcomes (pillar 7). In what follows the targets and objectives of the pillars are briefly described.

Access: Targets and objectives Pillar 4

We need very fast Internet for the economy to grow strongly and to create jobs and prosperity, and to ensure citizens can access the content and services they want.

The DAE document states that the objective is "…to bring basic broadband to all Europeans by 2013 and seeks to ensure that, by 2020, (i) all Europeans have access to much higher internet speeds of above 30 Mbps and (ii) 50% or more of European households subscribe to internet connections above 100 Mbps." (p19). Policies here need to focus on a mix of technologies, in other words access needs to be ubiquitous and mobile. In terms of infrastructure this requires spectrum management policies and Next Generation Access initiatives to be coordinated across the single European market. In concrete terms, this also includes coordinating multiple location access provision through third, voluntary and commercial sector organisations.

Skills and Literacy: Targets and objectives Pillar 6

The digital era should be about empowerment and emancipation; background or skills should not be a barrier to accessing this potential.

The DAE argues that a common digital competence framework is needed, to create effective education training and certification measures outside formal education systems. Nevertheless, the policy recognises that digital competence should always be developed and assessed within a context. Here clear target groups are identified as being the elderly, low income, unemployed and lower educated. The specification of the types of skills that are needed to participate in a digitally inclusive society are identified along the lines of technical, social, cultural, civic and creative skills for a variety of different tangible outcomes such as employability, health, and countering social isolation. The focus here is on the skills needed to work in the IT industries. Gender issues are particularly stressed since women continue to be severely underrepresented in the IT sector. Accessibility is also part of this particular Pillar although technically that is more about access than about literacy. Cross border national and European provision of eGovernment services content is also part of this pillar. Universal service and securing digital content and accessibility of the different services for all is part of literacy pillar 6 and not pillar 4 which deals with infrastructure or 7 which explicitly deals with ICT benefits for all.

Engagement/tangible outcomes – Targets and objectives Pillar 7

Smart use of technology and exploitation of information will help us to address the challenges facing society like climate change and the ageing population.

Many of the targets and objectives under Pillar 7 do not directly deal with digital inclusion as such, they identify a few additional important areas of personal and social well-being where ICT could help overcome disadvantage. In particular, "…ICT is becoming a critical element for delivering policy objectives like supporting an ageing society, […], empowering patients and ensuring the inclusion of persons with disabilities."(p.27) The specific targets in the DAE under Pillar 7 are mostly technological interventions, rather than user driven design of technologies in areas such as eHealth. User driven or needs driven policy is clearer in the area of cultural and creative content but this focusses on stimulating national cultural projects such as cinema and language preservation rather than culture in the sense of cultural diversity and underrepresented groups.

Gdansk Roadmap for Digital Inclusion

The roadmap was established as part of the DAE action plan in 2011. It was specifically linked to the e-skills and digital literacy policy for SMEs and disadvantaged groups Access is absent from the roadmap and skills, motivations and engagement are spread throughout and sometimes conflated. Nevertheless, 5 targets and priority areas were identified that can be related to literacy and motivation with reference to grassroots sectors, in particular to those difficult to reach and include in normal consultations:

1. *Awareness* raising about the benefits of technologies amongst disadvantaged groups and the organisations that interact with them.
2. Accessible and stable *funding* for those who want to get engaged with digital inclusion initiatives.
3. *Digital literacy* and skills for enhancing human capital amongst target groups of disadvantaged individuals.
4. Supporting the connection of *knowledge hubs* for experience and resource exchange among digital inclusion stakeholders.
5. Develop and promote *common tools*.

The document leaves open which target groups should be addressed but mentions gender inequality, ageing, and disability in reference to digital inclusion issues (6).

A2: The approaches taken by the European countries in tackling the challenges of digital inclusion

What follows is a general overview of country policies. In table 4 countries are classified by whether or not they mention digital inclusion in terms of access, skills, awareness and engagement as objectives in their government policies[3]. The information in the table does not refer to implementation but to the reported focus of public government documents.

With a few exceptions, available national policy documents do not specify how targets related to access, literacy and engagement are to be achieved, if they specify targets at all. Consequently, but not solely for that reason, evaluation of the effectiveness of the implementation of specific policies is extremely difficult.

[3] For the sake of this discussion paper policies are any communication accessible to the public produced by government bodies or multi-stakeholder groups that function at a national level.

Table 4 Strategic Digital Inclusion Policy Foci of Selected European Countries

		Country														
Strategic policy areas	**Operational objectives**	AT	CZ	DE	EI	EE	EL	FR	GB	HU	IT	NL	NO	PT	PL	RO	SE
Infrastructure	Increasing speed	V	V	V	V		V		V	V	V		V		V	V	V
	Integrated platforms for services (e.g. G-Cloud)			V	V	V	V	V	V	V		V	V		V	V	V
Access	Ubiquitous access (CTCs, Libraries, School)		V				V	V	V	V	V		V	V	V	V	V
	Accessibility				V		V	V	V		V	V	V	V			V
Skills/ Literacy	Formal education in schools	V		V	V	V	V	V	V	V		V	V	V	V	V	V
	Formal certification for adults (on the job training)	V		V	V			V	V			V	V	V	V		V
	Stimulating informal learning	V		V	V			V	V			V	V		V		V
Awareness	Digital champion	V			V				V			V			V		
	Public awareness campaigns about benefits of the internet	V		V	V	V	V	V				V				V	
	Public awareness of online risks			V	V	V	V		V		V	V	V	V		V	V
Engagement	Content for specific vulnerable/excluded groups[4]	V				V		V	V			V	V			V	V
	eGov content	V		V	V	V	V	V	V	V	V	V	V	V	V	V	V
	Commercial content		V	V	V	V	V		V	V	V	V	V		V	V	V

Access: Infrastructure provision (e.g. rural roll out, high speed broadband and accessibility) are part of almost all countries' national policies and many mention the establishment of a platform that joins up all government and public services to provide easy access. The Nordic countries seem more engaged with the gCloud service as specified in the DAE. None of the policies mention aiming to set up a cross border service with the exception of Norway.

Literacy: A number of countries have digital literacy initiatives but these mostly focus on in school training or in libraries/ Community Technology Centres (CTCs) training or assume that access provision in these locations is akin to increasing literacy in vulnerable groups. Very few policies mention that there is or will be a specific certification available for those who are not in education. Very few mention on the job certification or certification for volunteers training to help others or for courses outside formal settings. If anything is mentioned, the elderly are usually

[4] Policies targeted at specific vulnerable groups to create content and engagement with the specific aim to increase inclusion amongst these groups

the focus and the European Computer Driver's License (ECDL) is the certification. The least prevalent are policies that refer to stimulating informal learning either through volunteer digital champion schemes or by encouraging public-private partnerships that set up learning through play programmes or provide such training online. Policies often do not mention specific vulnerable groups or specific skills that are lacking in the groups most at risk of exclusion. The elderly are mentioned but the other groups identified in the Roadmap and DAE such as gender or minorities are not.

Awareness: A number of countries have Digital Champions, although not as many as would be expected considering the importance given to volunteers and civic organisations in the Roadmap. Who these are takes different forms in different countries. Sometimes there's a national digital champion whose job is awareness raising amongst the general public, businesses and policy makers of the importance of digital inclusion. In many country policies, the responsibilities of these digital champions are not clearly specified. In other countries there are a number of digital champions, volunteers who try to get the disconnected online and help them to increase their skills which is probably better classified as falling under informal learning or as access provision when it is just about getting people online.

The European Safer Internet programme has been successful in bringing together different stakeholders at the national and regional level in matters around making people aware of online risks. It provides very specific guidelines and has the benefit of being connected to a cross-border service (Childline) with national representatives as well as clear connections with law enforcement ministries and child protection agencies. These initiatives are mostly focussed on children. At the moment there is no equivalent for awareness raising around the benefits and there is no cross-European initiative nor is it connected to a specific government department. There is a notable absence of any awareness of benefits initiatives targeted at specific vulnerable groups with the exception of the elderly. In many countries NGOs take on this role in a nationally uncoordinated manner.

Engagement: Most initiatives providing content specifically for identified vulnerable groups are aimed at the elderly or at the disabled. For the former this focusses on skills training and awareness of age relevant digital services and for the latter on access(ibility) or (health) care. Platforms with content for youth are also common but disadvantaged youth (e.g. NEETs) are not mentioned in policy as a group that needs specific attention in this area. There is no explicit mention of stimulating participatory design or user centred content for the gender, minority or lower education groups mentioned. Most country policies mention the creation of eGov content without specifying how this will affect particular groups at risk of social exclusion or whether the content of these services is designed around the specific needs of these groups. Policies that mention stimulating commercial content for, for example, SMEs focus on safety and payment systems rather than on support for SMEs in creating content suitable to their needs. Worrying is that representation of target groups (e.g. women) in the creation of commercial online content is not part of national policies, reflecting the lack of these groups in IT industry and education.

Reporting: variation across countries. While there is no space in this discussion paper to describe all the national policy landscapes in detail, there is a wide variety of formulas across Europe and significant differences in where responsibility is located within countries (see bibliography for links to national policy websites). One of the following ministries tends to be involved in setting out the policy: infrastructure, media and culture, business, development or education. However, the involvement of other departments and sectors is left unspecified. Van Dijk and Van Deursen (2014) emphasised that policy implementation cannot take place without cooperation with the ICT industry, ICT training centres, Publishers of

educational and other content, labour organisations, Schools and Universities, Public Libraries, Public and Community Access Centres and Citizen Initiatives. Therefore, it is worrying that many national policies do not specify which actors should be involved in the implementation of digital inclusion policies.

Reporting on national policies and responsibilities was in general poor in countries where diffusion was low. Often, they had not been updated for a number of years. Sometimes the reporting almost literally copied the DAE but did not contextualise it to the specific problem areas in a country nor to the country specific groups at risk of social exclusion that should be targeted. In some countries there were NGO initiatives that tackled these issues but often they were not coordinated nor did they have regular access to funds or management help from an overarching organisation. Similarly public-private partnerships were rare in countries with lower levels of diffusion.

Digital Agenda: Progress and Challenges in Policy and Implementation

Progress around the DAE and the Roadmap is measured on the DAE scoreboard. This scoreboard is more concerned with statistics on user engagement than on the implementation of policies related to these and the evaluation of their effectiveness. The implementation of digital inclusion related DAE objectives is usually in the hands of regional and local initiatives.

There seems to be an evaluation gap where the statistics (and potential improvements in access, literacy, awareness and engagement) are difficult to link to specific policy implementations. So while we know what the state of the art is we do not know what government or national level initiatives have done to influence these levels of engagement by citizens. More and more people are online but progress seems to be slower in some countries and for particular groups with compound levels of social exclusion. At this point explaining why certain countries and certain groups are more responsive to implementation and formulation of digital inclusion policies is impossible. Reporting on progress and challenges in the implementation of policies related to access, literacy, awareness and engagement is therefore in many cases speculative and anecdotal.

Access (DAE Pillar 4, Roadmap targets 2 and 4)

Progress

- *Increasing speed and ubiquitous access:* More people have access to the internet, 77% of European households are now online but not all countries are equally connected and within countries differences exist between social groups. In many countries with lower levels of diffusion public access points have been set up in libraries, schools and Community Technology Centres (CTCs).
- *Accessibility and integrated platforms*: Policy implementation in this area has taken off mostly in countries with higher levels of diffusion where policies are formed around gCloud services. Creating a social innovation platform is also part of this access area but there is very little mention of this in policy.
- *Funding*: Funding for infrastructure, mostly for increased bandwidth and speed on networks, has been made available through the ESF. This has been called upon by local and regional governments.

Challenges

The main challenge for the access area is that no target groups have been identified for most of these initiatives. Infrastructure and access policy implementation focus on geography (i.e. increasing connectivity in rural areas) rather than on inclusion of specific socially excluded groups through targeted access provision or targeted funding for organisations and volunteers working with specific

vulnerable groups. Public availability of infrastructure and access centres is not on its own sufficient to create a digitally inclusive society. Monitoring of whether sites and platforms are used by individuals from groups with different socio-demographic backgrounds is not transparently done, in particular in countries with lower levels of diffusion. As regards the social innovation platforms, one of the challenges is that the definition of what this is relatively unclear and thus difficult to implement.

Literacy (DAE Pillar 6, Roadmap target 3 and 5)

Progress

- *Formal education*: The EU has established a framework for measuring digital skills under the media literacy programme.
- *Formal certification*: The European Computer Driver's License is relatively well known and several countries have implemented this in policy.
- *Informal learning*: Pan European initiatives include an expanded eSkills week in March and volunteer digital champion initiatives.

Challenges

Reporting and implementation at the national level of digital literacy is not very consistent. When mentioned in policy it is often unclear what the specific elements of digital skills are. One of the main challenges is that DAE policy focusses on training persons to work in IT industries while there is a lack of knowledge of the skills needed for 'everyday' jobs or for volunteer intermediaries helping others to get online. Another challenge is that, while in some countries specific target groups are mentioned as in need of digital skills, the contextual aspect of the policies is lost in that they do not discuss which types and levels of literacy are needed for different groups. The ECDL is universal and, therefore, not contextual. The scope of the groups addressed in literacy elements of digital inclusion policies is furthermore limited, the elderly and young people in educational institutions are commonly included but other groups that are considerably more likely to lack digital competency and confidence are not. Conspicuously absent from implementation and evaluation of digital literacy initiatives are those from disadvantaged socio-economic backgrounds, those with lower levels of education and women from particular socio-economic backgrounds.

Note: Formal training and volunteer programmes tend to reach the 'low hanging fruit' because they rely on people coming to centres or volunteers identifying those in need and reaching out. This means that those who are socially isolated and not institutionalised, those who live in communities where overall take up and skill is low and those who are reluctant to enter formal learning or public spaces are unlikely to be reached by through these initiatives.

Awareness (DAE Pillar 6 and 7, Roadmap target 1)

Progress

- *Digital champions*: In several European countries national Digital Champions have been appointed.
- *Public safety awareness*: A cross national Safer Internet Day (11 Feb in 2014) is implemented in all European Countries and the Safer Internet Programme has been successfully implemented across Europe.
- *Public benefits awareness*: There is very little progress in this field except through digital champions in a select few countries. There are only a few public private partnerships.

Challenges

The roadmap emphasises that awareness raising is about motivation and related to establishing the needs of individuals before going out to change their minds. This can only be achieved if policies tackle social exclusions in an integrated way, i.e. including traditional fields of exclusion as well as digital literacy. Targeting awareness raising campaigns to traditional fields of social exclusion and associated levels of digital literacy is rarely done. The role of national digital champions is not specified along those lines and tends to involve much anecdotal evidence about technology use rather than tangible positive outcomes for specific social groups.

Policy in this area could do with clearer linking of the positive aspects of media literacy to the more cautionary awareness raising activities through the Safer Internet project. A concerted European effort to create public awareness about the benefits, targeted at specific disengaged populations and their everyday needs, a platform organisation of public private partnerships, is desperately needed.

Engagement and tangible outcomes (DAE pillar 7, Roadmap target 4 and 6)

Progress

- *Content for vulnerable groups:* There is very little progress in this area, if policy mentions the stimulation of provision of relevant content and services for particular groups these are defined very broadly (i.e. the elderly, youth);
- *eGov:* Especially high diffusion countries have increased their provision of content for government services aimed at groups at risks of social exclusion, payments of taxes, information about benefits and health care have been digitised in most of these countries. This takes the form of digital by default policies and, in the Netherlands, multiplatform policies;
- *Commercial:* Many countries have established policies in relation to safety of online transactions and are in discussions about guaranteeing open platforms that promote the internet as a public good.

Challenges

Policy rarely mentions guaranteeing or stimulating relevant content production for specific vulnerable groups that are underrepresented online. Conspicuously absent are the roadmap and DAE target groups: women, ethnic minorities, low income and the unemployed. One challenge here is that the digitally excluded most likely to benefit from the full range of services offered online often have compound levels of social exclusion. Targeted websites to any one of these groups separately is likely to reach the most engaged within these groups and not those within these groups who are socially excluded. The roadmap suggests participatory design and user driven social innovation projects and public-private partnerships. The challenge here is an absence of any mention of these in relation to content provision for specific vulnerable groups. NGOs and volunteer organisations are often on their

own to figure this out and they are not clearly linked to tangible outcomes to create more inclusive societies.

The challenge in the eGovernment area is that the implementation of these policies has been more about the supply than the demand side, again user driven and participatory design is almost absent in the provision of eGov content for specific socially excluded groups.

A3: Links to other EU Policy Areas: Europe2020 and SIP

The Europe 2020 strategy and the Social Investment Package (SIP) discuss the social challenges that Europe is facing and identify tangible outcomes for specific groups which European social policies should target. Many of the challenges in digital inclusion policies discussed limited evaluation of policy implementation, partly due to a lack of clarity around the desired outcomes for specific socio-demographic and socio-cultural groups at risk of social and digital exclusion. Therefore, these overarching European policies can inform the implementation and evaluation of digital inclusion policies.

Europe 2020 strategy

The main aim of Europe2020 is to *"... turn the EU into a smart, sustainable and inclusive economy delivering high levels of employment, productivity and social cohesion."*

There are clear links between the specific target areas of Europe2020 and the Digital Inclusion objectives within the DAE. The access aspect of the DAE is explicitly mentioned as a flagship initiative (p. 14, Europe2020) with the objective *"… to speed up the roll-out of high-speed internet and reap the benefits of a digital single market for households and firms"* (p. 6). This explicitly digital aspect of Europe2020 does not go further than infrastructure policies. The *"circulation of content with high level of trust for consumers and companies on digital platforms as regulated by national legislation"* (p. 21) is also specifically mentioned. From a digital inclusion perspective this is important because certain groups who have had negative experiences and lower levels of trust in public organisations are also suspicious towards digital technologies. Since there is a limit to what regulation of content and online safety protections can achieve to keep people safe and engaged, digital inclusion initiatives can inform the appropriate social policy response. Digital inclusion in a broad sense (access, skills, awareness and engagement) is needed to create these levels of trust and engagement.

The point has been made that access, infrastructure and safety measures are only one aspect of digital inclusion and on their own not sufficient to create a (digitally) inclusive society. Even in countries with high levels of diffusion, a considerable number of citizens are not taking full advantage of the internet. Digital inclusion policy can benefit from refocussing on the tangible social outcomes of digital inclusion for specific socially excluded groups. Therefore, the following flagship Europe2020 initiatives can and should be integrated with digital inclusion policies:

- *"Innovation Union"* to improve framework conditions and access to finance for research and innovation so as to ensure that innovative ideas can be turned into products and services that create growth and jobs. ➔ This is related to increasing digital *literacy* and making sure that a wider section of the population has higher level digital skills so that research and innovation within a digital Europe is led by a representative section of the population. When it comes to digital inclusion, gender issues are identified but the representation of young people from disadvantaged backgrounds and ethnic minorities in these types of

formal training should also be explicitly addressed through digital inclusion policy.

- *"Youth on the move"* to enhance the performance of education systems and to facilitate the entry of young people to the labour market. ➔ This is related to *access* provision at educational establishments and to digital inclusion *literacy* initiatives that focus on training educators and students to a higher level of digital literacy. Under the digital inclusion agenda it is important to note that the provision of these training programmes should take into account that those from socially excluded backgrounds are at a disadvantage when it comes to digital literacy training. The target groups for youth on the move still need to be identified in the digital inclusion context.
- *"An agenda for new skills and jobs"* to modernise labour markets and empower people by developing their skills throughout the lifecycle with a view to increase labour participation and better match labour supply and demand, including through labour mobility. ➔ Digital *skills* are inevitable in this area. It is important that digital inclusion is put firmly on this agenda so that already existing inequalities are not exacerbated by the digital exclusion of groups that are socially excluded. In addition, it is important here to think about the outcomes, what are the new jobs and skills that are likely to be created and which digital skills, awareness and engagement are necessary for people to take part in this digital economy from the most simple support and administrative jobs to the highest end of management of an organisation, from the IT to the service sector.
- *"European platform against poverty"* to ensure social and territorial cohesion such that the benefits of growth and jobs are widely shared and people experiencing poverty and social exclusion are enabled to live in dignity and take an active part in society. This multi stakeholder platform aims *"To design and implement programmes to promote social innovation for the most vulnerable, in particular by providing innovative education, training, and employment opportunities for deprived communities, to fight discrimination (e.g. disabled), and to develop a new agenda for migrants' integration to enable them to take full advantage of their potential"* (p. 19, Euro 2020). ➔ Equal access to ICT and an equal distribution of digital skills and needs driven engagement with content and services online is fundamental to combat poverty of the kind described in this initiative. The strength of this platform is that it very clearly defines which tangible outcomes are needed for specific target groups of socially excluded individuals. These tangible outcomes should be taken as the starting point and evaluation point of digital inclusion policies and initiatives.

The Europe2020 strategy specifically states that *"Country-specific recommendations will be addressed to Member States. Policy warnings could be issued in case of inadequate response."* (p. 6) Therefore, one of the key recommendations in relation to digital inclusion policies is that they should be more country context specific. Each country needs to take the six steps described in the background section to figure out, for all the elements of the Europe2020 policy what the specific social exclusion issues are, which groups of individuals are the most likely to suffer from these, which organisations and locations these individuals are most likely to be reached in, what role digital inclusion plays for that particular type of social exclusion in that particular group in that particular country, and how the organisation or location can provide training and meaningful, sustainable engagement with ICT. Then, and this is crucially missing from digital inclusion policy implementations, evaluations need to take place along the lines of Europe2020 areas in improvements for these specific target groups and the tangible outcomes that were identified in relation to the needs of these groups.

Social Investment Package

The digital society initiative as part of Europe2020 is most clearly linked to digital inclusion in the SIP. Under the missing links and bottlenecks section this is described in reference to the European economic agenda as:

"*The single market was conceived before the arrival of Internet, before information and communication technologies became the [sic] one of the main drivers of growth and before services became such a dominant part of the European economy. The emergence of new services (e.g. content and media, health, smart energy metering) shows huge potential, but Europe will only exploit this potential if it overcomes the fragmentation that currently blocks the flow of on-line content and access for consumers and companies*." (p. 20, Europe 2020).

This recognises that the world, and Europe in particular, is inescapably part of a changing and mobile digital landscape where significant barriers exist for European citizens. Digital inclusion policies and initiatives are an intrinsic part of social innovation which is discussed in detail in another important European policy: the Social Investment Package (SIP).

The SIP sets out the following social policy objectives that can be related to digital inclusion (p. 6 SIP, 2014):

- "*Preserving access to adequate social protection benefits, services, health and long term care*" ➔ This relates to access and the digital skills needed to use the internet effectively and in a sustainable way, especially amongst the most vulnerable in society (i.e. those in need of care or benefits).
- "*Access to more personalised services ("one-stop shop")*" ➔ This relates to digital engagement, in particular to guarantee that content is available for particular vulnerable populations and targeted to the specific needs of those individuals.

To achieve these goals the SIP specifies a series of deliverables for social innovation initiatives, they can be rewritten as follows for digital inclusion policies:

- A *methodology* on the efficiency, effectiveness and 'investment dimension' of digital inclusion policy budgets;
- A knowledge bank on what works and what doesn't in terms of digital inclusion policy implementation;
- Establishing *social innovation and social investment priorities* for Horizon 2020: approaches for the modernisation of social policies and services specifically referring to aspects of digital inclusion in terms of access, skills, awareness and engagement for tangible social outcomes;
- Assess the financial, economic and social *returns* on different forms of investment in digital inclusion initiatives;
- Better *statistical data* to aid the development of digital inclusion policy;
- Improving *access to information* for citizens: accessibility of public sector bodies' websites, make information about access to social benefits and services more easily accessible to citizens.

A4: Thematic links to earlier policy debate and research

While digital inclusion policies are a relatively recent aspect of the European policy landscape, there are a few preceding policy initiatives that the DAE builds on. Lessons to be learned from these previous initiatives related to access, literacy and engagement are detailed briefly here.

- *Infrastructure and access:*

  The i2010 was the European Commission's strategic framework adopted in the Riga Ministerial Declaration[5] which laid out broad policy guidelines for the information society and the media in its accompanying eEurope 2005-2009 action plan. This was the first time that there was an "*integrated policy which aimed to encourage knowledge and innovation with a view to boosting growth and creating more better-quality jobs*"[6]. The evaluation concluded that the action had contributed to the following results that we would now classify under digital inclusion: the number of Europeans online increased dramatically, also in disadvantaged groups; Europe as world leader in broadband internet speed and mobile connections; Supply and use of online services increased sharply; and ICT policies were mainstreamed. *Lessons learned*: Concerns were raised about the lack of development in R&D compared to other countries. The new digital agenda was supposed to deal with this aspect in particular. However, after public consultation the current DAE incorporated many of the same initiatives since it was clear that the digital inclusion objectives had to be readjusted in a changing digital landscape. Evaluation of implementation of policy was not as good as it could have been as evidenced by a stalled increase in use and digital literacy, not measured before, turning out to be an important barrier to full engagement.

- *Digital literacy*:

  The Media Literacy programme and the high level group of experts on literacy set out to create consistent cross-Europe benchmark indicators for media literacy which included defining new literacies related to digital skills. Problems with defining what media literacy was and who should be responsible for its implementation, as well as discussions about who should be targeted by media literacy interventions created problems in the implementation. Lessons learned: Separating out skills and use of media is important when defining what literacy is. Only if this is done can one understand which skills are needed to use media for different purposes and implement targeted training programmes and universal measurement to benchmark literacy across Europe.

- *Engagement and tangible social inclusion outcomes:*

  PROGRESS initiative. PROGRESS[7] is a financial instrument supporting the development and coordination of EU policy in the following five areas: Employment, Social inclusion and social protection, Working conditions, Anti-discrimination, and Gender equality. No reference is made in these to how ICT might help tackle these issues but the European Social Fund that provides a significant proportion of the funding for DAE related initiatives is based on this fund. Lessons learned: the importance of a multi-stakeholder approach is fundamental to the success of these policies. In addition, compound disadvantage is a real issue that complicates targeted interventions.

Part B: Assessment of the best practice policy under review

B1: Brief summary of the main features of the good practice under review

The Best Practice under review in this discussion paper is the Galician "Digital Volunteering Using ICT for Social Action" programme. This programme is a regional level programme launched in January 2012.

[5] http://europa.eu/rapid/press-release_IP-06-769_en.htm
[6] http://europa.eu/legislation_summaries/information_society/strategies/c11328_en.htm
[7] It is now one of the 3 axis of the EU Programme for Employment and Social Innovation (EaSI) (http://ec.europa.eu/social/main.jsp?catId=1081)

The Digital Volunteering programme aims to tackle digital inclusion in the Galician region of Spain building on the European Digital Agenda and tries to address the societal challenges as proposed in Horizon2020 initiatives related to health, demographic change and wellbeing and inclusive, innovative and reflective societies. It is seen as a complement to other actions carried out by the Galician government in terms of *"citizen-targeted ICT dissemination, awareness-raising and training measures, performed through the CeMIT network."* (p. 9) This particular approach seems to be the first of its kind in the region.

The Digital Volunteering programme uses volunteers in NGOs, the service and commercial sector, as well as in educational establishments, to foster social inclusion in 6 main target groups: the elderly, prisoners, disabled persons, rural women, parents and the unemployed. Social inclusion is variously identified along the lines of employability, health, education and civic participation.

There are 7 lines of action identified in the programme: 1) digital literacy and inclusion, 2) social and accessible technology, 3) social + ICT, 4) CSR + ICT, 5) Employment, 6) UNI + ICT, and 7) Social Innovation. These lines of action are a combination of tools, target groups and areas of potential intervention.

It is relatively unclear how and where the volunteers will be recruited but the method of implementation seems to be training volunteers to be able to subsequently provide formal training on how to (safely) use social, commercial, entertainment and eGovernment platforms for the target groups identified earlier. The tools provided to these volunteers are resources in the form of a central digital platform with information and discussion forums, a formal training programme and the availability of space to continue this training, sharing of best practices, and administrative support as regards management of the different organisations involved in the Digital Volunteer programme.

The evaluation of the implementation of this programme focuses on numbers of individuals, volunteers and organisations that have participated or been exposed in some way to the programme and the number of tools and resources distributed. The targets were either met or superseded by the numbers actually reached.

B2: Assessment of the policy in relation to the priorities of the Europe 2020 Strategy and the Social Investment Package

To evaluate the best practice under review, it is useful to look at how it might contribute to the goals set by Europe2020 and the Social Investment Package (SIP).

Europe 2020 and the Galician Digital Volunteering (DV) programme

- "*Innovation Union*": In lines of action 1, 2 and 7 the DV programme points towards addressing specific goals in relation to this aspect. For example, when it engages with the university sector, service sector and IT providers for social innovation projects. Nevertheless, no specific target groups are linked to this (e.g. there is no mention of women or minorities).
- "*Youth on the move*": This is addressed by approaching volunteers in schools. Public schools are mentioned as a target group in action line 1, line 5 mentions young entrepreneurs, line 6 described projects that bring university students and the IT industry together.
- "*A digital agenda for Europe*": Speed and infrastructure and increasing trust in services are not really a part of the goals of this initiative and a volunteering programme would not be the best way to this in any case. Action line 1 does mention refurbishing old equipment and donating this.

- "*An agenda for new skills and jobs*": The whole DV programme is centred around training volunteers in different sectors to increase jobs and skills. Although none of the action lines specifically mentions skills it is implicit that this is part of all lines. There is no clear definition of which skills will be trained. However, certain types of engagement (e.g. social networking, identity, crowd funding and management) are mentioned but it is unclear which skills or target groups will be reached through which resources or volunteers. Some projects are described in line 1 but no specific goals are set for these in terms of access, skills, awareness or engagement. The project mentions target groups without explaining why these groups and not others, such as migrants or those with lower levels of literacy or compound levels of disadvantages, are chosen as part of the intervention.
- "*European platform against poverty*": This is only clearly addressed by including unemployed as a target group within action line 1, although it's not clear which group of unemployed this project aims to reach. That is, those with compound disadvantage in terms of low education or health problems could probably benefit most from targeted digital inclusion interventions. It is likely to also be part of Red Cross collaborations (line 5) and the rural women and prisoners as target groups. There is a great emphasis on the elderly and health, not on the other Europe2020 identified target groups of migrants and the discriminated (e.g. disabled).

The SIP and the Digital Volunteering Programme

Earlier two aims of the SIP were identified, the digital volunteering programme addresses both:

- *Preserving access*: This is very clearly one of the aims of the Digital Volunteering programme, in fact improvement in health, well-being and active ageing is the one clearly defined aim of the programme. Social benefits are not directly mentioned nor does it explain how the actions undertaken by volunteers to get people online will specifically alleviate social inequality in relation to this area.
- *Personalised services*: The DV programme mentions the creation of several platforms and knowledge banks. However, it is unclear how they are going to improve access to these by the socially included groups in the population. The way the programme is written at the moment, it focusses more on providing the volunteers with platforms and information than on how these volunteers will transfer their knowledge and skills to a wider population for specific tangible social outcomes.

To some extent all SIP deliverables are part of the DV programme, it is particularly strong in creating knowledge bank and establishing priorities but not target groups:

- *Methodology*: An important aspect of the DV programme is setting up a management structure, support and resources for the volunteering organisations. This is argued to make collaboration and functioning of all the separate initiatives more effective and efficient but no evaluation method is mentioned as regards digital inclusion for all target groups or in relation to specific outcomes.
- A *knowledge bank*: A clear plan to provide knowledge bank tools is one of the strengths of the DV programme, under all lines of action a platform or forum is created that brings together the different stakeholders and volunteer organisations and provides them with resources to facilitate their jobs. In particular, a technological infrastructure to support centres (line 1), creating a social technology catalogue for social and accessible technology (line 2), providing services and products targeted at the social sector (line 3), fora to

exchange best practices (line 4), a discussion forum for new young ICT entrepreneurs (line 5), and best practice recording of citizen initiatives (line 7).

- *Priorities*: The DV programme focusses on the health, wellbeing and active ageing arm of Horizon2020 and therefore these are integrated into different lines of action. In action line 1, 4 types of social action organisations (for the elderly, the disabled, local municipalities, and cultural organisations) are identified as targets and 6 target groups (elderly, disabled, public schools, prisoners, rural women, unemployed). The document does not specify which social and digital inclusion needs the programme will be investing in for these particular groups. Another problem is that some of these groups are very broad and therefore encompass a variety of social challenges that would require different types of social innovation and investment.
- *Returns on investment*: There is no indication of how the social returns on investment will be measured. The management model is not clearly linked to evaluation of effectiveness because desired social outcomes are not clearly defined. It is all about support for (NGO, Third Sector, and commercial) volunteers but not about monitoring the effectiveness of these volunteers in creating sustainable digital inclusion to achieve social outcomes.
- *Statistical data*: DV programme assessment focusses on measuring take up of products/services by the volunteers and on the digital scoreboard indicators of use of ICT by individuals and organisations. There is no indication of engagement targets (i.e. types of use) in relation to particular outcomes, let alone targets for skills or motivation/awareness.
- *Access to information*: This is mentioned under line 7 (social innovation) which refers to a platform for citizen initiatives but does not address improving access for citizens. Further on, the document assumes that citizens shall 'demand access' but this seems to contradict the research that shows that the most socially excluded groups, who are heavy users of these services, are unlikely to be pro-active or skilled enough to request or know about these services. Just creating platforms is not enough to alleviate digital exclusion in this sense.

Learning value for other Member States

The learning value for other Member States can be evaluated along the 6 steps to successful policy implementation identified in the introduction. Taking into consideration the Europe2020 strategy and the SIP, the DV programme is especially strong on points 2, 4 and 5. Currently weaker are steps 1, 3 and 6.

1. *Social challenges*: The way in which the DV programme links to the Europe2020 strategy grounds this initiative in a broader policy framework of social inclusion which should make it easier to determine what the specific social outcomes of this initiative will be. The only mentioned tangible outcomes are linked to health, well-being and active ageing, all part of the social challenges as identified by Horizon2020, the funding arm of Europe2020. However, no outcomes are defined in relation to other target groups nor is detail given for those mentioned.
2. *Target groups*: The DV programme has very clearly defined, if sometimes rather broad, target groups. The learning value for other Member States is to understand how this initiative came to decide on these particular groups. It is important to subsequently evaluate how successful this programme is at reaching beyond those within those large groups that are relatively easy to reach. The lack of reflection on compound social exclusion might be a real issue in the implementation. There is a risk of volunteers only reaching the "low hanging fruit" since those most motivated and easy to reach within the broad groups are most likely to participate.

3. *Digital inclusion needs*: Needs assessment in terms of specific skills, types of access, motivational issues and content provision for the target groups is not described. At least not in terms of how it relates to the targets for social inclusion set out by the European level policies. The accreditation and training of the volunteers in terms of which different aspects of digital inclusion they are supposed to transmit is unclear.
4. *Target organisations and locations*: A wide range of stakeholder organisations across all sectors is identified and the management model helps in coordinating these efforts to cover the everyday locations and organisations most target groups are in touch with. Nevertheless, many of the locations used in practice might not be that welcoming or friendly to those who have a history of issues with formalised learning or institutionalised service provision. In addition, (rural) women, while mentioned as one of the target groups and an important element of the Europe2020 agenda, are not clearly targeted through any of the current projects that are part of the DV programme.
5. *Resources*: The project provides a wide range of digital resources and management support for the volunteers and organisations involved. The use of volunteers was recommended in both the SIP and the Europe2020 strategy. Nevertheless, there is confusion between the desired outcomes of the initiative, the resources that will be used to achieve these goals and the groups that are targeted through this intervention which will make it difficult to implement.
6. *Evaluation*: The data presented in the results section are unlikely to help identifying success and sustainability in relation to the desired outcomes identified as part of the Europe2020 and SIP. Most of the data are not about inclusion but about diffusion. That is, they are not about the needs of vulnerable groups that are met and reductions in inequality but about the roll out of ICTs without evaluation or assessment of the effectiveness of these in limiting social inequalities through the lifting of digital barriers. An important lesson to be learned from this particular project when it develops is whether volunteers are able to create sustainable, broad engagement with ICT rather than a shorter term access and minimal, decontextualised skills training. This is going to depend a lot on how the volunteers are recruited and how these volunteers will be approaching those people who are the targets of the initiative.

Conclusions

This discussion paper presented a framework to evaluate digital inclusion policies in terms of tangible outcomes and argues that these should be linked to social inclusion targets specified in the Europe2020 strategy and the Social Investment Package (SIP). This means that the desired outcomes of the implementation of digital agenda policies at the national level need to be defined in reference to increased social inclusion and not increased digital inclusion. Taking social outcomes for specific sectors, excluded groups and areas of social innovation as the starting point will make policy implementation more efficient and effective. Types of ICT access, literacy, motivation and engagement can then be linked to particular social outcomes for particular groups in particular countries. At the moment reporting on policy implementation is disconnected and refers only rarely to clear social investment targets for specific groups most at risk of digital and social exclusion. For example, increased access speeds and skills in the high end IT sector are important for European growth but do not tackle the issues associated with digital exclusion as encountered by socially excluded groups in their everyday lives and clearly identified as priorities under the SIP.

There are many different digital inclusion projects in the EU at the moment but in thinking about their effectiveness, the discussion needs to shift from ‘how many?’

questions to questions about 'why?' and 'for whom?' digital inclusion policy initiatives are implemented. Policy and implementation need to refocus from access and pure skills to meaningful engagement and tangible, social outcomes of ICT use by embedding digital inclusion into a number of different policy and regulation areas, notably the wider European policy landscape that deals with social challenges. While this might make it more difficult to implement it also makes evaluation of the actual achievements of the policies at a national level more transparent.

Questions/issues for debate

What are the most important tangible social outcome areas for digital inclusion policies? How are ICT awareness, motivation and engagement supported in relation to specific social outcomes in national policies?

Which target populations should be emphasised in digital inclusion policies that aim to tackle the social challenges as identified by the Europe2020 strategy and the Social Investment Package?

Why is reporting on national digital inclusion policies, its implementation and target areas poor in many European countries? What can be done to improve this?

How can data that links digital inclusion initiatives to social inclusion be presented and collected? That is, how will we recognise truly effective and scalable, social innovations in the area of digital inclusion?

Where should the monitoring of the implementation of digital inclusion policies be located at a regional and national level if this is a cross-sector social issue? What are the difficulties in deciding where to locate this?

What has been done to stimulate multi-sector partnerships in relation to digital inclusion? What are the barriers?

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Current Digital Inclusion Policy Frameworks and Evaluation Tools

Digital Agenda Europe (DAE)
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0245:FIN:EN:PDF

Gdansk roadmap
http://innodig.eu/download/Gdansk_Roadmap_Reworked_text_7.10.11.pdf

Previous policies

i2010
http://europa.eu/legislation_summaries/information_society/strategies/c11328_en.htm

eEurope action plan
http://ec.europa.eu/idabc/en/document/70.html

Related EU policy Initiatives

Policy Roadmap for the 2013-2014 Implementation of the Social Investment Package (SIP)
http://ec.europa.eu/social/main.jsp?catId=1044&langId=en

Europe 2020 strategy
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF

European Platform Against Poverty and Social Exclusion
http://ec.europa.eu/social/main.jsp?catId=961&langId=en

Progress Programme
http://ec.europa.eu/social/main.jsp?catId=327&langId=en

Media Literacy programme
http://ec.europa.eu/culture/media/media-literacy/index_en.htm

High Level Group of Experts on Literacy
http://ec.europa.eu/education/policy/school/doc/literacy-report_en.pdf

Country specific digital inclusion policy resources

General resources

Digital Agenda Score Board
http://ec.europa.eu/digital-agenda/en/scoreboard

Digital Agenda Best practice document (very limited information on a few countries)
http://daeimplementation.eu/best_practices.php

EGov factsheets for all European countries -http://www.epractice.eu/en/factsheets

Local discussions around the digital agenda (some countries with very little interaction) - http://daa.ec.europa.eu/going-local

Internet awareness around safety initiatives - Saferinternet.org

Country websites

Austria

Literacy - http://www.digikomp.at/ and http://www.efit21.at

Infrastructure, http://www.bka.gv.at/site/7902/default.aspx

Awareness and Engagement - http://www.seniorkom.at/ and http://www.digitales.oesterreich.gv.at/site/6497/Default.aspx

Czech Republic

http://www.digitalnicesko.cz (not updated since 2011, pdf only available in Czech)

Infrastructure- http://www.mpo.cz/en/e-comm-and-post/internet/

Estonia

http://263654.edicypages.com/eesti-infouhiskonna-arengukava-2020/infouhikonna-arengukava-2020-loppversioon (in Estonian)

Access, Literacy, and Engagement - http://e-estonia.com/components

Germany

Access, Literacy, Awareness and Engagement - http://www.bmwi.de/Dateien/BBA/PDF/ikt-strategie-der-bundesregierung,property=pdf,bereich=bmwi,sprache=de,rwb=true.pdf (in German)

Access - http://breitbandinitiative.de/ueber-uns and http://www.initiative-netzqualitaet.de/startseite/

Engagement - http://www.e-government-landkarte.de/nationale-e-government-Strategie

Literacy- http://www.bmbf.de/de/16684.php

Greece

Engagement - http://www.epset.gr/en/Digital-Content

Engagement - http://www.espa.gr/el/Pages/staticOPDigitalConvergence.aspx

(in English)
http://www.espa.gr/elibrary/Summary_OP_Digital_Convergence_EN.pdf

Hungary

Access -http://www.kormany.hu/en/ministry-of-national-development (minimal information)

Access and Literacy- http://www.kormany.hu/hu/nemzeti-fejlesztesi-miniszterium/infokommunikacioert-felelos-allamtitkarsag

Italy

Infrastructure and literacy (regulation) -http://www2.agcom.it/eng/eng_intro.htm

http://www.camera.it/leg17/1

Infrastructure - http://www.camera.it/leg17/465?area=22&tema=637&Le+comunicazioni+elettroniche+e+l%27Agenda+digitale+nazionale

Evaluation and implementation - http://www.agendadigitale.eu/egov/

Netherlands

Infrastructure and literacy – http://ecp.nl/

Literacy - https://www.digivaardigdigiveilig.nl/ and http://ecp.nl/

Engagement - http://www.seniorweb.nl/

Norway

Infrastructure, access, literacy, and engagement
http://www.regjeringen.no/en/dep/kmd/subjects/ict-policy.html?id=1367

http://www.regjeringen.no/en/dep/kmd/documents/white/propositions/2012-2013/meld-st-23-20122013-2.html?id=728993

Poland
Access, literacy and engagement - https://mac.gov.pl/popc/

Access - https://mac.gov.pl/dzialania/narodowy-plan-szerokopasmowy-przyjety-przez-rade-ministrow/

Engagement - https://mac.gov.pl/program-zintegrowanej-informatyzacji-panstwa/

Portugal
Infrastructure and literacy - http://www.fct.pt/dsi/agenda/

Access - http://www.acessibilidade.gov.pt/

Romania
http://www.ise.ro/wp-content/uploads/2011/08/Studiu-strategie-tineret-2011.pdf (in Romanian only)

http://digitalagenda.ro/strategia-de-roadshow/

Literacy - http://www.activewatch.ro/en/media-education/events-and-activities/media-literacy-good-practices-in-romania/ and http://www.tehne.ro/programs/elearning_ICT_in_education.html

Other relevant links

Digital champion meetings http://ec.europa.eu/digital-agenda/en/news/summary-1st-meeting-european-digital-champions

First Digital Agenda workshop reports (2011) http://ec.europa.eu/digital-agenda/events/cf/daa11/workshop-results.cfm

Digital Agenda Europe (2011) Workshop report on "Digital literacy and e-Inclusion"http://ec.europa.eu/digital-agenda/en/news/report-workshop-digital-literacy-and-e-inclusion

Life and work website Digital Agenda Europe http://ec.europa.eu/digital-agenda/life-and-work

The costs and benefits of eAccessibility http://www.eaccessibility-impacts.eu/researchResults.aspx

Code of Best Practices for Women and ICT (2013) http://ec.europa.eu/digital-agenda/en/news/code-best-practices-women-and-ict

Appendix I More detailed description of digital inclusion areas of debate in the background section

A brief description of these different areas follows since they will be used as a framework to evaluate digital inclusion policy and the best practice case study.

Access and Infrastructure

Without access, no one can use the internet or other ICT, therefore ubiquitous access is indispensable in creating a digitally inclusive society and this has always been and is still part of the digital inclusion debate. Not any access will do; quality, mobility and ubiquity are now considered fundamental to any digital infrastructure. Quality is commonly defined as speed and bandwidth but also includes the location of access since this determines the quality of the experience. For example, home access to ICT is most convenient to all but the homeless and offers more freedom to use and to develop digital skills through informal learning than access in other locations such as Community Technology Centres (CTCs) or libraries. Similarly, always-on and broadband access should lead to a higher quality experience and broader use. A high number of access platforms, such as PCs, laptops, games machines and smart phones, as well as a greater mobility in accessing content, for example, through wireless or 3G connections, are also indicators of ubiquitous and, therefore, quality access.

Skills and Literacy

After an initial focus in debates on access and infrastructure it was soon clear that this is by no means sufficient to create a digitally inclusive society, those working within this arena soon realised that equal opportunities for use could not be equated with ubiquitous, high quality access. Traditional literacy and education are unequally distributed between different socio-economic and socio-cultural groups and research showed that this is reflected in how people engage with technologies. Digital skills should be thought of at a basic technical, operational level, as well as in relation to the critical, social and creative literacies needed to use most digital spaces. Understanding which specific technical, social, creative and critical skills predict different types and levels of engagement of ICT is the focus of current digital literacy research. Beyond these specific skills that can be measured and trained through formal assessment and training programmes, self-confidence in relation to ICT has been shown to be a strong determinant of engagement independent of the actual skill level of the participant. Worrying is that confidence, even more than actual skill level, is unequally distributed amongst the population and parallels lack of empowerment amongst groups that are already vulnerable to exclusion and marginalisation in wider society.

Motivation and Awareness

Recently, a lack of interest in what ICT have to offer has emerged the most often mentioned reason for disengagement by those who do not classify themselves as internet users. The apprehensions one has regarding use of the ICT in general, relating to the effect they have on society, freedom and morals and have been shown to lead to reluctance to use ICT and might underlie this lack of interest. Furthermore, an awareness of what ICT might be good and bad at providing influences the relevance individuals give to ICT and how broadly they use them. Those debating digital exclusion have thus argued that a lack of interest in ICT reflects the idea that ICT use is not suitable for an individual's social group as well as his or her personally and that they are related to social interactions and processes taking place in their everyday life worlds. Relatively little is known about the attitude and awareness formation processes and the most important individuals influencing the opinions of disadvantaged individuals. This relatively new debate

around interest and awareness has, as a result, been less productive and interventions difficult to evaluate.

Content and engagement

It is likely that future debate around ICT will center around the idea that access, skills and awareness of benefits are insufficient to describe a digitally inclusive society. Just having the right access, skills and attitudes without actually taking up the variety of opportunities available through ICT is unlikely to improve digital and, therefore, offline, social inclusion. Digital inclusion under the definition given at the beginning of this paper should reflect whether the an individual's ICT use enhances their life in a broad way. This means that content needs to be available for all citizens, content that reflects their different levels of access, skills and motivations and that this content is engaging enough to lead to a sustainable and broad use of ICT. Some suggest that those who create and design of digital platforms and content should represent the diversity of individuals in a society and that this is currently far from the case.

Appendix II Detailed statistics on digital inclusion in Europe

Internet access at home in EU households (in percentages)

	Hhlds	Income in 1st quartile	Income in 4th quartile	Δ Hhld income groups
European Union (28 countries)	79	55	95	40
European Union (15 countries)	81	60	96	36
Austria	81	64	97	33
Belgium	80	56	97	41
Bulgaria	54	14	92	78
Croatia	65			
Cyprus	65	39	95	56
Czech Republic	73	38	95	57
Denmark	93	79	100	21
Estonia	80	56	89	33
Finland	89	72	100	28
France	82	64	96	32
Germany	88	74	98	24
Greece	56	37	92	55
Hungary	71	35	94	59
Iceland	96	92	100	8
Ireland	82			
Italy	69	42	90	48
Latvia	72	39	97	58
Lithuania	65	25	97	72
Luxembourg	94	90	98	8
Malta	79	:		
Netherlands	95	87	99	12
Norway	94	90	97	7
Poland	72	45	92	47
Portugal	62	33	90	57
Romania	58	22	83	61
Slovakia	78	49	97	48
Slovenia	76	41	99	58
Spain	70	41	97	56
Sweden	93	78	99	21
Turkey	49			
United Kingdom	88			

Source: Eurostat, 2013

The Nordic countries (Sweden, Norway, Finland, Iceland, Denmark, the Netherlands, often including the UK and Luxemburg) have high household infrastructure rates in terms of access, while the Southern and Eastern European countries lag behind. Between country differences are stark in terms of household infrastructure: from 49% of households with internet access in Turkey and 54% in Bulgaria to 96% in Iceland and 95% in the Netherlands. The smallest differences between households from different income groups (around 7%) can be found in the Nordic countries and the largest difference (78%) amongst the Eastern European countries, in Bulgaria only 14% of the households in the lowest income quartile has internet access compared to 92% of those in the highest income quartile, in Lithuania the difference is 72% and in Romania 61%.

Internet use by individuals (in percentages)

	All	25 to 34 yrs old	65 to 74 yrs old	Δ age groups	Men	Women	Δ gender groups	No/low education	High education	Δ education
European Union (28 countries)	77	93	39	54	79	75	4	54	96	42
European Union (15 countries)	80	94	45	49	83	78	5	57	96	39
Austria	82	97	35	62	85	78	7	58	95	37
Belgium	83	95	49	46	85	81	4	65	97	32
Bulgaria	56	78	10	68	58	55	3	22	89	67
Croatia	68	97	18	79	76	62	14	31	92	61
Cyprus	66	88	16	72	68	64	4	33	92	59
Czech Republic	76	90	29	61	77	75	2	64	91	27
Denmark	95	100	78	22	96	95	1	92	99	7
Estonia	82	99	33	66	83	81	2	69	93	24
Finland	92	100	67	33	93	92	1	84	99	15
France	84	96	48	48	85	82	3	66	97	31
Germany	86	98	51	47	88	83	5	74	95	21
Greece	61	86	10	76	65	58	7	26	92	66
Hungary	74	94	23	71	75	73	2	44	95	51
Iceland	97	100	80	20	98	96	2	94	100	6
Ireland	80	95	37	58	80	81	-1	52	97	45
Italy	61	80	19	61	65	56	9	37	89	52
Latvia	76	98	26	72	77	76	1	58	93	35
Lithuania	69	94	15	79	69	69	0	49	94	45
Luxembourg	95	100	77	23	96	93	3	79	98	19
Malta	70	94	23	71	72	69	3	41	98	57
Netherlands	94	100	78	22	96	93	3	85	99	14
Norway	96	100	76	24	96	95	1	92	99	7
Poland	65	92	18	74	66	64	2	42	95	53
Portugal	65	94	20	74	69	61	8	46	96	50
Romania	55	73	12	61	57	53	4	26	96	70
Slovakia	81	97	30	67	81	81	0	59	98	39
Slovenia	74	97	26	71	75	72	3	41	97	56
Spain	74	94	23	71	76	71	5	51	96	45
Sweden	95	100	78	22	96	95	1	87	99	12
Turkey	46	63	5	58	57	36	21	29	95	66
United Kingdom	91	99	66	33	91	91	0	65	98	33

Source: Eurostat, 2013

The largest difference between men and women is around 21%, the largest difference between those under 35 and over 65 is 79%, and the largest difference between those with higher and lower levels of education is 70%. In general, the Nordic countries have over 90% of all the different socio-demographic groups online. The exception can be found for those with lower levels of education where only Iceland, Denmark and Norway have over 90% of internet users in both higher and lower educated groups. This pattern is different for age; in the 'top' countries just over 80% of those between 65 and 74 years old use the internet.

Individual internet use in the last 12 months: Search engines

	All	25 to 34 yrs old	65 to 74 yrs old	Δ age groups	Men	Women	Δ gender groups	No/low education	High education	Δ education
European Union (28 countries)	75	95	37	58	78	73	5	52	95	43
European Union (15 countries)	78	96	42	54	81	76	5	54	95	41
Austria	81	98	34	64	85	76	9	56	95	39
Belgium	81	95	46	49	83	79	4	62	96	34
Bulgaria	56	82	10	72	58	55	3	21	90	69
Croatia	65	98	17	81	72	58	14	28	89	61
Cyprus	64	95	15	80	66	63	3	31	91	60
Czech Republic	76	94	32	62	77	75	2	65	92	27
Denmark	92	97	73	24	93	92	1	88	98	10
Estonia	78	97	28	69	79	77	2	64	91	27
Finland	90	99	62	37	90	90	0	80	98	18
France	81	98	43	55	83	79	4	62	97	35
Germany	83	96	48	48	86	80	6	70	94	24
Greece	62	96	10	86	66	59	7	27	92	65
Hungary	73	93	23	70	75	71	4	42	94	52
Iceland	93	99	69	30	95	91	4	87	99	12
Ireland	76	90	34	56	76	75	1	47	94	47
Italy	62	89	20	69	66	57	9	38	91	53
Latvia	75	98	26	72	76	75	1	57	92	35
Lithuania	71	99	17	82	71	71	0	50	95	45
Luxembourg	91	98	70	28	94	88	6	66	97	31
Malta	66	95	18	77	67	65	2	35	97	62
Netherlands	92	99	72	27	93	90	3	78	99	21
Norway	91	97	59	38	92	90	2	83	97	14
Poland	64	97	18	79	66	63	3	42	93	51
Portugal	65	99	21	78	69	61	8	47	97	50
Romania	50	76	11	65	52	48	4	25	89	64
Slovakia	81	99	30	69	81	81	0	58	98	40
Slovenia	74	98	25	73	75	72	3	41	97	56
Spain	73	97	24	73	76	71	5	51	96	45
Sweden	92	97	69	28	93	91	2	82	98	16
Turkey	47	75	5	70	57	37	20	30	94	64
United Kingdom	86	96	62	34	88	85	3	52	96	44

Source: Eurostat, 2013

The largest age group differences can be found in the Eastern and Southern European countries (86% Greece) and the smallest age groups differences in the Nordic countries (24% Denmark). The largest gender differences can be found in the Southern European countries, (20% Turkey, 14% Croatia), the smallest gender differences in the Nordic and Eastern European countries, Finland, Slovakia and Lithuania all have 0% differences. The largest differences in Education can be found in the Southern and Eastern European countries (Bulgaria 69%) and the smallest differences in the Nordic countries (Denmark 10%).

Individual internet use in the last 12 months: Emailing attachments

	All	25 to 34 yrs old	65 to 74 yrs old	Δ age groups	Men	Women	Δ gender groups	No/low education	High education	Δ education
European Union (28 countries)	65	88	29	59	67	62	5	40	90	50
European Union (15 countries)	68	89	33	56	71	65	6	41	90	49
Austria	71	93	27	66	76	67	9	45	90	45
Belgium	72	88	38	50	75	69	6	49	92	43
Bulgaria	42	70	5	65	42	42	0	13	80	67
Croatia	45	80	10	70	50	40	10	14	78	64
Cyprus	49	77	10	67	48	49	-1	20	82	62
Czech Republic	70	92	26	66	70	70	0	55	90	35
Denmark	83	95	54	41	83	82	1	75	95	20
Estonia	65	87	19	68	65	66	-1	52	84	32
Finland	78	92	42	50	77	78	-1	62	94	32
France	72	93	38	55	74	70	4	49	94	45
Germany	69	86	37	49	72	66	6	54	86	32
Greece	47	87	6	81	50	45	5	15	81	66
Hungary	69	93	21	72	71	68	3	38	94	56
Iceland	84	94	52	42	86	82	4	73	98	25
Ireland	64	79	24	55	64	64	0	33	88	55
Italy	55	84	16	68	60	50	10	30	87	57
Latvia	59	91	13	78	59	60	-1	44	83	39
Lithuania	57	94	9	85	56	58	-2	40	88	48
Luxembourg	79	92	56	36	84	73	11	46	92	46
Malta	55	90	13	77	55	56	-1	22	95	73
Netherlands	84	97	58	39	87	82	5	64	97	33
Norway	81	88	46	42	81	81	0	70	95	25
Poland	50	86	11	75	51	49	2	32	88	56
Portugal	53	91	15	76	56	50	6	32	93	61
Romania	43	72	7	65	45	42	3	19	87	68
Slovakia	73	97	22	75	72	73	-1	52	95	43
Slovenia	58	93	13	80	58	58	0	27	93	66
Spain	60	87	17	70	63	57	6	34	89	55
Sweden	79	94	48	46	81	77	4	66	91	25
Turkey	29	51	2	49	37	22	15	14	82	68
United Kingdom	78	91	50	41	80	75	5	40	93	53

Source: Eurostat 2013

The largest age group differences can be found in the Eastern and Southern European countries (85% Lithuania) and the smallest age groups differences in the Nordic countries (36% Luxembourg). The largest gender differences can be found across the European continent (15% Turkey, 11% Luxembourg), the smallest gender differences can also be found across the European continent (-2% - women do this more than men, Lithuania). In most countries men and women do this about equally. The largest education differences can be found in the Southern and Eastern European countries (Malta 73%) and the smallest differences in the Nordic countries (Denmark 20%).

Individual internet use in the last 12 months: Chat (percentages)

	All	25 to 34 yrs old	65 to 74 yrs old	Δ age groups	Men	Women	Δ gender groups	No/low education	High education	Δ education
European Union (28 countries)	37	73	6	67	39	35	4	26	49	23
European Union (15 countries)	37	72	6	66	39	34	5	26	47	21
Austria	35	77	3	74	37	33	4	29	43	14
Belgium	45	83	10	73	46	44	2	33	57	24
Bulgaria	30	58	2	56	30	29	1	11	55	44
Croatia	29	68	3	65	36	23	13	14	37	23
Cyprus	40	81	5	76	40	39	1	23	57	34
Czech Republic	29	76	2	74	31	28	3	22	42	20
Denmark	63	94	21	73	62	64	-2	65	69	4
Estonia	39	81	3	78	41	38	3	45	43	-2
Finland	56	94	15	79	54	57	-3	54	60	6
France	31	65	6	59	36	27	9	21	44	23
Germany	28	71	3	68	31	26	5	37	29	-8
Greece	39	86	:		42	37	5	16	59	43
Hungary	48	79	10	69	48	48	0	30	63	33
Iceland	47	61	13	48	49	45	4	40	59	19
Ireland	26	53	3	50	26	25	1	17	30	13
Italy	38	78	5	73	42	35	7	22	59	37
Latvia	37	76	5	71	37	37	0	35	50	15
Lithuania	57	96	8	88	56	58	-2	43	83	40
Luxembourg	43	80	14	66	47	39	8	36	42	6
Malta	31	63	:		32	30	2	13	48	35
Netherlands	13	13	5	8	14	11	3	8	17	9
Norway	31	46	:		36	27	9	35	34	-1
Poland	41	88	5	83	41	41	0	34	64	30
Portugal	39	81	5	76	41	37	4	25	61	36
Romania	27	55	3	52	29	26	3	14	57	43
Slovakia	37	76	:		38	37	1	40	50	10
Slovenia	36	78	:		39	33	6	23	52	29
Spain	41	80	6	74	42	40	2	26	56	30
Sweden	54	82	15	67	54	54	0	45	67	22
Turkey	20	39	1	38	26	14	12	11	44	33
United Kingdom	47	76	10	66	48	46	2	21	54	33

Source: Eurostat, 2013

The largest age group differences can be found across the European continent (88% Lithuania) as are the smallest age groups differences (8% The Netherlands, 38% Turkey). The largest gender differences can be found across the European continent (Croatia 13%), the smallest gender differences in the Northern and Eastern European countries (-3%, women do this more than men, Finland). In most countries men and women do this about equally. The largest education differences can be found in the Southern and Eastern European countries (44% Bulgaria) and the smallest differences in the Northern and Eastern European countries (-8%, lower educated do this more than the higher educated, Germany).

Individual internet use in the last 12 months: VoIP (percentages)

	All	25 to 34 yrs old	65 to 74 yrs old	Δ age groups	Men	Women	Δ gender groups	No/low education	High education	Δ education
European Union (28 countries)	33	54	11	43	35	31	4	20	50	30
European Union (15 countries)	33	55	12	43	36	31	5	20	50	30
Austria	33	49	9	40	36	30	6	23	51	28
Belgium	37	58	15	43	40	34	6	24	54	30
Bulgaria	35	56	5	51	36	33	3	12	61	49
Croatia	30	58	6	52	34	26	8	13	44	31
Cyprus	40	62	10	52	40	40	0	18	61	43
Czech Republic	40	70	10	60	40	40	0	28	59	31
Denmark	52	69	26	43	56	49	7	49	65	16
Estonia	55	83	17	66	55	55	0	47	66	19
Finland	45	55	24	31	46	44	2	37	56	19
France	40	67	17	50	42	39	3	27	60	33
Germany	24	44	10	34	27	21	6	24	32	8
Greece	34	68	5	63	36	33	3	14	56	42
Hungary	36	54	11	43	39	34	5	16	56	40
Iceland	75	89	48	41	74	76	-2	63	87	24
Ireland	38	51	12	39	39	37	2	15	58	43
Italy	31	57	6	51	35	28	7	16	54	38
Latvia	53	83	14	69	54	53	1	40	71	31
Lithuania	58	88	11	77	57	58	-1	40	82	42
Luxembourg	48	58	26	32	50	45	5	32	58	26
Malta	32	58	:		31	33	-2	12	61	49
Netherlands	46	60	25	35	48	44	4	32	63	31
Norway	44	58	17	41	48	40	8	42	60	18
Poland	28	52	7	45	30	28	2	19	50	31
Portugal	29	55	8	47	31	27	4	18	52	34
Romania	15	27	3	24	16	15	1	7	37	30
Slovakia	52	80	18	62	52	53	-1	40	71	31
Slovenia	34	60	10	50	35	33	2	19	58	39
Spain	25	41	6	35	26	24	2	12	40	28
Sweden	54	82	27	55	55	54	1	47	68	21
Turkey	9	17	:		12	7	5	4	29	25
United Kingdom	39	53	17	36	41	36	5	15	53	38

Source: Eurostat, 2013

The largest age group differences can be found in Eastern European countries (77% Lithuania) and the smallest age groups differences are found in the Nordic and Eastern European countries (24% Romania). The largest gender differences can be found across the European continent (8% Croatia and Norway), as are the smallest gender differences (-2%, women do this more than men, Iceland and Malta). In most countries men and women do this about equally. The largest education differences can be found in the Southern and Eastern European countries (49% Bulgaria and Malta) and the smallest differences in the Northern and Eastern European countries (8% Germany).

Individual internet use in the last 12 months: Filesharing (percentages)

	All	25 to 34 yrs old	65 to 74 yrs old	Δ age groups	Men	Women	Δ gender groups	No/low education	High education	Δ education
European Union (28 countries)	14	34	2	32	18	10	8	9	21	12
European Union (15 countries)	14	33	2	31	18	10	8	9	21	12
Austria	7	12	:		9	6	3	5	9	4
Belgium	15	32	2	30	19	10	9	11	19	8
Bulgaria	19	46	:		23	16	7	8	37	29
Croatia	19	54	:		29	10	19	11	25	14
Cyprus	10	25	:		12	7	5	5	14	9
Czech Republic	8	23	:		11	5	6	5	14	9
Denmark	16	33	:		23	9	14	20	18	-2
Estonia	24	53	:		29	20	9	25	30	5
Finland	14	20	:		21	7	14	10	15	5
France	12	31	1	30	15	9	6	7	19	12
Germany	4	12	:		6	2	4	5	5	0
Greece	12	34	:		14	9	5	3	19	16
Hungary	20	45	2	43	25	14	11	13	28	15
Iceland	37	75	:		48	27	21	41	37	-4
Ireland	7	15	:		9	5	4	3	11	8
Italy	15	37	1	36	21	10	11	8	27	19
Latvia	25	62	2	60	30	21	9	29	29	0
Lithuania	34	78	:		40	28	12	32	51	19
Luxembourg	12	18	:		16	7	9	:	13	
Malta	19	53	:		19	18	1	5	37	32
Netherlands	31	57	9	48	35	27	8	20	43	23
Norway	25	44	:		30	20	10	29	30	1
Poland	14	40	:		18	10	8	13	22	9
Portugal	17	47	:		20	14	6	10	31	21
Romania	6	15	:		7	5	2	3	19	16
Slovakia	15	39	:		20	10	10	19	21	2
Slovenia	20	57	:		26	15	11	16	29	13
Spain	25	53	2	51	29	20	9	14	37	23
Sweden	26	52	:		34	19	15	26	30	4
Turkey	10	21	:		13	7	6	4	26	22

Source: Eurostat, 2013

This particular use/skill has a lot of missing data for the older age group since they are probably unlikely to undertake this activity. Amongst the countries for which there is data, the largest age group differences can be found in Latvia (60%) and the smallest age groups differences in Belgium and France (30%). The largest gender differences can be in Southern and Northern European countries (21% Iceland), and the smallest gender differences across the European continent (1% Malta). The largest education differences can be found across the European continent (32% Bulgaria and Malta) and the smallest differences in the Northern and Eastern European countries (-4%, the lower educated do this more than the higher educated, Iceland).