Measuring progress in e-Inclusion
Riga Dashboard
2007

European Commission
DG Information Society and Media

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1. WHAT IS THE RIGA DASHBOARD?

The Riga Dashboard is aimed at reporting progress in the achievement of policy targets set by the Ministerial Declaration signed in Riga on 11 June 2006[i] by 34 European countries. The Declaration defined "e-Inclusion" as "both inclusive Information and Communication Technologies (ICT) and the use of ICT to achieve wider inclusion objective and policies aiming at both reducing gaps in ICT usage and promoting the use of ICT to overcome exclusion". It recognised that ICTs are a powerful driver of growth and employment and that they contribute to improving the quality of everyday life and social participation of Europeans. It maintained that the fight against discrimination to improve ICT access for people with disabilities and the elderly is particularly important.

The Ministerial Declaration, using the data available at the time, agreed that "many Europeans still reap few or no benefits from ICT and there are resilient gaps in ICT use". For instance at the time, 57% of individuals living in the EU did not regularly use the Internet in 2005; only 10% of persons over 65 used Internet, against 68% of those aged 16-24; only 24% of persons with low education used the Internet, against 73% of those with high education; only 32% of unemployed persons used the Internet against 54% of employed persons. Only 3% of public web sites surveyed complied with the minimum web accessibility standards and guidelines, hindering access to web content and services for people with disabilities who comprise some 15% of the EU population.

The *Riga Dashboard* is therefore intended to measure progress towards the Riga commitments. The 2007 Riga Dashboard is the first European Commission's report of this kind and is aimed at providing evidence for the Communication on the European e-Inclusion Initiative. It mainly draws on available Eurostat indicators and surveys. But it is also complemented by data obtained by specific assessments in other areas such as e-Government, and insights on the areas of ICT for ageing and ICT for cultural diversity.

The latest i2010 annual report[ii] included a preliminary analysis on the progress to the Riga targets and recognised that the Riga Declaration priorities are relevant at the EU level and the required policy efforts needed to reach the targets are substantial given the initial conditions. This has been further confirmed in this first Riga Dashboard exercise in preparation of the European e-Inclusion initiative.

The key resulting message is that, apart from the case of broadband connectivity not considering urban rural divides, ***progress towards the Riga targets is only happening at half the speed which is necessary to reach them by 2010. Without policy intervention disparities are deemed to stay and in some cases widen***.

The monitoring of the Riga Dashboard will be performed regularly to continue quantifying and qualifying progress to the fully achievement of the targets by 2010, as part of the i2010 annual progress report.

2. MEASURING PROGRESS IN E-INCLUSION?

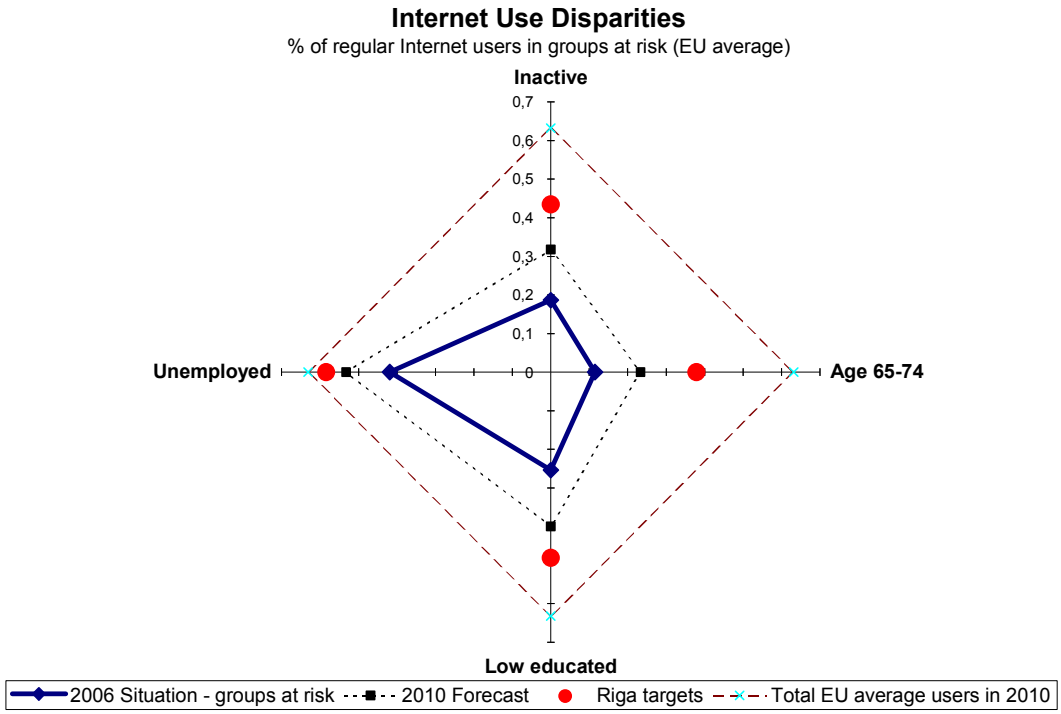
The Riga Dashboard measures progress towards four targets to be reached by 2010: two of them dealing with the supply side (broadband coverage and e-Accessibility of public websites) and two others within the demand side (halving the disparities in internet use and digital literacy disparities):

1. **Gaps in Internet usage** between current average use by the EU population and use by older people, people with disabilities, women, lower education groups, unemployed and "less-developed" regions **should be reduced to a half, from 2005 to 2010.**

   The gap in Internet use among groups at-risk of exclusion is slowly closing but not at a pace that would allow it to be halved by 2010. Projections indicate that the gap would only be halved around 2015. Moreover, the risk is that it of becomes a structural gap given fast technological advancements. In 2006[iii] only 47% of Europeans used the internet (against 43% in 2005) but with sharp deviations depending on:

- age: 73 % of those aged 16-24 but only 10% of those aged over 64;
- Level of education: 77% with high education, 25% of those with low education level;
- Employment status: 38% of unemployed and 17% of economically inactive persons compared to 60% of those employed, and 84% students.

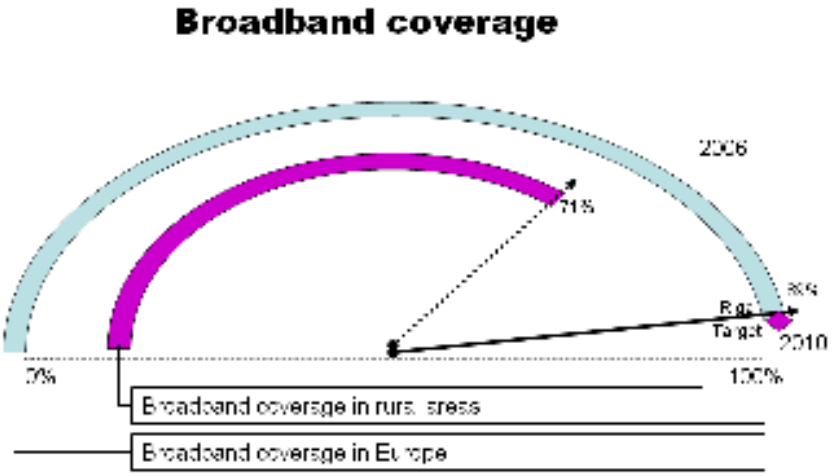
Exhibit 1: Internet disparities not closing



2. **Geographical Divides**. Significantly reduce **regional disparities** in internet access across the EU, increase the availability of **broadband (coverage)** in under served locations, and aim for broadband coverage to reach at least 90% of the EU population **by 2010.**

   The 2006 data shows that the overall coverage target is likely to be met at EU level since broadband coverage reaches 89% of the EU population. However, coverage in rural areas stands at 71%, with lower download speeds available than in urban areas and less competition between alternative providers.

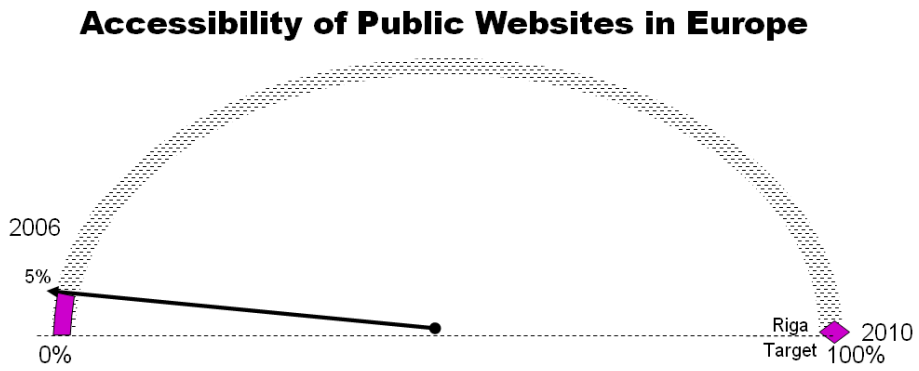
Exhibit 2: where do we stand in broadband coverage



3. **Inclusive e-Government.** Promote and ensure **accessibility of all public web sites by 2010**. Designing and delivering key services and public service policies in a user centric and inclusive way, using channels, incentives and intermediaries that maximise benefits and convenience for all so that no one is left behind.

   Accessibility of public websites has only very modestly increased to 5% of public web sites in 2007 raising the need for policy intervention.

Exhibit 3: where do we stand in accessibility of public websites



4. **Digital Literacy**. Reduce **by half by 2010 the digital literacy gap** between the EU population and the unemployed, immigrants, people with low education levels, people with disabilities, and elderly, as well as marginalised young people.

   In this area, gaps in internet and computer skills are still important especially for groups at risk with low education, economically inactive and the older population. These are also the groups which have shown to have larger disparities in the rate of regular internet usage, and will not likely meet the Riga targets by 2010.

Exhibit 4: percentage of internet skilled in 3 at risk groups vs. percentage of total Internet skilled

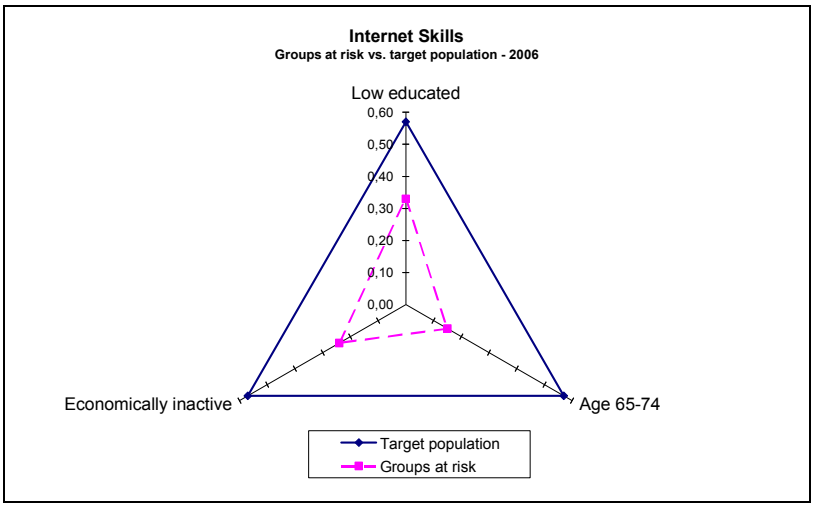
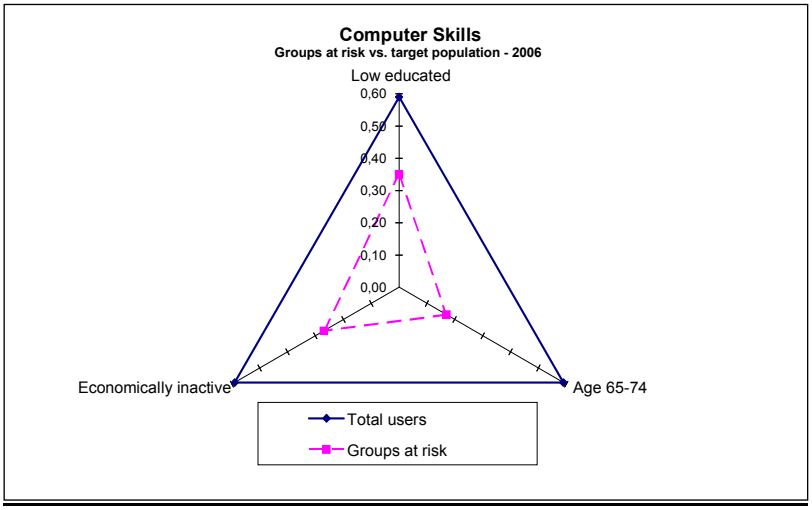


Exhibit 5: percentage of computer skilled in 3 at risk groups vs. percentage of total Internet skilled



The Riga Ministerial Declaration also identified two more areas of intervention: On **ICT and Ageing** targets were set in terms of halving the gap in current average internet use between the EU population and older people; removing barriers to internal market of ICT services and products for the elderly; supporting active ageing at work, especially through greater training for ICT skills; supporting active participation of elderly in society; supporting independent living and quality of life. To this purpose the Commission is monitoring evolutions and recently launched an "Action Plan for Ageing Well in the Information Society"[iv].

On **Cultural Diversity in the information society**, it committed European countries to: foster pluralism, cultural diversity and linguistic diversity in the digital space (multilingual, local, cultural heritage, European values content); improve economic and social participation and integration, creativity and entrepreneurship of immigrants and ethnic minorities through their greater participation in information society. To this purpose, the Commission is currently pursuing a number of studies and exploratory projects within the Competitiveness and Innovation Programme (CIP) have been launched in this area

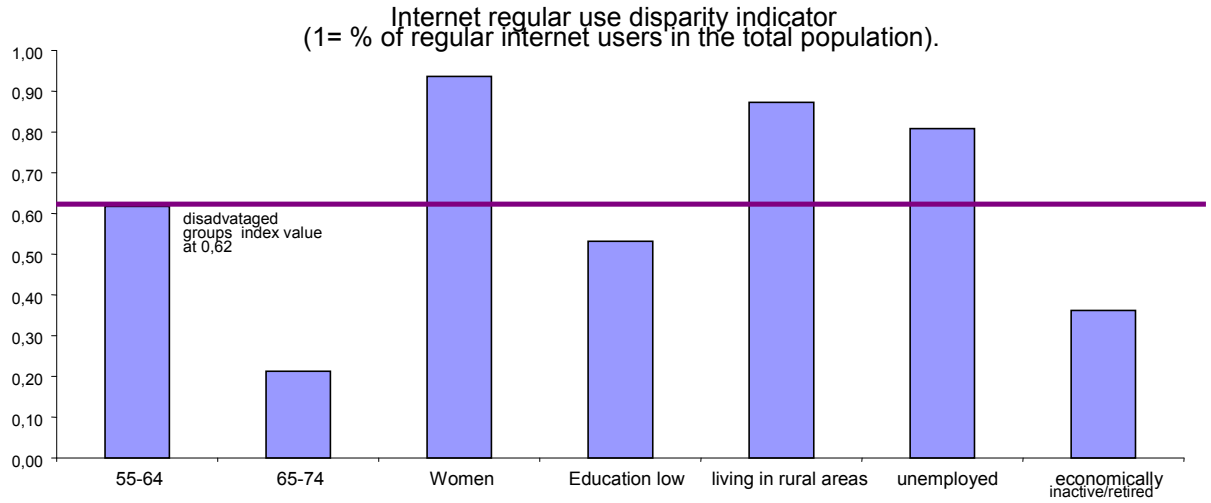
3. REDUCING REGULAR INTERNET USAGE DISPARITIES IN AT RISKS GROUPS

The declaration of Riga set out the objective 'To convincingly address e-Inclusion, the differences in Internet usage between current average use by the EU population and use by older people, people with disabilities, women, lower education groups, unemployed and “less-developed” regions should be reduced to a half, from 2005 to 2010'

In order to track this target, an index using Eurostat 2006 data has been produced to measure the disparities between the disadvantaged groups and the European average as collected by Eurostat. Indexes are often used to monitor policy measures. The index is based on simple penetration rate ratios, which has been shown to be the most appropriate way to track and analyse disparities over time in digital divide dynamics[v]. This has been applied in the graph below which compares regular Internet usage rates between the total population and that of the different disadvantaged groups. Its value at a level of 0.62, roughly means that the identified groups at-risk (if considered together using an average for the 7 groups) use the Internet at a rate which is approximately 62% of the European population currently using the internet (47% of total population), that is at roughly two-thirds of average use.. Then when considering the different disadvantaged groups individually, it is clear from the chart that the groups more distanced (i.e. with the larger disparities) from the EU regular Internet use level are the aged 65-74 years old, the low educated, and the economically inactive (outside the labour force and retired people); all with index levels around 0.50 or lower, and therefore far away from the total disadvantage groups index value at 0.62.

When the index for disparity measurement is applied to the countries, as it can be seen below, the picture on the disparities varies substantially across the EU. A number of countries have an at-risks groups index value much lower than the EU 0.62 one- In particular Bulgaria, Greece or Cyprus have values below 0.50 (meaning that the at-risk groups in these countries use the Internet less than half than the total population in each country).And the country with the highest value (i.e. the lowest disparity) is Sweden at 0.82, meaning that in Sweden at-risk groups use the Internet at 82% of the Swedish population. When it comes to the rates of the specific disadvantaged groups, again most countries have the largest disparities in Internet use with the low educated, the economically inactive, and the aged 65-74. Whereas the disparities for woman, rural citizens, and the unemployed are much lower in most countries, in the group 54-65 years old (old individuals still in working age) there is a very different situation among countries; ranging from 0.89 in Iceland, to only 0.23 in Romania.

Exhibit 6: Internet disparities



*Based on Eurostat 2006 ICT Community Survey of Household and individuals (includes only population aged 16 to 74 years old)

Table 1: Index of Internet use in at risk groups by country in 2006

	aged 55-64	aged 65-74	woman	rural	low educated	unemployed	Inactive	total at risk index
BE	0.64	0,23	0,93	0,83	0,63	0,80	0,45	**0,64**
BG	0,29	0,03	0,96	0,46	0,45	0,27	0,13	**0,37**
CZ	0,47	0,11	0,93	0,85	0,82	0,56	0,18	**0,56**
DK	0,82	0,52	0,97	0,91	0,85	0,82	0,54	**0,78**
DE	0,68	0,30	0,91	0,87	0,85	0,90	0,50	**0,72**
EE	0,45	:	0,99	0,92	0,80	0,64	0,29	**:**
EL	0,29	0,06	0,80	0,76	0,21	0,89	0,19	**0,46**
ES	0,38	0,10	0,88	0,69	0,42	0,76	0,24	**0,50**
FR	0,61	:	0,93	0,78	0,60	1,01	0,26	**:**
IE	0,51	0,20	0,97	0,76	0,43	0,75	0,35	**0,57**
IT	0,44	0,12	0,83	0,84	0,40	0,87	0,20	**0,53**
CY	0,35	0,10	0,92	0,66	0,34	0,67	0,26	**0,47**
LV	0,40	0,09	0,98	0,82	0,69	0,50	0,33	**0,54**
LT	0,28	0,07	0,99	0,72	0,81	0,42	0,15	**0,49**
LU	0,75	0,33	0,84	0,99	0,66	0,57	0,47	**0,66**
HU	0,49	0,14	0,97	0,76	0,45	0,54	0,26	**0,52**
NL	0,71	0,44	0,93	0,96	0,73	1,08	0,61	**0,78**
AT	0,60	0,23	0,89	0,89	0,61	0,91	0,42	**0,65**
PL	0,34	0,06	0,94	0,63	0,81	0,52	0,20	**0,50**
PT	0,30	:	0,89	0,80	0,50	0,65	0,16	**:**
RO	0,23	:	0,93	0,27	0,08	0,68	0,58	**:**

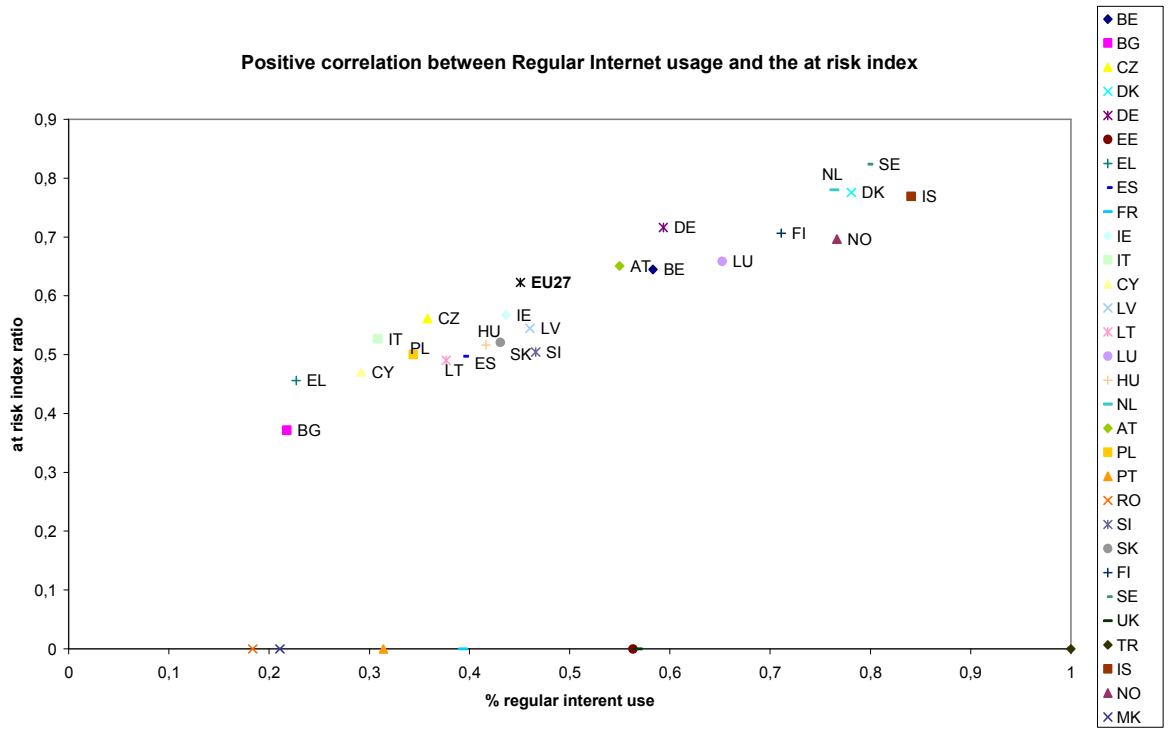
	aged 55-64	aged 65-74	woman	rural	low educated	unemployed	Inactive	total at risk index
SI	0,37	0,12	0,91	0,88	0,41	0,65	0,18	**0,50**
SK	0,35	0,02	0,91	0,90	0,82	0,50	0,14	**0,52**
FI	0,72	0,24	0,99	0,91	0,78	0,82	0,49	**0,71**
SE	0,84	0,49	0,95	0,95	0,84	1,11	0,59	**0,82**
UK	0,75	0,34	0,90	1,04	0,35	:	0,47	**:**
IS	0,89	0,41	0,98	0,94	0,89	0,74	0,53	**0,77**
NO	0,81	0,33	0,95	0,95	0,63	0,83	0,38	**0,70**
EU27	**0,60**	**0,22**	**0,91**	**0,87**	**0,56**	**0,79**	**0,36**	**0,62**

** Not available - Commission services based on Eurostat Community Survey 2006. (includes only population aged 16 to 74 years old). Data for Malta are currently under revision.*

*** The index value for total disadvantaged is calculated as an average of the other 7 disadvantaged index values in a country: aged 55-64, aged 65-74, woman, rural, low educated, unemployed and economically inactive.*

As it can be seen in the table above, It has not been possible to calculate the total at risk index for all the countries since some miss data breakdowns for it (not available) However for those having it, an analysis has been performed to check the level of correlation between the regular Internet use in a country and the ratio value of the total disadvantaged at risk index in that country. What the graph below shows is that there is indeed a positive correlation and the countries with the highest internet usage rates in 2006 (the Scandinavian countries, Netherlands, Luxembourg and Germany) also have the highest levels in the at risk internet use index (i.e. smaller disparities between the disadvantaged groups and their total population regular Internet use) Whereas the opposite is also true, and the countries with the largest disparities are also the ones with the overall lowest regular internet use I. (Bulgaria, Greece and Cyprus).

Exhibit 7: Correlation between regular usage and risk index



- <u>The projection:</u>

The idea of doing a projection of the internet use disparities is to look at how the Riga Dashboard changes overtime, and to anticipate the likelihood of halving the existing disparities by 2010. Thus the

calculation of ratios on Internet use disparity is based on actual Eurostat data (2003-2006) and their projection to 2010[vi]. In particular, extrapolations are based on a logistic curve that is quite commonly used for this kind of exercise and under the hypothesis that all the groups will reach 100% usage somewhere in the future (and that as a consequence, the disparity will disappear).

These projections indicate the ***need for policy intervention if disparities will have to be reduced.*** They also implicitly refer to an optimistic assumption of digital gaps disappearing over time. Reality is somewhat different since ***digital divides are often cumulative*** due to the introduction of ever new technologies and services and due to interacting and mutually reinforcing exclusion factors**.**

Generally the projection shows that in order to meet the Riga target on halving the Internet usage disparities by 2010, a lot of effort will have to be put in policies addressed to the disadvantaged groups: According to the Commission services' projection, the Riga objective of halving the regular internet use gap is unlikely to be reached by 2010 for all groups (except for the aged 54-65).

The following exhibits present each of the 7 projections performed for the different disadvantaged groups. There are three curves in all cases: a diamond-dotted line showing the EU15 average internet use rate in 2005 (45%) and its projection to 2010 (63%); a second triangle-dotted curve which is a projection of internet use by the disadvantaged group considered between 2005 and 2010, and a third square-dotted curve which illustrates how the ratio between the specific at risk group and the total population changes over time. The closer this ratio gets to 1, the smaller the disparity. For the Riga targets to be met, the disparity ratio would have to be halved between 2005 and 2010.

There are generally three situations found in the seven projections performed:

1. In some groups (i.e. women, unemployed and citizens living in rural areas) the existing disparity is already quite small. It is important to emphasize that the situation with these groups is better since their Internet regular use rate is already closer to the EU Population average.

Exhibit 8: Projection: disparities in internet use linked to gender

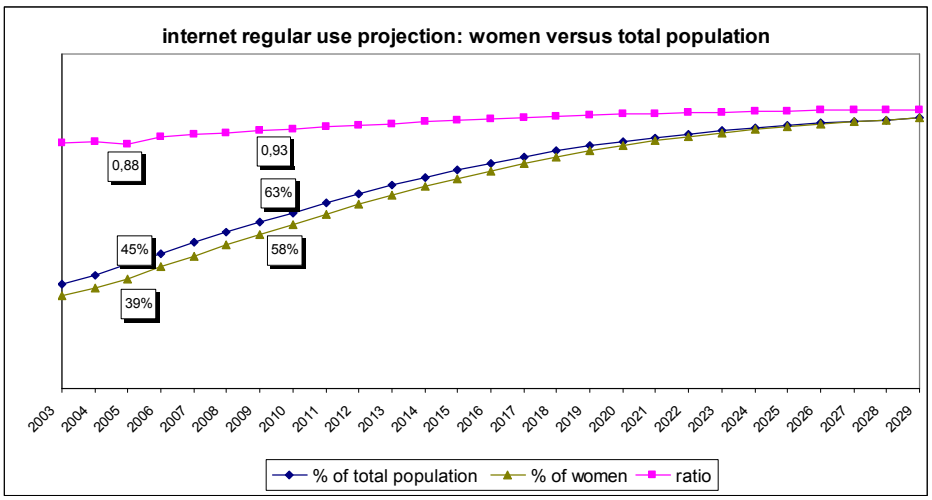


Exhibit 9: Projection: disparities in internet use linked to unemployment

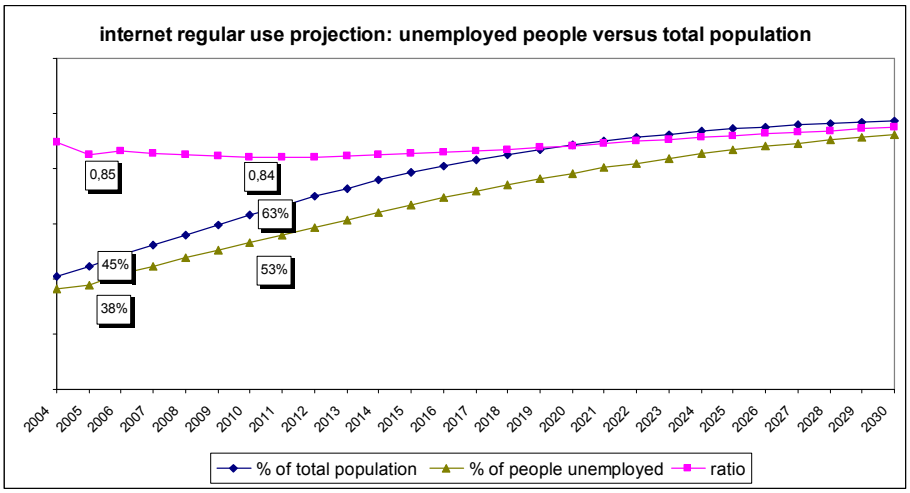
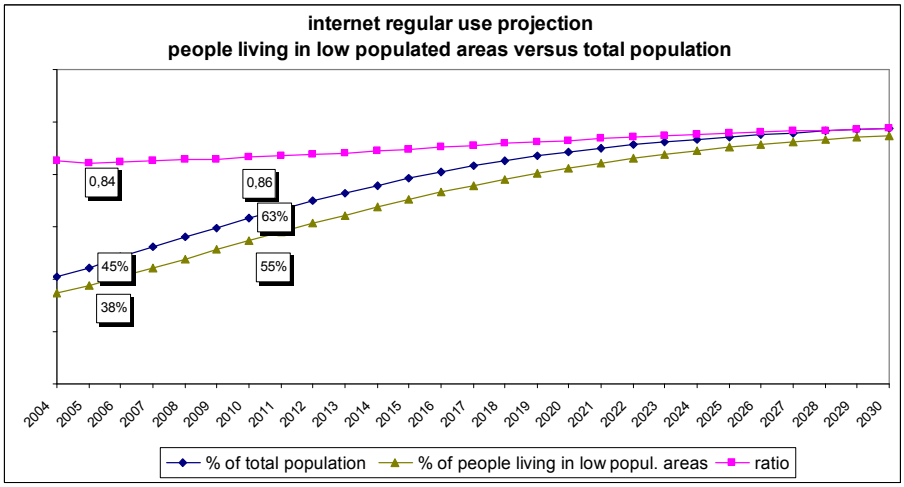


Exhibit 10: Projection: disparities in internet use linked to geographical residence (rural areas)



2. In a second group of projections below (concerning groups with low education, the economically inactive and the older people between 65-74 years old), the Riga targets are also not going to be met by 2010. However the reason is to be found in the fact that existing disparities are large, and at the projected growth they are not likely to be halved by 2010.

Exhibit 11: Projection: disparities in internet use linked to educational level

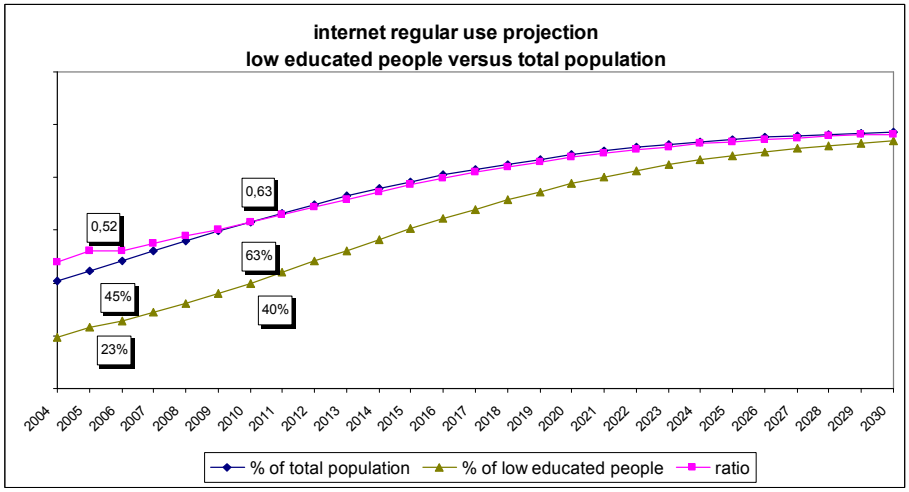


Exhibit 12: Projection: disparities in internet use linked to economic inactivity

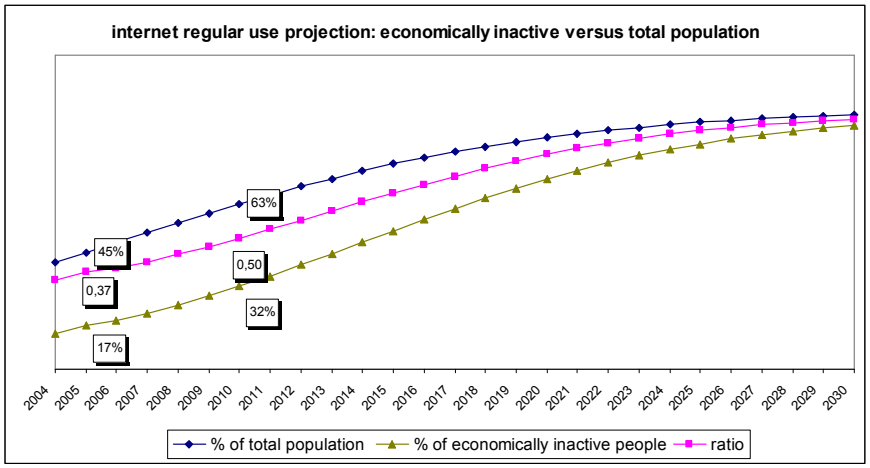
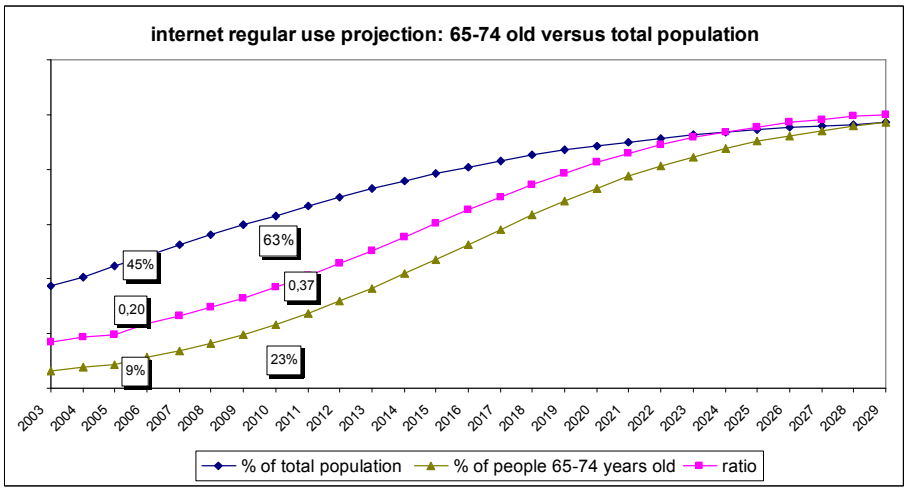
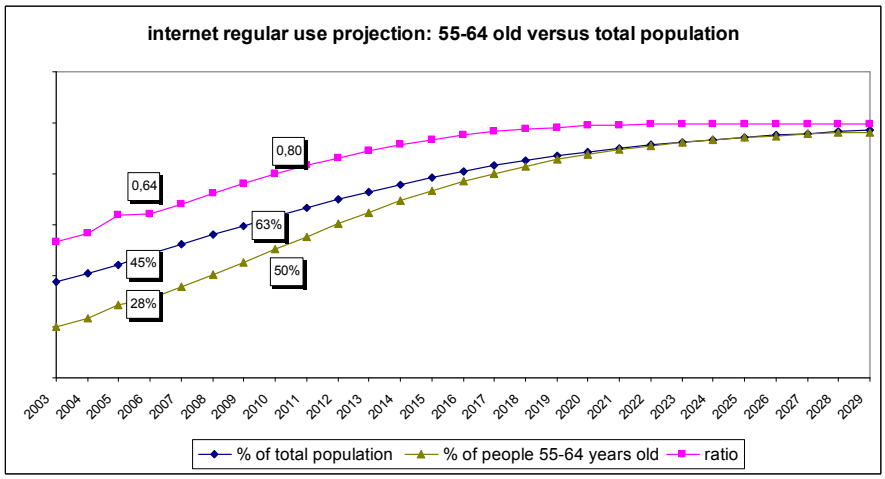


Exhibit 13: Projection: disparities in internet use linked to age (65-74)



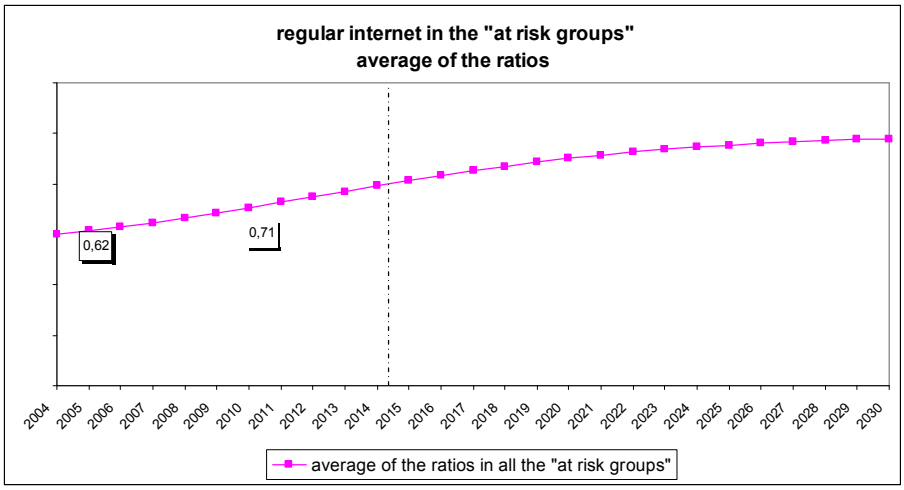
3. Finally, there is a third case for the group including the aged between 55 and 64, where it seems likely that the target could be met under the best possible scenario, (where disparity disappears in future). Hence, out of the 7 disadvantaged group projections performed, it is only in the case concerning the group of people aged 55 -64 where the gap seems closest to be halved by 2010 (initial gap in 2005 is 0.36 (1-0.64=0.36) and in 2010 is projected to be 0.2 (1-0.8=0.2). Thus it is likely to be nearly halved from 0.36 in 2005 to 0.2 in 2010.

Exhibit 14: Projection: disparities in internet use linked to age (55-64)



As a final consideration, when performing projections for the 7 groups (based on the average of the 7 ratios), the Riga target is unlikely to be reached by 2010 if all "at-risk groups" are considered (see exhibit below). Currently the disparity ratio is 0.38 (that is 1-0.62=0.38). In 2010 it is projected to remain at 0.29 (1—0.71=0.29). Therefore, the target is unlikely to be met according to this projection unless more decisive policy actions at all levels are considered (the ratio 0.39 would have to be halved to a value of 0.19, instead of 0.29).

Exhibit 15: Projection: disparities in internet use for all "groups at risks" based on average



The simulations above convey a striking message. ***The Riga targets of halving digital disparities will not be reached by 2010 for any disadvantage group except people in the age group 54-64***, even when accepting the very optimistic scenario of disparities disappearing over time with no major policy intervention (same saturation levels for the disadvantaged groups and the total number of individuals aged between 16 and 74 years old). However, countries are experiencing different paths and trajectories on the way to meeting the Riga targets with some of them fulfilling them more than others.

The policy conclusion from this exercise is that ***efforts need to be put in place to meet the commitments expressed in the Riga Ministerial Declaration***. It is unlikely to reach the Riga targets in the short timeframe to 2010 without major policy interventions particularly focused on the low educated, the economically inactive, and the older users.

This exercise could not consider data on internet use by the disabled population and ethnical minorities since these data are not currently collected by the Community ICT surveys. Therefore the situation can be even more challenging when considering that these groups might be among the ones with lowest internet usage rates. The exercise did not consider age groups below 16 year old and over 74, since available Eurostat data refer to individuals aged 16 to 74. However given the greater internet use among younger generations internet penetration levels in these cohorts is expected to increase for ages over 16. Age dynamics are also expected to affect usage rates among the older age groups as current Internet users get older.

4. E-ACCESSIBILITY

The quantitative Riga target for accessibility is to ensure that all public websites are accessible to all by 2010. However, it is already noted that the target, if no major efforts are put in place, will be difficult to meet.

Figures state that only 5% of web sites conform to minimum web accessibility standards and guidelines[vii] demonstrating that there is still a long way to go for reaching 100% compliance by 2010.

The accessibility of government websites has to be considered also by taking into account the geographical dimension (national, regional, and local) and the type of e-Government service. Compliance to e-Accessibility is low within a certain range of services or geographical level[viii].

5. BROADBAND COVERAGE

In the Riga Declaration, Member States agreed to significantly reduce regional disparities in Internet access across the EU by increasing broadband coverage in under-served locations. The commitment is to increase broadband coverage in Europe to at least 90% of the population by 2010. The 2006 data shows that this target has been basically already met at EU level: 89% of the EU population is covered by broadband. However, if considering only coverage of rural areas, this stands at 71%, with lower download speeds available than in urban areas and less competition between alternative providers[ix].

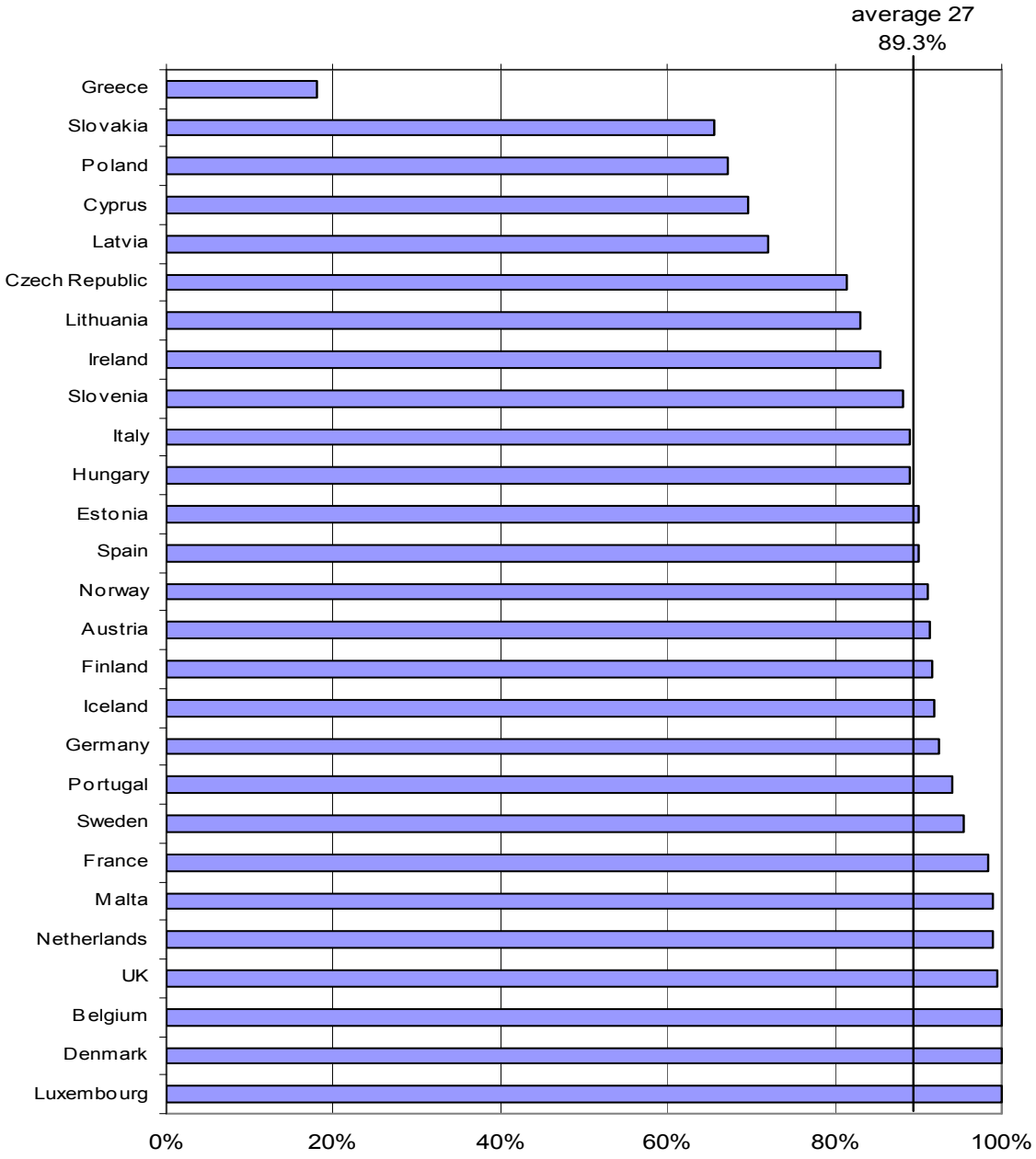
The situation varies significantly also by country: In a number of countries with the highest broadband penetration levels, already 90-100% of the population can have a broadband access (i.e. the Riga target is already met). However in countries where the penetration level is below 10% of the population, the picture is more diverse, with some countries enjoying around 80% coverage, while in those with lower availability this figure goes to 70-60%.

Thus latest measurements for broadband coverage show that the picture is quite diverse in Europe:

- Average DSL coverage reached 89.3% of the population at end 2006 in EU (and 92% in EU-15) Thus Riga has been met. However in rural areas there are 71% of the citizens reached by broadband.

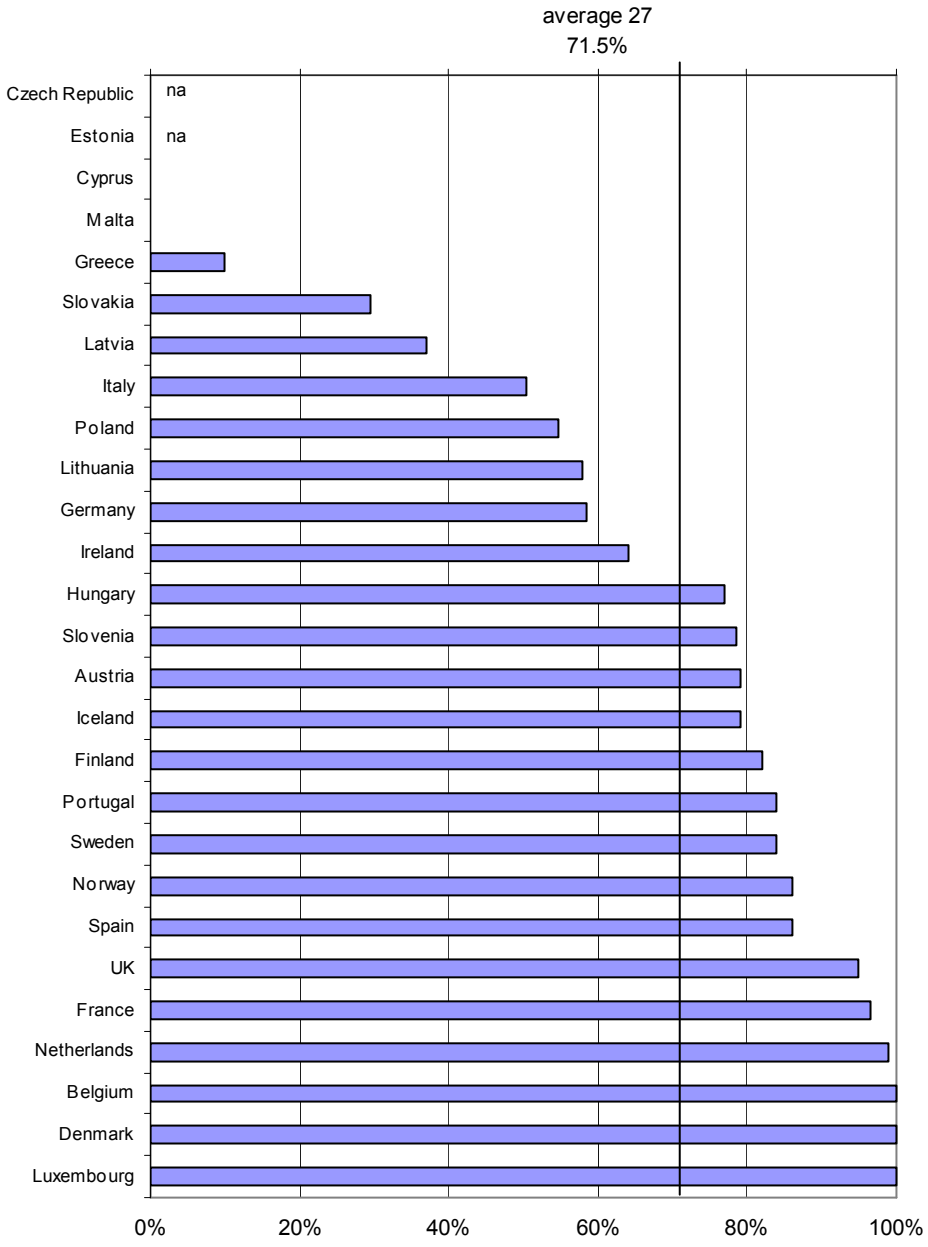
- There are wide differences at country and regional level: Greece is still lagging behind with only 18% while Benelux countries as well as DK or the UK are close to 100%

Exhibit 16: Coverage by country: broadband coverage in Europe as a % of the total population



* Commission services, 2007: not including satellite and wireless technologies, only cable and DSL deployment)

Exhibit 17: Rural coverage by country : broadband DSL coverage in Europe as a % of the rural population



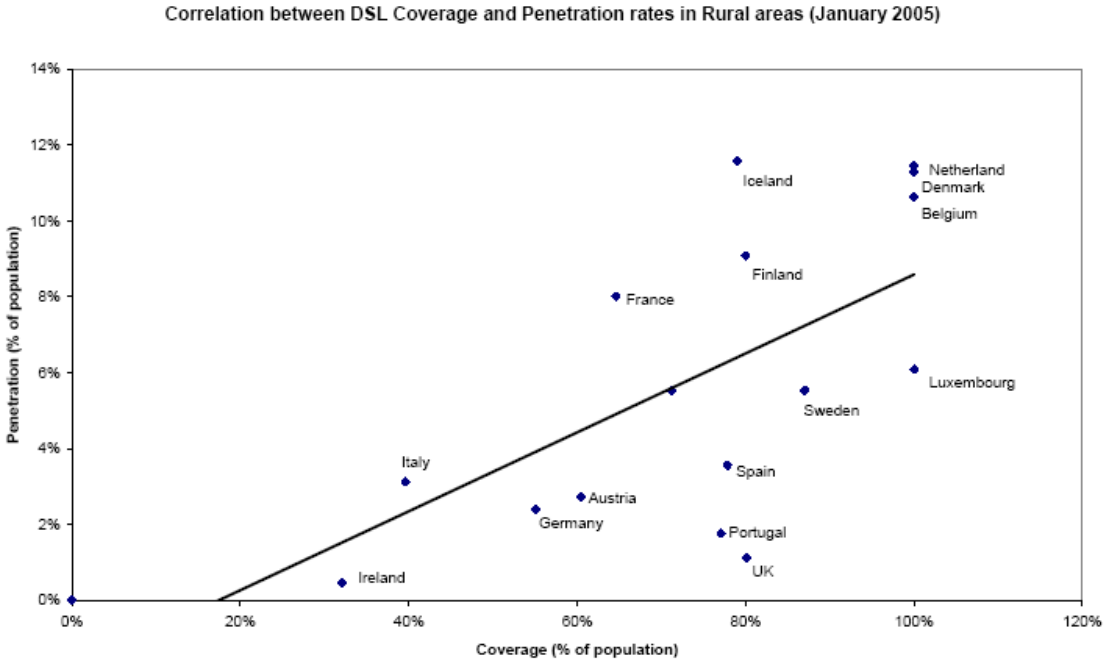
* Commission services 2007 - note it does not include satellite and wireless technologies, only cable and DSL deployment)

In addition to broadband coverage, in the view of the 2008 e-Inclusion initiative and future Riga Dashboards, it would be also interesting to track progress in broadband penetration, since there are large differences in take up at national and regional levels.

- At end 2006, Broadband **penetration** in EU-27 reached 27% (has increased over twofold from 12.5% at end of 2005)
- However penetration rates still vary greatly from one country to another: from 3.3% in Bulgaria to 32.3% in Denmark. In fact there are still 7 countries in Europe below 10% of broadband penetration.

– Penetration is also lower at the rural level: In urban areas broadband is almost ubiquitous and there is no correlation between access and take-up[x]. Whereas there is a positive correlation in rural areas: take-up is higher in those countries where broadband is more widely available (Figure below). Even if the rural population may be less inclined to adopt the new technology, lack of access may very well be constraining would-be users. Other factors might be related to the affordability, quality (i.e. speed) and offer of broadband contents and services in rural areas.

Exhibit 18: Take-up in rural areas is higher in those countries where broadband is more widely available. Source: Commission services



These aspects will be further explored in the context of the next Riga Dashboard since there is a new indicator in the 2007 Eurostat ICT Community survey on barriers for not getting broadband at home. This question includes the reasons why citizens are not having a broadband connection at home (i.e. lack of availability, problems of affordability, lack of interest, lack of skills, access to broadband at work, etc.) and thus will complement the analysis to better understand the gap between coverage and take up, also at rural level.

Another aspect to be explored in future editions of the Dashboard is the regional level data available for analysis[xi]. Finally, the issues related to convergence, multi-platform access of the Internet, and locations of use are other potential indicators to complement the dashboard in the view of second digital divides emergence.

6. DIGITAL LITERACY

Digital literacy is the final target set up quantitatively in the 2006 Riga Ministerial Declaration. As a result of the implementation of related actions the current usage gaps of digital literacy and competence between disadvantaged groups and the average population are likely to be halved by 2010.

Progress on this target will be measured on the basis of available indicators and further work in the context of i2010. In the Declaration, the Commission has agreed to publish a Review of existing policies in a national and regional level to support Digital Literacy in these groups as well as a review of

indicators on it. A special module on Digital Literacy later in 2007 in the Community Household Survey will provide further progress to it.

In the meantime, using indicators on e-Skills for competences in using computer and internet in the Community survey in 2006, groups with the lowest levels of computer and internet skills are the least educated individuals, older people and the economically inactive when compared to the total population (see table below). Unemployed individuals and women however -though still slightly below the EU average- have better computer and internet skills levels than the other disadvantaged groups.

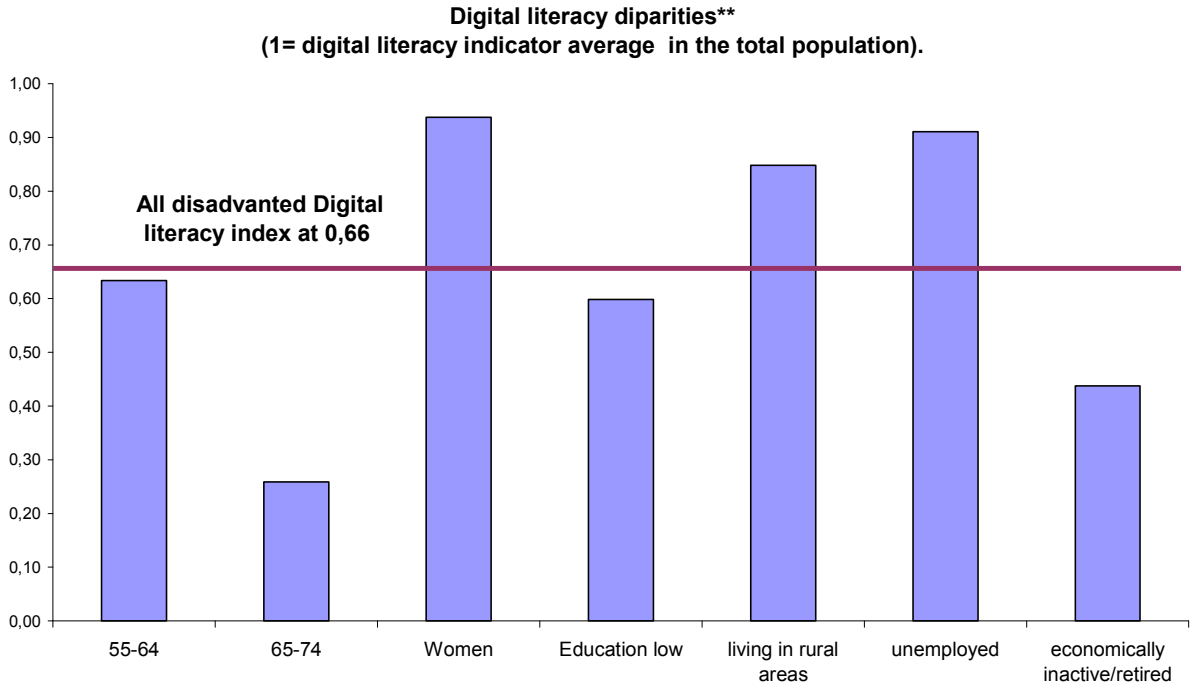
Table 2: Digital literacy

Internet User Skills

Internet user skill level	EU total	Low educated	Aged 55-64	Aged 65-74	Retired/ inactive	unemployed	women
Never used	43	67	65	85	76	48	47
Have some degree of internet skills	57	33	35	15	24	52	53
Computer User Skills							
Computer user skill level	EU total	Low educated	Aged 55-64	Aged 65-74	Retired/ inactive	unemployed	women
Never used	41	65	61	83	73	44	44
Have some degree of computer skills	59	35	39	17	27	56	56
Notes 1. Figures are the percentage of the population in the particular group 2. Low educational level applies to those with no formal education, primary or lower secondary education (corresponding to UNESCO's ISCED classification levels 0, 1 or 2)							
Source: Eurostat, Community Survey on ICT use in Households and by Individuals, 2006							

In addition to percentages, an index to measure disparities in this indicator has been built using Eurostat 2006 data. The digital literacy disparity index below shows similar results to the one on regular internet use presented earlier. Its value at a level of 0,66 means that the ratio of digital literacy of groups at risk of exclusion to the digital literacy of the average EU population is 66%. Groups with largest disparities in digital literacy in comparison to total population level are people aged over 65, the economically inactive, and the low educated.

Exhibit 19: Digital literacy disparities



**Digital literacy has been calculated using an average of two basic indicators : % EU citizens with some degree of internet skills and % EU citizens with some degree of computer skills

Further Riga Dashboard analyses will look further into the realisation of the target on digital literacy including the use of 2007 Eurostat data on digital literacy. Similar projections to the ones produced on internet use will be performed for this target[xii].

7. BEYOND RIGA DASHBOARD: INCLUSIVE E-GOVERNMENT

According to a recent survey[xiii], on average only about 20% of all users of government services[xiv] in ten EU Member States relied on digital channel to access them. When contacting government, most citizens still use overwhelmingly the face-to-face channel (80%) and other traditional means such as telephone and post (about 40%). There are of course significant differences between countries, with Denmark leading in the sample with over 40% of government users using e-Channels, whilst in the Czech Republic the figure is less than 9%. Also, in the UK and Ireland the use of the postal services and the telephone has overtaken face-to-face.

Given this situation, there are clearly prevailing supply side failures and barriers (low internet availability, low roll-out, poor accessibility and usability, limited promotion and awareness of e-Government services) whose removal will benefit everyone. Limited use of e-Government services is clearly not just a problem of disadvantaged groups, even though disadvantaged groups are likely to be more seriously affected than the mainstream population.

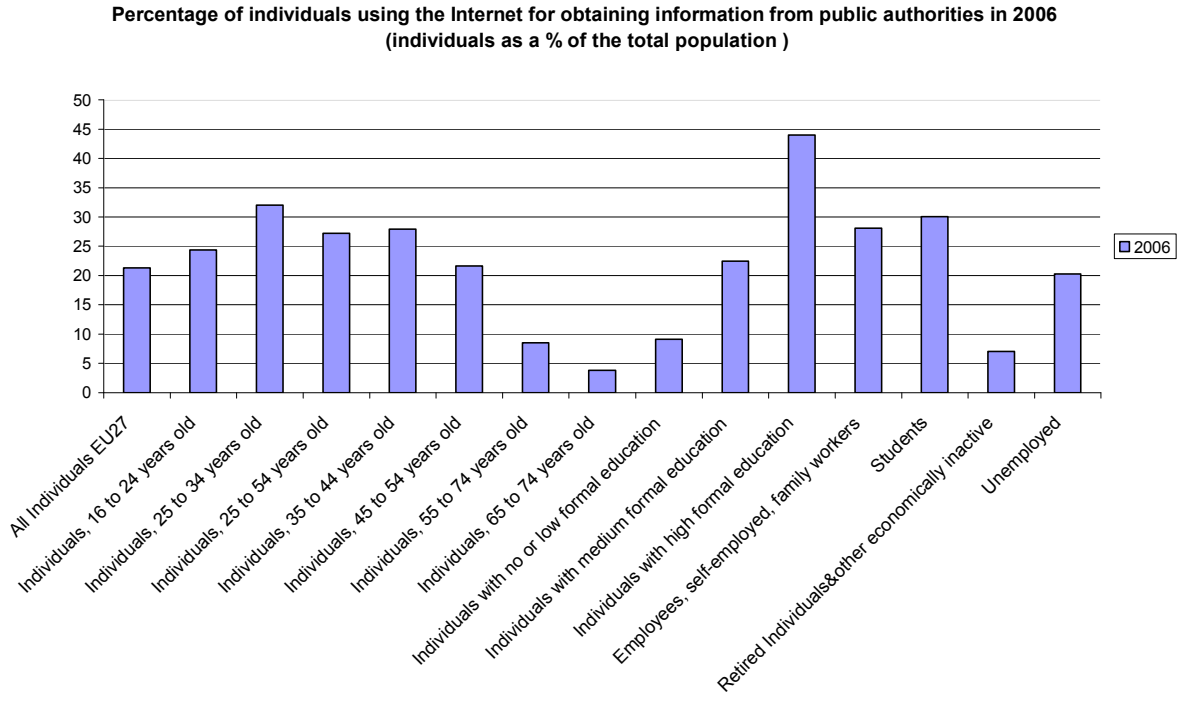
Confirming and partly explaining the above picture on limited e-Government use among the wider population, a study for the UK Cabinet Office examined the digital engagement[xv] of all people in the UK and found that 48% of the adult population were unengaged, i.e. had never actively used the examined technologies or had not done it in the previous three months (even though only 13% had no home access to these technologies). However, 78% of people aged 65 and over were in the low or moderate access, unengaged groups, as was the case for 63% of people in low and unskilled occupations. Lack

of access to digital technologies was also found to be strongly correlated with unemployed households and household including someone with a long term illness.

These results demonstrate that a large proportion of socially excluded groups do not have access to ICT and/or are unengaged, and are therefore digitally excluded from government information and services provided electronically.

This is also confirmed by the figure below which shows that citizens in employment seem to have a somewhat higher use of e-Government services than other groups, as do those who are better educated and in the younger age groups with the exception of those under 25.

Exhibit 20: e-Government usage by socio-demographic group in 2006

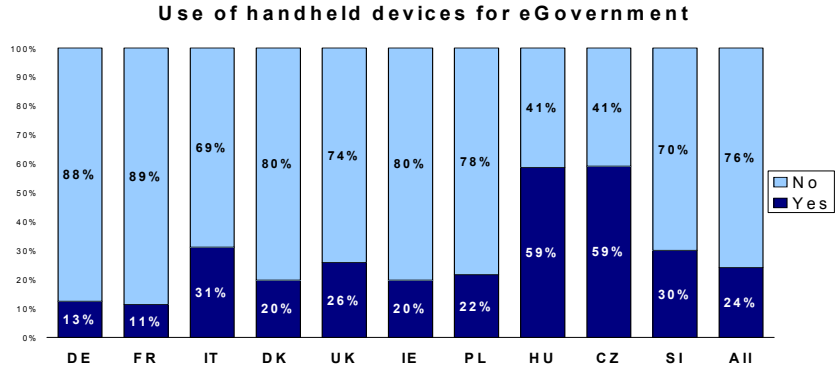


A concern for persisting digital divides arises in this context as it is the poorer, less educated, less skilled and more vulnerable citizens who make both greater direct and greater indirect demands on government, but yet who face much greater access barriers via both electronic and traditional channels[xvi].

The eUser survey[xvii] has shown that, after supply-side conditions, user skills and digital literacy on the demand side are the next most important determinants of high and beneficial use of e-Government services. Such factors seem to be more significant for e-Government uptake than socio-demographic factors like income, gender, labour force status and to some extent also education. Promoting the digital literacy of disadvantaged groups is therefore an important measure to achieve wider own-use of e-Government services.

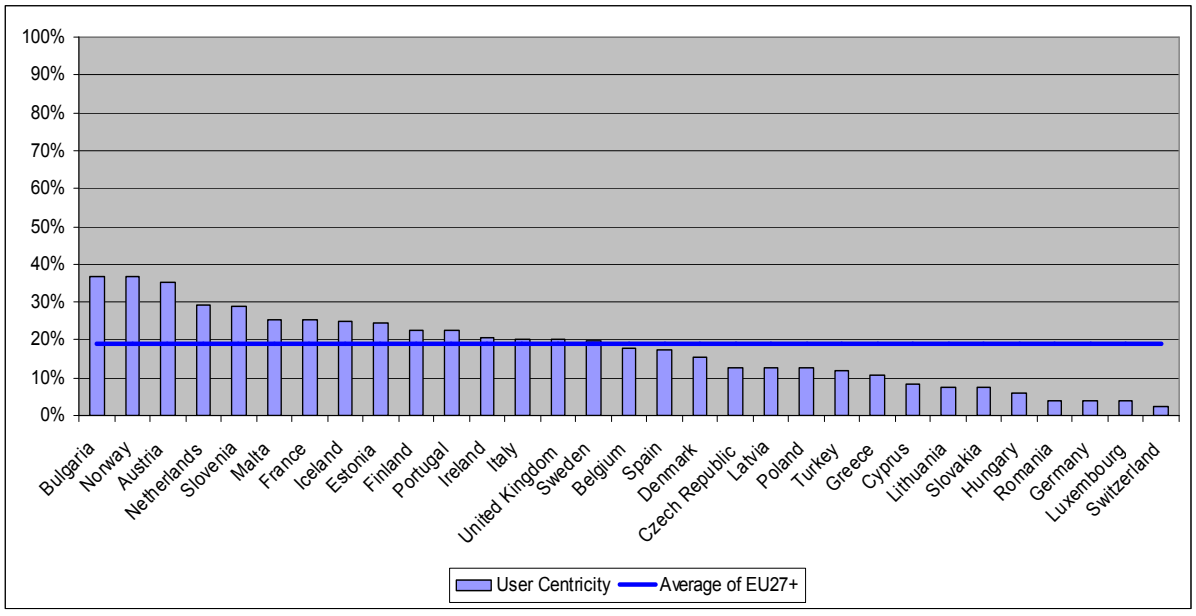
The following figures show that higher degrees of user digital competences lead progressively to higher use of e-Government, so that users with the most developed e-Skills tend to use e-Government services more.

On the other hand, research has found that it is still the case that those users of e-Government services who access the Internet from PC platforms tend to be in higher income groups, of lower age and with a tertiary education. In contrast to this, access to e-Government services through hand-held devices, like mobile phones or PDAs (personal digital assistants or organizers, i.e. 'm' or mobile government), is both becoming more important generally (see exhibit), and is particularly important for people who are otherwise likely to be digitally excluded. These include groups with degrees education below secondary level, those not working or disabled persons, as well as those living in countries where access is a greater problem. ***Multi-channel delivery strategies, especially using mobile phones, are thus important ways of providing inclusive e-Government services***.



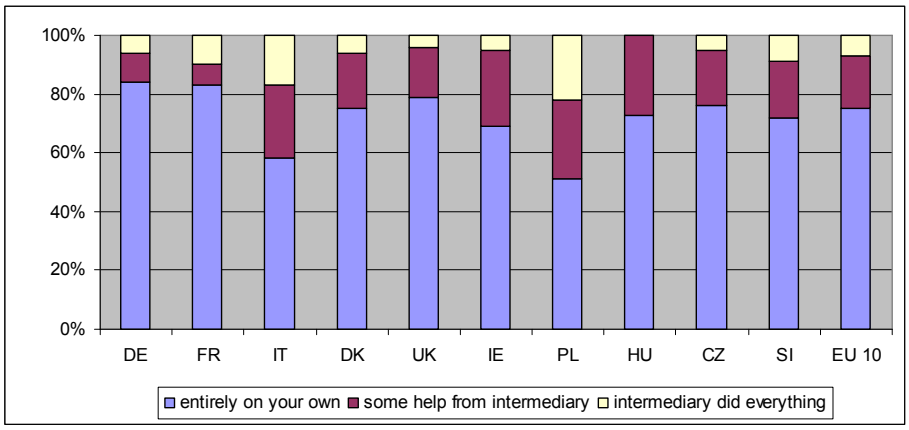
Composite indicators on user-centricity are based on three subindicators revealing the availability of services with legally binding electronic identity, multi-channel access to service, and website compliance with international standards of accessibility. This indicator measures stated (text or logo) compliance with international accessibility standards. These indicators reveal a limited average compliance in Europe of only 19% pf on-line government services.

Exhibit 21: user centricity of e-Government services in EU27 + Norway, Iceland, Switzerland and Turkey



Addressing e-Skills or providing alternative channels are relevant aspects when promoting and increasing the direct use of e-Government services. For a number of reasons, however, many potential beneficiaries of these services –especially among disadvantaged groups- will never be able or willing to access them directly. So called ***'social intermediaries' have been found to play already an important and largely unexpected role in this respect***. 42% of e-Government users in the ten surveyed countries access the services also on behalf of family or friends (more so in the countries with highest e-Government use[xviii]) and they assist on average 2.6 people (many more in the New Member States, up to 5.3 in the Czech Republic).

Exhibit 22: e-Government users receiving support from a social intermediary (in 10 selected countries)



The figure above shows that on average 18% of all e-Government users receive some help from an intermediary, whilst 7% receive complete help. This means that approximately a quarter of e-Government users are not fully autonomous. Support from an intermediary is highest in the new Member States, which may be due to greater access problems and lower digital skills so that more of the population may need to use e-Government via the more skilled social intermediaries. This probably also reflects different national levels of e-Government service development, particularly in terms of sophistication and user friendliness. Italy and Ireland are the only older Member States with greater than average numbers of users receiving help from a social intermediary.

The profile of the typical citizen receiving assistance in using e-Government, derived from the eUser analysis, is highly specific. Low digital engagement and skills, manual and unskilled occupations, rare internet user and living in regions with low internet penetration. Assisted users tend to be aged 50 and over, to demonstrate a markedly low functional and low leisure online orientation, to be female rather than male, with below secondary level education, unemployed or not working, with an income below the poverty level or no higher than median income, to have Internet access outside the home, and to have started to 'use' the Internet only very recently. These latter factors are, however, not statistically significant. Overall, the types of individuals receiving assistance from social intermediaries for e-Government tend to be those who are otherwise beyond the digital divide and excluded from e-Government, as well as from other Information Society benefits, and who are living in countries which are not leading in e-Government.

The social intermediaries themselves represent a potentially rich resource and are likely to have existed at family and community levels, helping to disseminate the benefits of public and private services long before the Internet provided another channel. They also possibly reflect a transition phase for many, prior to their own use of eServices as with previous historical patterns of diffusion of new technologies, even though better understanding is needed of whether intermediaries ultimately act as a barrier or a stepping stone to own use of e-Government services.

8. BEYOND RIGA DASHBOARD: ICT AND ACTIVE AGEING

The Riga declaration sets the targets to: a) reduce to a half the gap in current average internet use between the EU population and older people; b) remove barriers to internal market of ICT services and products for the elderly; support active ageing at work, especially through greater training for ICT skills; c) support active participation of elderly in society; support independent living and quality of life.

Despite some progress in internet use by the ageing population, the gap still remains large in this area of digital exclusion. If continued, this trend poses a number of challenges for the European society that is ageing in terms of financial and social sustainability. By 1995 70 million people over the age of 60 were living in the Union, almost 20% of the population. By 2020, this figure will rise to 25% and people

of 80 years and older will more than double. At the same time, the total working age population (15-64 years) is due to fall by 21 million between 2005 and 2030. This demographic evolution raises many challenges that ICT can help to address, creating many benefits to older individuals, but also making the economy grow in more productive ways.

Accessible ICT solutions and assistive technologies can help overcome many impairments often associated to ageing, thus supporting the active participation of the elderly in society, independent living and quality of life.

Today, however, only 27% of people over 54 and 10% of those over 65 years old use the internet regularly, compared to 47% for the EU25 on average. This means that existing barriers, technical and economic, but especially those linked to awareness and skills, need to be removed.

To this purpose, the Commission has in 2007 adopted an Action Plan on ICT for Ageing Well in the information society aimed at raising awareness of the market and individual opportunities from ICT for ageing well, promoting the enabling conditions for technologies aimed at the ageing population to be deployed, fostering uptake for these technologies and encouraging research in this area[xix].

9. BEYOND RIGA DASHBOARD: ICT AND CULTURAL DIVERSITY

The Riga declaration set the targets to: a) promote cultural diversity in relation to inclusion by: fostering pluralism, cultural identity and linguistic diversity in the digital space (multilingual, local, cultural heritage, European values content); b) improving economic and social participation and integration, creativity and entrepreneurship of immigrants and ethnic minorities through their greater participation in information society.

On January 1st 2003, 15.2 million of third-country nationals were counted among the EU-25 residents, i.e. 3.35% of the total population. The percentage of foreign-born people varies significantly across Europe from less than 3% in the Slovak Republic, Finland and Hungary, to between 8 and 13% in the UK, France, the Netherlands, Germany, to 32% in Luxembourg. All these figures are bound to grow, given Europe's declining population, the ageing of its workforce, the lack of qualified personnel, and recently improved economic growth rates. The diversity of the immigrant population itself has been growing, with a large part of the recent flows coming from countries such as Russia, the Ukraine, China and Latin America (especially to Spain).

ICT is seen to have potentially mixed effects in promoting cultural diversity. The beneficial role in supporting migrants' personal ties with distant family and friends has raised concerns that this might lead to further social isolation and to a slowing down of integration. On the other hand, widespread use of ICT especially among younger people, including in immigrants and ethnic minorities groups[xx] might enable bridging links across ethnic, cultural and language barriers for instance through the new social media, might contribute to filling jobs in high-skill sectors and to support the many small businesses started by immigrant entrepreneurs, which represent an important avenue for integration in the economy and contribute to the quality of life in many cities.

Concerning multi-language information on public sector web sites, evidence shows that when available is almost always still limited to English and is targeted to tourists, foreign investors or researchers. Of course, e-Government portals are also available in other official national languages where they exist[xxi]. The Czech Republic has a national web site devoted to foreigners living in the country and translated into several languages[xxii]. In the UK the Cabinet Office has issued guidelines with regard to designing information resources in different languages for government websites. In the Netherlands many local governments use specially designed 'virtual integration counters' to facilitate access to services by immigrants and ethnic minorities[xxiii], but much appreciated also by native users.

Besides, these specific experiences there is still lack of data concerning the ICT use by culturally diversified groups and in relation to risk factors leading to exclusion. The Commission has launched in

2007 studies and innovation projects aimed at better assessing this area and quantifying possible targets for the future.

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[i] http://ec.europa.eu/information_society/events/ict_riga_2006/doc/declaration_riga.pdf
[ii] http://ec.europa.eu/information_society/eeurope/i2010/annual_report/index_en.htm
[iii] European Commission, i2010 - Annual Information Society Report 2007, SEC(2007) 395
[iv] COM/2007/0332 final
[v] 'Benchmarking from a policy perspective'- eInclusion report' December 2006
[vi] 'Benchmarking from a policy perspective'- eInclusion report' December 2006
vii Web accessibility figure coming from the study for the 2005 UK Presidency "e-Accessibility of public sector services in the EU".
viii See Measuring e-Accessibility, Empirica et al., 2007, Interim report
http://ec.europa.eu/information_society/soccul/eincl/index_en.htm
ixBroadband Coverage in Europe, Commission Services (2007, data as of 31.12.2006)
[x]Digital divide forum report: Broadband access and access and public support in under served areas", European Commission, Brussels 2005.
[xi] Though note that not all the MS are providing regional level data to Eurostat: the availability of regional data for the Community survey is on a voluntary basis but already large.
[xii] It was not possible to include the projection this year since one additional timeserie is requested- this will be performed once the 2007 Eurostat data has been relished for the next Riga Dashboard.
[xiii] The eUSER survey in 2005 provided a statistically valid telephone interview sample of about 10,000 adults at home across ten EU Member States (the Czech Republic, Denmark, France, Germany, Hungary, Ireland, Italy, Poland, Slovenia, and the United Kingdom), as well as studies on the supply side, on good practice and on user-orientation issues related to e-Health, e-Government and eLearning services: http://www.euser-eu.org.
[xiv] According to the survey, almost 70% of all adults had direct contact with the public administration in the previous 12 months.
[xv]Cabinet Office Report "Enabling a digitally United Kingdom" (2004). Digital engagement was measured by crossing 4 levels of home and/or community access to the three selected technologies (PC, mobile phone and Digital TV) with three levels of use.
[xvi] eUSER, op. cit., found that the more intensive users of government services (not e-Government) tend to be able, well educated, higher income citizens, in an older age group, not working because of unemployment, invalidity or retirement. While the latter features reflect stronger needs which likely justify greater use of government services, the role of abilities and background factors highlight that social exclusion factors are at play even before digital divide considerations.
[xvii] Millard, J. (2006, forthcoming) "Report on current demand/supply match for e-Government", part of Deliverable D5.2, eUSER Project, an IST Sixth Framework Programme R&D project: http://www.euser-eu.org.
[xviii] Based on % of government users using eChannels they are Ireland, Denmark, the UK and France.
[xix] COM/2007/0332
[xx] The OFCOM study "Communications Market Special Report. Ethnic minority groups and communications services" (June 2007) found these groups to be intensive users of communications technologies and services in the UK and to have much higher interest and positive attitudes to technology than the overall population (much related to the different age profile of the two groups).
[xxi] For instance, for Spain see http://www.060.es/
[xxii] http://www.en.domavcr.cz/
[xxiii] For instance, see http://www.GovWorks.nl/amsterdam