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COMMISSION STAFF WORKING DOCUMENT

Digital Agenda Scoreboard 2012

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Digital Agenda Scoreboard

1. Executive summary

Europe remains in the midst of a profound economic crisis, where low or no growth leads to high and rising unemployment. High stocks of public debt limit the ability of governments to increase demand by government spending. Macroeconomic crisis management alone is not sufficient to restart growth. The key to growth must be found in structural change to the economy.

In today's technological environment, any structural change must necessarily include a strong dose of digitisation. Europe's companies cannot remain competitive, nor can public services remain first-class, if they do not make extensive use of information and communication technology (ICT). Virtually all newly created jobs require good ICT skills, and so do most existing jobs, too. Promoting ICT is promoting a job-rich recovery.

Hence, to accelerate the deployment of advanced ICT in Europe, the European Commission has adopted the Digital Agenda for Europe[1] (DAE) as part of the overall Europe2020 strategy for smart, sustainable and inclusive growth. The Digital Agenda proposes 101 specific policy actions across 7 domains: digital single market; interoperability and standards; trust and security; fast and ultra-fast internet access; research and innovation; digital literacy, skills and inclusion; and ICT-enabled benefits for EU society. This combined set of actions is intended to stimulate a virtuous circle of investment in and usage of digital technologies.

This document is the second edition of the Digital Agenda Scoreboard, reporting on the progress of those actions between June 2011 and May 2012, and assessing overall impact on the basis of 13 key performance targets. It is accompanied by a series of online publications looking in more detail at specific aspects of the Digital Agenda, such as digital competences, broadband or R&D in ICT[2]: http://ec.europa.eu/information_society/digital-agenda/scoreboard/index_en.htm.

Progress towards achieving key performance targets is mildly positive, though some areas for concern should be noted (see Chart 1), which can be partially attributed to the negative economic climate in which the strategy is being deployed.

Regular internet usage is rising steadily, especially among disadvantaged groups. Fewer and fewer citizens have never used the internet. Similarly, online buying continues to increase, although the pace of growth in cross-border eCommerce is very slow. Importantly, high-speed broadband shows the first signs of taking off, including super-fast connections above 100 Mbps. Finally, the market share of LED lighting is expanding swiftly.

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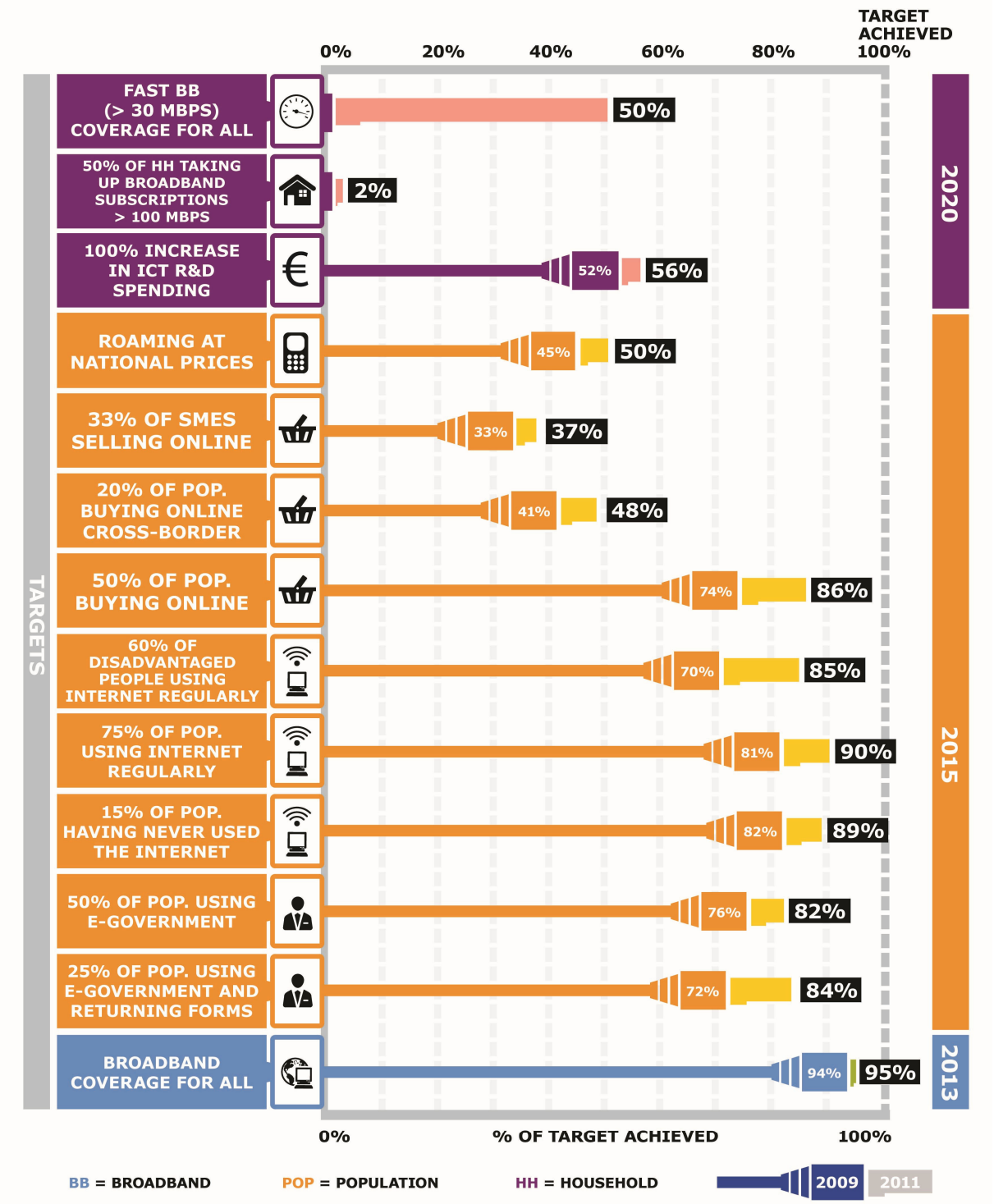
[1] Available at http://ec.europa.eu/information_society/digital-agenda/index_en.htm.

[2] The content of these online publications corresponds to what used to be published in the annual Telecom Implementation Reports and Digital Competitiveness Reports.

How the EU scores on the Digital Agenda targets



In some areas there is real progress, but not swift enough to meet the ambitious Digital Agenda targets. For example, despite the economic slowdown, there has been growth in public investment in R&D, but not strong enough to hit the target in 2020. Similarly, roaming prices have fallen, but far too slowly, reinforcing the need for the recent legislative agreement.

Finally, in some areas no progress could be recorded last year. The use of eGovernment has stalled, although some small Member States have improved their performance significantly. Also, online purchasing and selling by SMEs has remained the same. But given last year's

progress, the eGovernment targets and the online purchasing target could still be achieved. However, the online selling objective appears unachievable on current trends.

The Commission has so far completed 34 actions under the Digital Agenda, while 15 have been delayed or are at risk of being delayed. The remaining 52 actions, under the responsibility of either the Commission or the Member States, are on schedule for completion by their respective deadlines.

Most actions supporting the Digital Single Market have been or will be completed by the end of this year. Effective access to online content and services requires an effective regime for copyright and payments, which will be proposed in 2012 and 2013, respectively. The Digital Single Market is the subject of calls for further action[3], which have been addressed in the eCommerce Action plan and the European Consumer Agenda, and will be further examined in the mid-term review of the Digital Agenda.

A review of the EU standardisation rules was adopted by the Commission and should contribute to more flexible and rapid standard setting. Other actions supporting interoperability are on track for completion in 2012, in particular the revision of the European Interoperability Strategy. In addition Member States are expected to align their national interoperability frameworks to the European Interoperability Framework, the European Interoperability Strategy and the Malmo and Granada declarations by the end of 2013.

Cybersecurity is rising in prominence as a major policy challenge. Cooperation in this field has been strengthened, for example through the European Forum for Member States and the European Public-Private Partnership for Resilience as well as by the establishment of national/governmental CERTs (computer emergency response teams) in 23 Member States.

The Commission has completed its actions to support fast and ultra-fast internet access, and has taken supplementary initiatives such as an ongoing public consultation on reducing the cost of rolling out high-speed broadband. However, more needs to be done to achieve the 2020 targets.

Despite the economic slowdown, there has been moderate growth in public investment in ICT R&D, compared to a reduction in commercial RTD spending. In its proposals for Horizon2020, the Commission committed to doubling investment in ICT RTD by 2015, relative to 2010.

Whilst more people are using the Internet, there is a continuous need to promote ICT skills and eInclusion for all citizens. At the same time, the need for ICT skills to improve employability across the labour force has also grown. Moreover there is an acute shortage in ICT professionals requiring more targeted actions to ensure more access to ICT careers.

ICT is a conduit for structural reforms and solutions to societal challenges. An eProcurement strategy has been adopted to help modernise online public services. Member States have not yet agreed on the list of cross-border public services, originally scheduled for the end of 2011. Regarding ICT for the environment, there have been some delays in policy actions, but the market share of LED lighting is expanding swiftly. The actions on eHealth, cultural diversity and intelligent transport are largely on track.

2. The key performance targets

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[3] European Council conclusions, March 2012, available at http://register.consilium.europa.eu/pdf/en/12/st00/st00004-re02.en12.pdf .

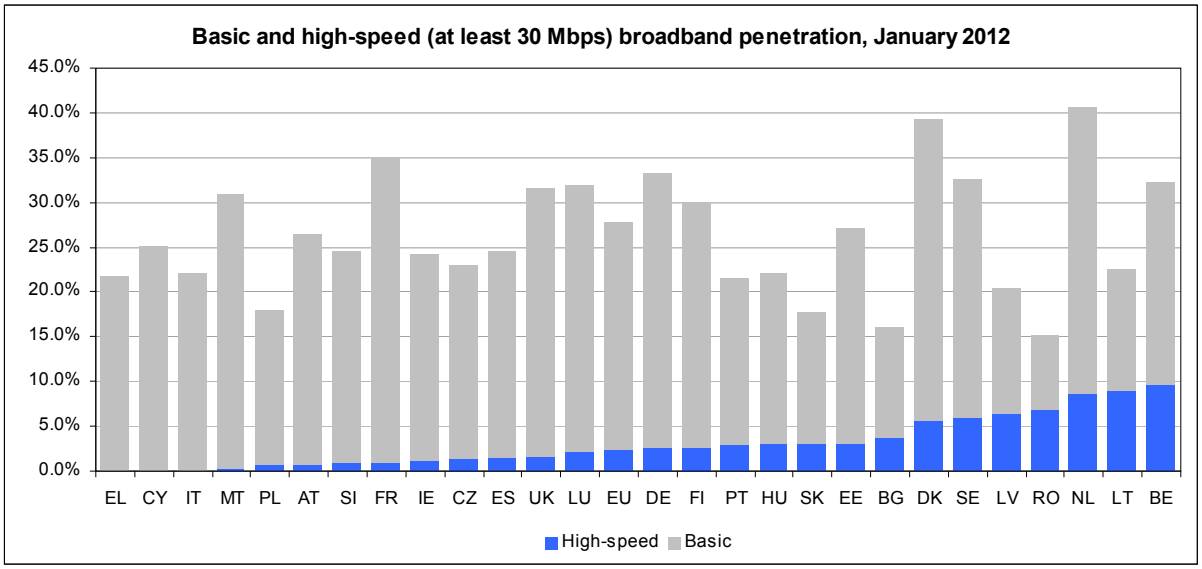
Annex 2 of the Digital Agenda sets out the key performance indicators. This limited set of indicators provides numerical evidence of the progress towards a selected group of headline targets. This section presents the performance of the EU with respect to these targets. As such, they do not follow the seven-pillar structure (see section 4 below).

- **Key performance target 1a**: the entire EU to be covered by broadband by 2013.

The coverage of fixed broadband networks was stable in 2011 at around 95% of the European population. Satellite coverage is complete, but take-up is not yet widespread in the under-served areas. State aid measures notified to the European Commission in the course of 2011 concerned: Greece (a €250 million measure for unserved rural areas), Poland (a €350 million aid scheme to deploy a fibre backhaul network in sparsely populated eastern Poland, serving around 8 million persons); Latvia (a budget of €119 million to build a passive and open Next Generation Access (NGA) networks in rural areas); Portugal (public funding of €106 million for NGA networks in rural areas, about 70% of the total cost); and Slovakia (an aid measure with €113 million to support a backhaul network for 330000 unconnected citizens).

- **Key performance targets 1b and 1c**: the entire EU to be covered by broadband above 30 Mbps by 2020 and 50% of the EU to subscribe to broadband above100 Mbps by 2020

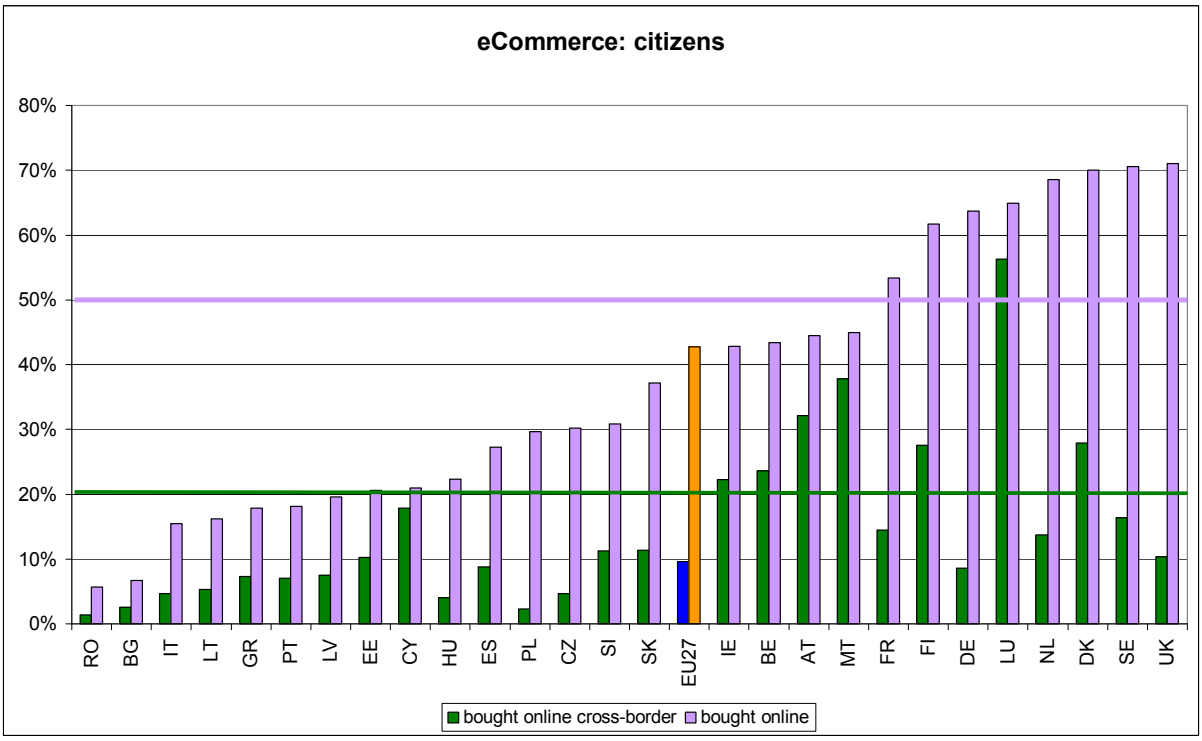
High-speed broadband coverage is growing. Now, 49.8% of households have access to fast or ultra-fast internet access, up from 28.7% last year. The wider availability of high-speed connections is also reflected in uptake patterns. Indeed, while growth in the overall number of broadband connections is slowing down, the trend towards higher speeds is clear and speeds have increased significantly, with almost half (48%) of all fixed broadband connections providing speeds of 10 Mbps and above. Although the deployment and take-up of ultra-fast broadband is still low, the share of all fixed lines delivering speeds of 30 Mbps and above rose from 5.1% to nearly 8.5% in a year. Superfast connections above 100 Mbps remain very scarce, but have nearly doubled from 0.8% to 1.3%.



Source: Commission, based on COCOM, total number of subscriptions by households and enterprises divided by population. Basic broadband is above 144 kbps, high-speed is above 30 Mbps.

- **Key performance target 2a**: 50% of the population to buy online by 2015

Progress towards achieving the target of 50% of the population using the internet to purchase goods and services is steady: after rising from 37% to 40% last year the share is now 43%. Progress in eCommerce is a bit faster than progress in internet use, with the share of internet users engaging in eCommerce edging up from 57% to 58%. The main items sold online are films/music/books/software, travel and accommodation, and clothing and sports goods, each being purchased by more than half of those shopping online. The fastest progress was observed in Malta (+7) and Ireland (+6), while among the countries with low scores Greece and Lithuania (+5 each) made the biggest jumps. On current trends, the EU target could be reached before 2015.



Source Eurostat, Community survey on ICT usage in households and by individuals, 2011: percentage of individuals between 16 and 74 who ordered goods or services for private use during the last year, and who ordered from sellers in other EU countries; horizontal lines represent targets

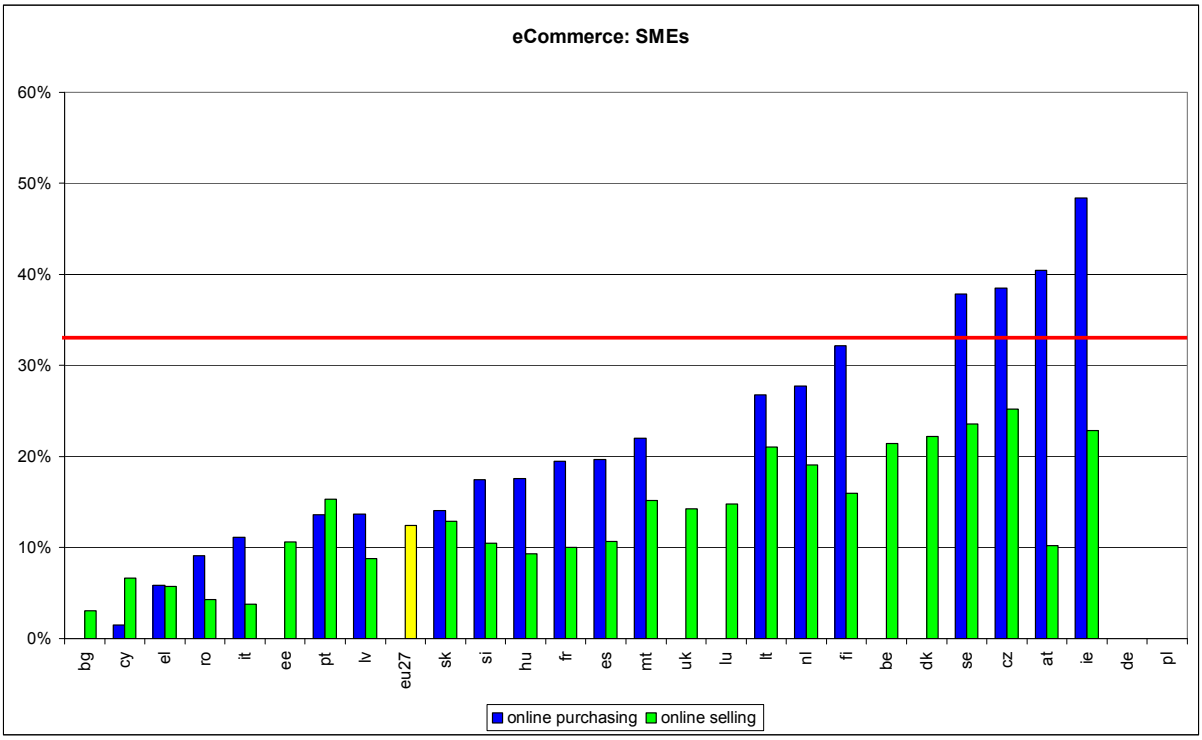
- **Key performance target 2b**: 20% of the population to buy online cross-border by 2015

The proportion of cross-border online purchasers continues to advance only slowly, from 8.2% in 2009 to 8.8% in 2010 and 9.6% in 2011. Citizens of small countries show a higher propensity to shop across the border if there are offers in their own or a similar language. While the importance of distance decreases for online shopping, the importance of language increases[4]. As a result, the only countries likely to meet the target by 2015 are small countries sharing a language with another country, and the Nordic countries. Indeed, this group showed the highest gains from an already high basis: Finland (+6), followed by Ireland, Belgium (+4

[4] IPTS working paper (forthcoming): Martens, B and Turlea, G. (2012), 'The drivers and impediments for online cross-border trade in goods in the EU'.

each) and Malta, Austria, Estonia, Luxemburg and Sweden (+3 each). Also, national eCommerce strongly underpins cross-border eCommerce: virtually nobody shops across the border without shopping in their own country first.

- **Key performance target 2c**: 33 % of SMEs to make online sales by 2015[5]



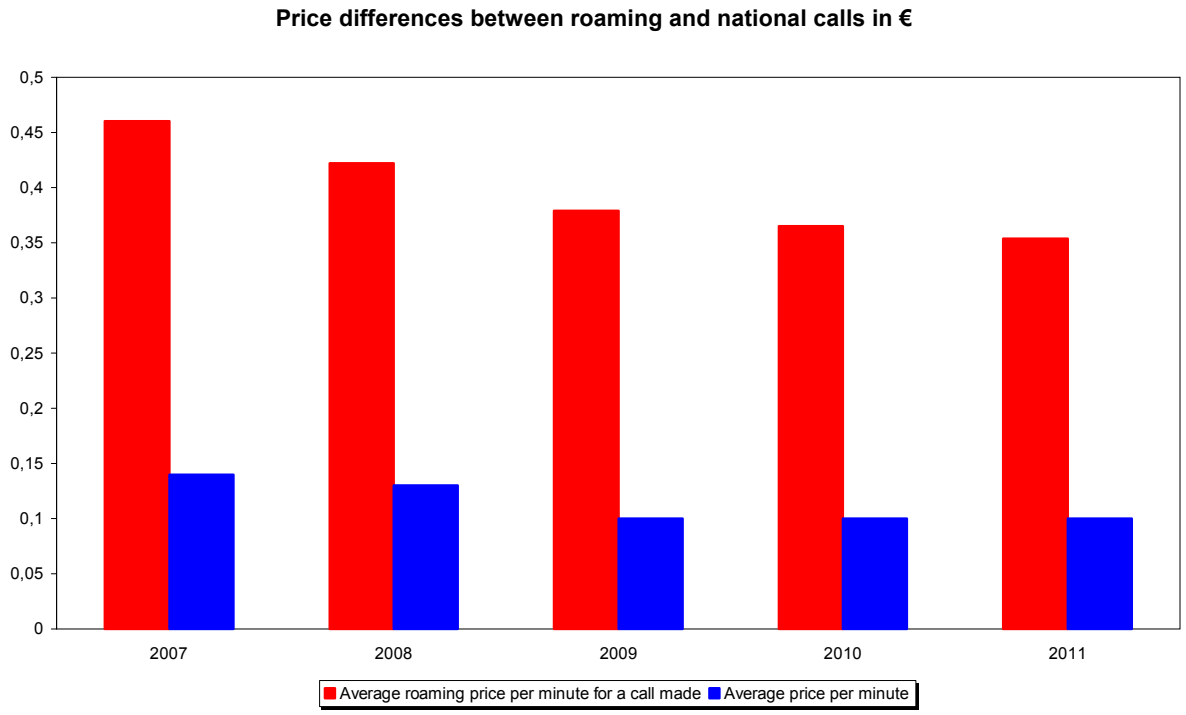
Source: Eurostat, Community survey on ICT usage and eCommerce in enterprises. (Enterprises with 10-249 persons employed purchasing/selling more than 1 % of their turnover online in 2010; horizontal line represents both targets); data for BG, EE, UK, LU, BE, DK, DE and PL missing

The use of computer networks by small and medium-sized enterprises for purchasing is commonplace in a number of Member States, often already exceeding the target. The biggest increases since the previous year could be observed in the Czech Republic (+6), Finland, Ireland and Latvia (+5)[6]. Online selling, on the other hand, remains much less widespread. Although the Czech Republic and Slovakia (+6) and Latvia (+3) recorded significant increases, it seems likely that the vast majority of Member States, or even all of them, will be unable to achieve this target by 2015.

5 Regarding online purchasing, data are missing for seven Member States accounting for close to half the EU population, so no EU-wide figures are available.

6 Due to missing data from 8 countries, there is no EU-27 value for the 2011 survey.

- **Key performance target 2d**: the difference between roaming and national tariffs to approach zero by 2015



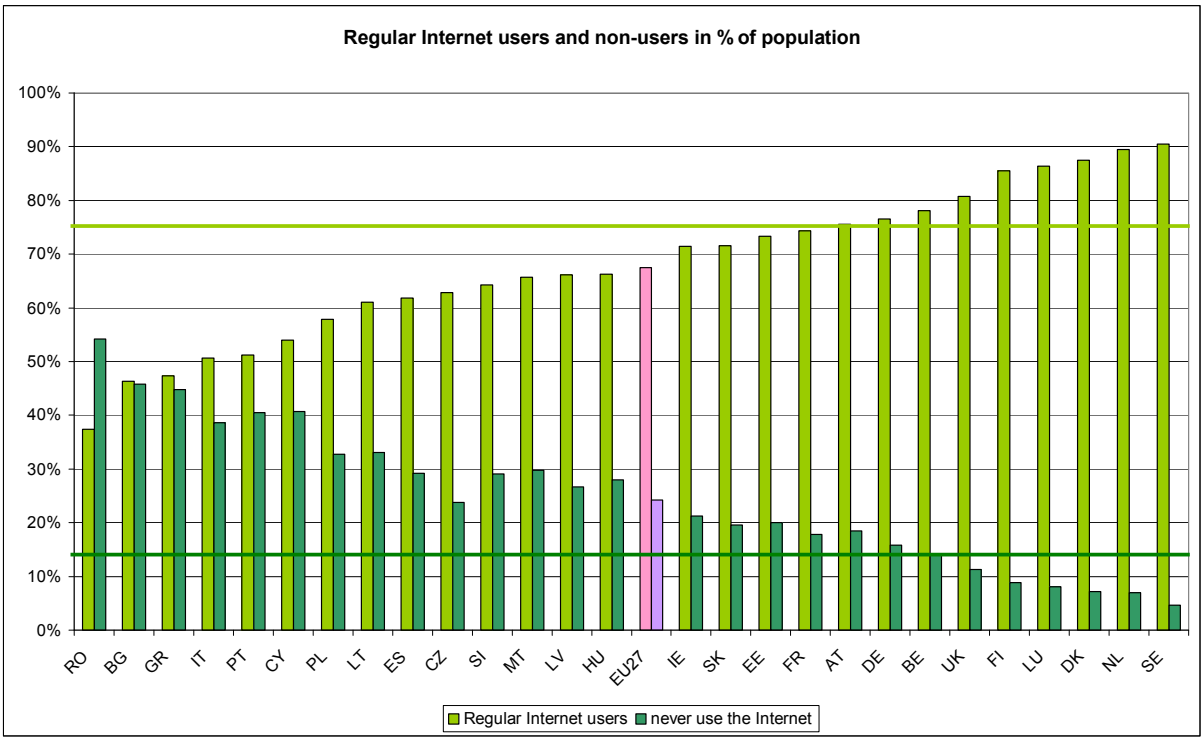
Source: Commission services based on BEREC

Roaming prices declined by 1.1 cents in 2011, which is clearly insufficient to close the still very large gap with national calls in the foreseeable future. Moreover, this is mainly due to the effects of the regulation of wholesale and retail prices and is not the result of emerging competition. Competition therefore needs be further promoted in order to give consumers a rapid and easy choice of roaming services at, or close to, the relevant competitive domestic prices. The new roaming regulation about to be adopted (see section 4) will be a big step forward in this respect.

- **Key performance target 3a**: to increase regular internet usage from 60% to 75% by 2015, and from 41% to 60% among disadvantaged people.

- **Key performance target 3b**: to halve the proportion of the population that has never used the internet from 30% to 15% by 2015

The proportion of the population regularly using the internet continues to increase, albeit somewhat more slowly than before: from 61% in 2009 to 65% in 2010 and now 68% in 2011. Growth in the most advanced countries has slowed, because saturation levels are close. The biggest gains were recorded in Ireland (+8), Hungary, Greece, Malta, and Austria (+6). Conversely, the percentage of non-users has continued to decrease from 30% to 27% to 24%. The faster growth of regular users relative to all users indicates that the share of regular users among existing users is rising as well. Romania is now the only country where there are fewer regular users than non-users.

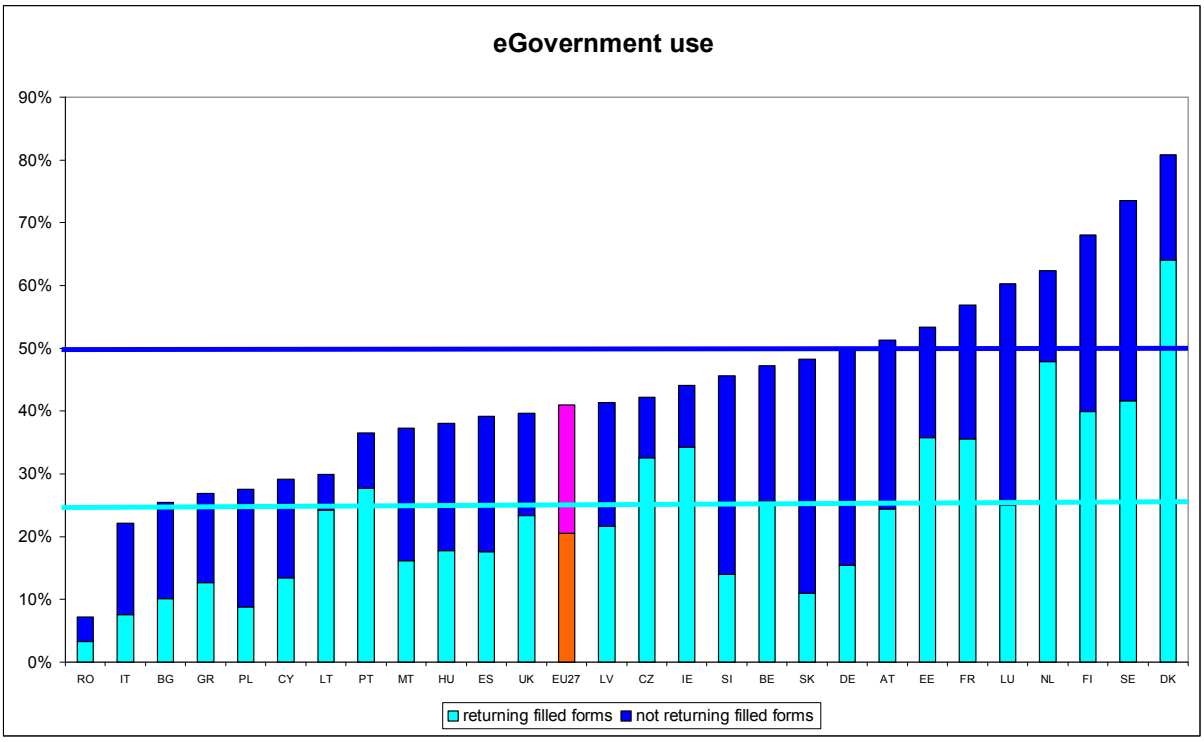


Source: Eurostat, Community survey on ICT usage in households and by individuals; persons aged 16-74 using the internet at least once a week / never using the internet; horizontal lines represent targets

Regular internet use among disadvantaged groups continues to grow faster than for the overall population, but still has some catching up to do: usage rates rose from 42% in 2009 to 46% in 2010 and 51% in 2011. Continuing progress at the current rate would result in achieving all three targets well ahead of 2015.

- **Key performance target 4a**: 50% of citizens to use eGovernment by 2015, with more than half returning completed forms

The proportion of citizens using the internet to interact with public authorities has stagnated at 41% over the last year, after rising by 3 percentage points the year before. Even so, the Czech Republic (+19), Greece, Portugal (+10 each) and Ireland (+8) made significant progress. Among the share of eGovernment users, the proportion returning completed forms is stable at 50%, with some substantial gains in Portugal (+9), Latvia and Lithuania (+7 each). Obviously, further stagnation in the coming years would jeopardise achievement of the target by 2015.



Source: Eurostat, Community survey on ICT usage in households and by individuals, 2011; percentage of persons aged between 16 and 74 using eGovernment services in the last 12 months; horizontal lines represent targets

- **Key performance target 4b**: all key cross-border public services, to be agreed by Member States in 2011, to be available online by 2015

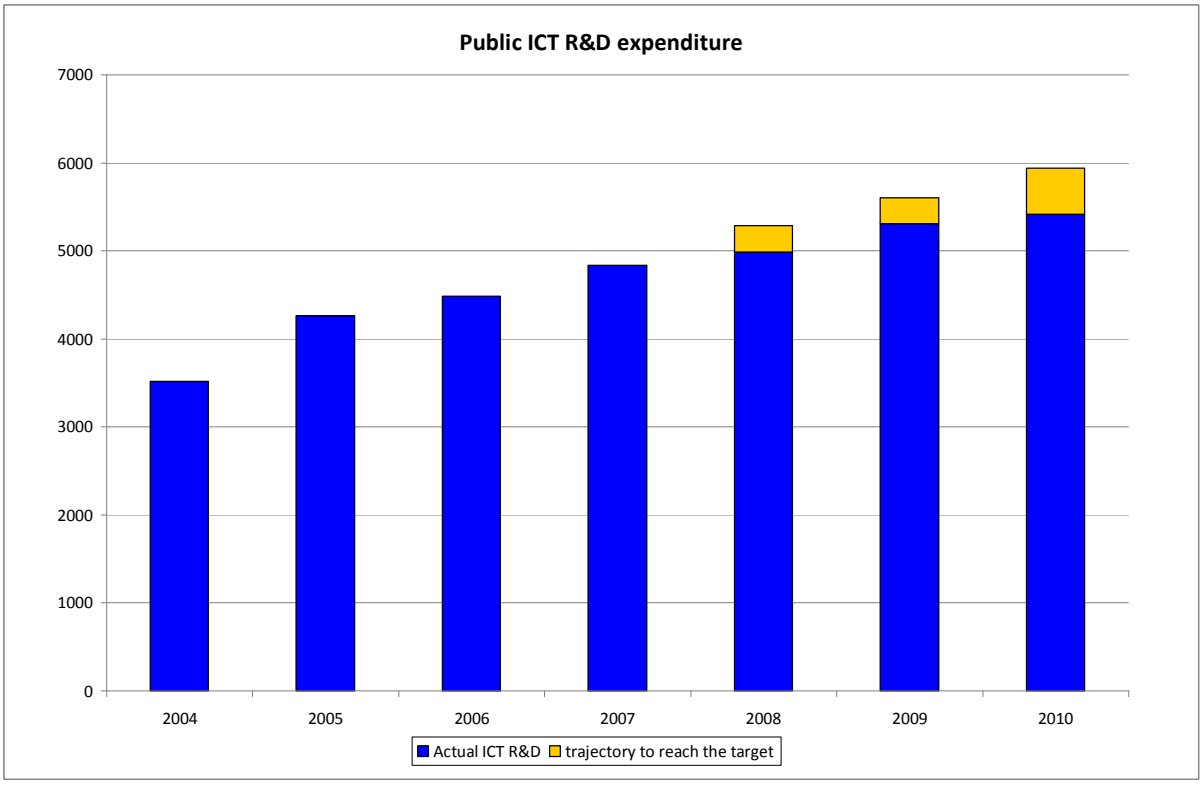
Discussions with Member States on the list of services to be made available online are ongoing. This target will be measured in future editions of the Scoreboard. The absence of a decision on the list makes it unlikely that Member States will achieve this target.

- **Key performance target 5**: to double public investment in ICT R&D to € 11 bn by 2020

Public investment in ICT R&D increased fairly fast from 2008 to 2009 (+ 6.5 %), but growth slowed again in 2010 to 2 %, compared to a required annual growth of 6 % between 2007 and 2020 in order to reach the target. Taken together with sluggish growth from 2007 to 2008, the result is that R&D in ICT is currently about 6 % below the required trajectory to reach the 2020 target. Nevertheless, given the economic crisis and the deficit reduction efforts currently being undertaken by many Member States, it is encouraging to observe that public R&D in ICT was not only not reduced, but even increased.

The scale of this achievement becomes clear when public ICT R&D is compared to commercial R&D in ICT, which fell by 7.4% from 2008 to 2009[7]. However, given the fall in value added in the ICT sector by 7% in the bottom of the recession, the weakening in R&D was moderate; in fact, R&D intensity remained almost stable from 2008 to 2009 with only a minor decrease from 5.35% to 5.33%. Nevertheless, this is still less than half the R&D intensity in the ICT sector in the US.

[7] Source: IPTS estimate, forthcoming at http://is.jrc.ec.europa.eu/pages/ISG/PREDICT.html:



Source: IPTS[8]. Values for EU-27 in EUR m. NB: the baseline estimate for 2007 has been revised due to a new methodology; new data cover two years (2009 and 2010)

- **Key performance target 6**: to reduce energy use of lighting by 20% by 2020

Reducing the energy use of lighting mostly involves a shift in technology towards solid-state lighting (SSL) such as light-emitting diodes (LEDs and OLEDs), which consume little energy (up to 80% less). This shift is happening fast. Indeed, the market share (in value) of SSL on the EU lighting market increased from 1.7% in 2009 to 6.2% in 2010 and 12.8% in 2011. SSL light sources are so much more efficient that total lighting energy consumption will decrease even if new lighting installations (for example to light building facades) become more widespread.

3. Involving stakeholders

The Commission strongly values cooperation with Member States and the engagement of stakeholders in the implementation of the Digital Agenda. Over the last twelve months, the main activities in this regard have been the Digital Agenda Assembly and the second edition of the 'going local' outreach initiative. Moreover, the Commission continues to convene the DAE High-Level Group on a regular basis, to discuss the orientations of DAE implementation.

The Digital Agenda Assembly (DAA) is a large stakeholder event that took place in Brussels in June 2011 with over 1600 participants, 24 workshop sessions and plenary sessions. The

[8] Stancik, J. (2012). A Methodology to Estimate Public ICT R&D Expenditures in the EU Member States. Institute for Prospective Technological Studies, JRC Technical Notes (forthcoming); available at http://http://is.jrc.ec.europa.eu/pages/ISG/PREDICT.html.

DAA used the web and social media to involve participants and gather contributions. Several of the 24 workshops had their own online animation activities and all workshops used blog posts and twitter hashtags. The online impact of the conference was significant, with many comments and contributions being submitted. The next DAA will take place in June 2012.

Following the success of the 2010 outreach initiative in Member States, called 'going local', which consisted in visiting all Member States for meetings and discussions with stakeholders, another round of country visits was organised. This time, they focused on gathering feedback on the implementation of the Agenda. There were around 60 visits to national capitals and other cities, reaching in total up to 5000 people and nearly 2000 stakeholders. Among other things, it emerged that 14 Member States have adopted integrated ICT strategies similar to the Digital Agenda. Going Local 2011 also pioneered using social media to widen the reach to stakeholders and build online communities around the DAE.

4. Key policy actions in the second year

The Digital Agenda is structured into seven 'pillars': A vibrant digital single market, Interoperability and standards, Trust and security, Fast and ultra-fast internet access, Research and innovation, Enhancing digital literacy, skills and inclusion, and ICT-enabled benefits for EU society. The following sections address policy actions planned under these pillars for June 2011 to May 2012 in the Digital Agenda.

A vibrant digital single market

As shown by the data on eCommerce (see section 2), buying online is still very much a national activity.

A number of actions have been taken in order to ensure easy access by companies and the public to existing material.

1. A proposal for a reviewed Directive on Re-use of Public Sector Information (12 December 2011), which aims to unlock the economic value of public information. Facilitating the re-use of public data and enlarging the scope to some cultural institutions (libraries, archives, museums) will enable the development of applications, new ways of delivering public services and better informed decision-making.
2. A Green Paper consultation (July-November 2011) on the online distribution of audiovisual works in the European Union and on the opportunities and challenges for a digital single market. This allowed stakeholders, particularly the producers, distributors and consumers of audiovisual content, to express positions on the key elements affecting them. A follow-up to the consultation will be published by mid-2012.
3. A Memorandum of Understanding (MoU) on Key Principles for the Digitisation and Making Available of Out-of-Commerce Works (20 September 2011), following the proposal for a Directive on Orphan Works. These proposals will help to facilitate access to and digitisation of content for which the author cannot be found or which is no longer in print.

The proposal for a Directive on collective rights management planned as a key action for 2011, slipped into 2012 and is to be adopted before the summer. This Directive will facilitate multi-territorial licensing of musical works for online uses and will establish a common framework of transparency and governance rules for all collecting societies.

To increase consumer confidence in the Digital Single Market the Commission has adopted 7 actions:

1. The eCommerce Action Plan, published on 11 January 2012 and containing further measures to stimulate the growth of e-commerce in the areas of secure and affordable electronic payments, awareness among businesses about going online, security of cross-border transactions, 'notice and action' procedures, and delivery.
2. A proposal for a Common European Sales Law (CESL) (October 2011), an optional contract law instrument offering legal certainty to both consumers and retailers in cross-border (especially online) transactions. It applies to contracts for the provision of goods and digital content.
3. A proposal for a Directive on Alternative Dispute Resolution (ADR), together with
4. A proposal for a Regulation on Online Dispute Resolution (ODR) for consumer disputes (November 2011). The ADR and ODR legislative package should help resolve out of court, in a simple, quick and inexpensive way, contractual disputes between a consumer and a trader arising from the sale of goods or provision of services (online, offline, cross-border or domestically) in the Single Market.
5. A proposal for a Regulation on eSignatures and mutual recognition of eID (4 June 2012).
6. A proposal for a Reform of the EU's 1995 data protection rules to strengthen online privacy rights and boost Europe's digital economy. The reform takes account of technological progress and globalisation, which have profoundly changed personal data handling since 1995. By providing an enforceable, future proof and harmonised set of rules for the protection of personal data, the data protection reform will stimulate growth and trust in the digital economy as well as ensure a high level of data protection.
7. A Green Paper on an integrated European market for card, internet and mobile payments, aiming to chart obstacles to European integration and to identify the best ways to eliminate these obstacles and to create a competitive and innovative European payments market..

Finally, the Commission has adopted a proposal for a revised regulation to further reduce the cost of roaming (6 July 2011)[9]. The coverage of the existing regulation will be extended to data roaming. The European Parliament approved the proposal on 10 May 2012, in time to ensure the Council's final approval in June and its entry into force by the expiry date of the current regulation. The proposal introduces structural measures to boost competition by 1 July 2014, in the meantime progressively lowering current retail price caps on voice and texting (SMS) services and introducing a new retail price cap for mobile data services.

Interoperability and standards

There is nothing more inefficient in a networked economy than networks where the different elements do not work together. Interoperability between ICT services and applications is a key necessity for a productive economy, and standards are vital for interoperability. In June 2011 the Commission presented a Communication on a strategic vision for European standards, and a proposal for a Regulation on European Standardisation to allow Europe's standard-setting framework to catch up with fast-moving technology markets. Acknowledging

[9] Available at http://ec.europa.eu/information_society/activities/roaming/docs/roaming_recast11.pdf

the increasing importance of ICT specifications developed by ICT industry organisations, ICT standards will be recognised through an open, light and transparent process, at the same time efficient and fast, in order to support the quick innovation cycle in the ICT domain. References to these standards will be allowed in public procurement.

Subsequently, on 28 November 2011, the Commission adopted a decision to set up a European multi-stakeholder platform on ICT standardisation, in order to provide advice and expertise on matters relating to the implementation of standardisation policy in the ICT domain. The multi-stakeholder platform will be composed of members representing public authorities from Member States, industry, small and medium-sized enterprises, societal stakeholders, European and international standardisation bodies, and fora and consortia.

Trust and security

The increasing importance of ICT networks for the economy makes attacks on these networks both costlier and more attractive to cyber-criminals. Moreover, networks can be abused to attack the most vulnerable groups in society, in particular children.

Concerning the fight against cybercrime, on 3 November 2011 the EU Commission and the European Network and Information Security Agency conducted together with the United States the first joint readiness tests for cyber-attacks in 'Cyber Atlantic 2011', with the EU Cyber Emergency Response Team participating as an observer. Two scenarios were tested: a cyber-attack on sensitive information from the EU's national cyber security agencies, and an attack on EU power generation equipment.

Moreover, on 28 March 2012 the Commission adopted a proposal to establish a European Cybercrime Centre, which is scheduled to start operations in January 2013. This Centre is to be established within the European Police Office (Europol) in The Hague. It will be the European focal point in fighting cybercrime and will focus on illegal online activities carried out by organised crime groups, particularly those generating large criminal profits, such as online fraud involving credit cards and bank credentials.

Regarding the online protection of children, on 29 November 2011 the Council adopted Conclusions on the protection of minors in the digital world, which call on Member States to act in this field, including by teaching online safety in schools. On 2 May 2012, the Commission adopted a Strategy for a Better Internet for Children. The strategy proposes a series of actions grouped around four main goals: i) to stimulate the production of creative and educational online content for children; ii) to scale up awareness raising and teaching of online safety; iii) to create a safe environment for children where parents and children are given the tools necessary to ensure their protection online; iv) to fight child sexual abuse material online. In that context, the Commission has launched a coalition of technology and media companies to work on technological solutions and corporate processes to facilitate simple and robust reporting tools, age-appropriate privacy settings, wider use of content classification, wider availability and use of parental controls, and effective takedown of child abuse material.

Fast and ultra-fast internet access

A key objective of ICT policy in all advanced economies is to ensure ubiquitous internet access at speeds fast enough to enable the network-based knowledge applications needed for tomorrow's competitiveness. In the past year, the EU has focused on mobile broadband spectrum allocation and on public support measures for fixed broadband deployment.

For mobile broadband, the European Radio Spectrum Policy Programme (RSPP), proposed by the Commission in September 2010, was adopted by the Council and European Parliament in November 2011. In particular, the RSPP provides for the 800 MHz band to be made available

for terrestrial electronic communications services, including mobile broadband, by January 2013, as the availability of suitable spectrum is a key condition for widespread growth of mobile broadband, including in rural areas.

For fixed broadband, on 19 October 2011 the Commission adopted a proposal[10] for a Regulation establishing the Connecting Europe Facility (CEF), setting out the general rules for the implementation of this new programme. CEF is a new programme, with a proposed budget for digital networks and services infrastructure of €9.2 bn (in constant 2011 prices). This amount was proposed by the Commission in the new EU budget proposal, the Multi-annual Financial Framework (MFF) for the period 2014-2020[11]. Furthermore, concerning Member States' broadband strategies, the European Commission published on 23 March 2012 a report on the implementation of national broadband plans[12], which follows the organisation of national broadband plan workshops to highlight the need for progress in this area and to facilitate the sharing of knowledge about best practices between Member States.

In addition to providing supplementary funding, the Commission has also launched a public consultation on how to reduce the cost of rolling out high-speed internet. This consultation, launched on 27 April 2012, addresses in particular how to reduce the costs associated with civil engineering, such as the digging up of roads to lay down fibre, which can account for as much as 80% of the total cost.

Finally, on 3 October 2011, the Commission launched two public consultations on access for alternative operators to the fixed telephone and broadband networks of incumbent operators. The first consultation concerns non-discriminatory access for alternative operators to the infrastructure and services of dominant telecom operators. The second concerns the way national regulators calculate prices that operators have to pay for this wholesale access (cost-orientation remedies). The results will help the Commission to draft recommendations for the consistent, investment-friendly application of non-discrimination and price control remedies.

Research and innovation

Europe continues to under-invest in ICT research and development, falling further behind other industrialised economies[13]. Given the importance of ICT for the future of pretty much all industries, the lack of investment in ICT R&D is a threat to the entire European manufacturing and service industry.

The vast majority of all public ICT research funding in Europe is spent by national and regional research programmes, so the EU's own Research Framework Programmes account for only a fraction of all research funding across the EU. However, with increasing global competition, no single EU country can now build the know-how and skills to master these increasingly complex technologies. In 2011, the ICT part of the 7th EU Framework Programme was in its fifth year of implementation and had already allocated almost €5 billion to around 1500 projects, about €1 billion more than the previous Framework Programme. The total number of ICT projects so far funded grew by 30%, and SMEs are increasing their share, accounting in 2011 for 16% of participants and 14% of funding. The 12 Member States that most recently joined the EU represent 3.5% of funding received, but can claim a higher relative participation of SMEs, confirming a trend already noticed in 2010.

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10 COM (2011) of 19.10.2011

11 COM (2011) 500 of 29.06.2011

12 Available at http://ec.europa.eu/information_society/newsroom/cf/item-detail-dae.cfm?item_id=7948.

13 'The 2011 report on R&D in ICT in the European Union', Joint Research Centre — Institute for Prospective Technological Studies, available at: http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=4399

For the future, on 30 November 2011 the Commission adopted a proposal[14] for a Regulation establishing Horizon 2020, the Framework Programme for Research and Innovation (2014 – 2020), with a total budget of €80bn (in constant 2011 prices), bringing together all EU research and innovation funding under a single programme. It focuses on turning scientific breakthroughs into innovative products and services. Funding provided by Horizon 2020 will be easier to access thanks to a simpler programme architecture, a single set of rules and less red tape. In particular, it introduces a single flat rate for indirect costs and only two funding rates — for research and for close-to-market activities, respectively — and a single point of access for participants. One key goal is to reduce the time until funding is received following a grant application by 100 days on average, meaning projects can start more quickly.

Enhancing digital literacy, skills and inclusion

The internet and ICT have reached most of society, but not quite all of it. 24% of the population never use it, in particular citizens from disadvantaged groups such as the elderly or the disabled. Moreover, many unemployed have insufficient ICT skills at a time when nearly all jobs require ICT literacy and when an increasing number of ICT jobs remain unfilled for lack of suitable applicants. To achieve 'Every European Digital' by 2015, Europe needs to develop the ICT skills base of its population, and in particular its labour force.

To increase ICT skills, on 6 October 2011 the Commission proposed rules for the European Social Fund (ESF) from 2014 until 2020. In particular, one of the ESF priorities states that it is to 'contribute to enhancing the accessibility, use and quality of information and communication technologies, through the development of digital literacy, investment in eInclusion, e-skills and related entrepreneurial skills'. It will then be up to the Member States to include ICT among the priorities for their national operational plans. In parallel, on 18 April 2012 the Commission announced, as part of its new employment strategy[15], its intention to set up multi-stakeholder partnerships in order to identify skills mismatches, intensify ICT training, and raise awareness of the potential of ICT careers, among other things[16].

Finally, work on the identification and recognition of what one understands under digital literacy/competences will result in a supplement to the Europass/ European Skills Passport by the end of 2012.

ICT-enabled benefits for EU society

ICT is a cornerstone of many policy initiatives, by no means limited to technology policy or to the ICT sector. In 2011, key initiatives concerned energy efficiency, intelligent transport, cultural heritage, and efficient public administration.

Regarding energy efficiency, in October 2011[17] the Commission proposed a set of common functionalities for smart meters for adoption by Member States, in order to enable smart grids to contribute to the decarbonisation of energy. This proposal will be the basis for further work on the interoperability of smart grids in Europe. Subsequently, on 15 December 2011, the Green Paper 'Lighting the Future' was adopted with the aim of involving stakeholders in

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14 COM (2011 809 of 30.11.2011

15 Avaialable at http://ec.europa.eu/commission_2010-2014/andor/headlines/news/2012/04/20120418_en.htm

16 Available at http://europa.eu/rapid/pressReleasesAction.do?reference=IP/12/380&format=HTML&aged=0&language=en .

17 Available at http://ec.europa.eu/energy/gas_electricity/smartgrids/doc/2011_10_smart_meter_funtionalities_report_full.pdf.

discussions on how to accelerate the deployment of innovative and highly energy-efficient lighting technologies.

In the related field of intelligent transport systems, on 22 December 2011 the Commission published a Communication setting out proposals for governance and incentive mechanisms for the deployment of SESAR[18], the Single European Sky's technological pillar. SESAR will streamline information sharing for improved planning and execution leading to more efficient Air Traffic Management operations.. Regarding the Communication on the deployment of eMaritime services, it is foreseen for adoption later this year.

In terms of cultural heritage, on 28 October 2011 the Commission adopted a Recommendation challenging Member States to: develop solid plans and build partnerships to place 30 million objects in Europeana by 2015 compared to the 19 million available today; get more in-copyright and out-of-commerce material online; and adapt national legislation and strategies to ensure the long-term preservation of digital materials. Furthermore, on 23 November 2011 the Commission adopted a proposal for a Regulation on the Creative Europe programme, which will support European cinema and the cultural and creative sectors.

The Commission Recommendation on the digitisation of cinemas (originally planned for 2011) is going to be transformed into a proposal for a Council Recommendation on European film in the digital era, with an enlarged scope including film heritage. It is due to be adopted in the second half of 2012.

For improving efficiency in public administration, the Commission adopted a strategy for eProcurement on 20 April 2012. The strategy aims to help all stakeholders, including SMEs, to adopt, by mid-2016, eProcurement by providing financial and technical support for the development of e-procurement infrastructure through EU programmes and funding. Moreover, the European Commission itself will move towards full e-procurement by mid-2015 and will make its e-procurement solutions available to Member States. Finally, the e-Commission 2012-2015 initiative describing the principles on which the Commission intends to implement its commitments in the e-Government Action Plan will be adopted shortly.

5. The next steps

The evidence provided in this document represents only a small part of the data available to measure the progress of the Digital Agenda. A more detailed analysis can be found under http://ec.europa.eu/information_society/digital-agenda/scoreboard/index_en.htm.

By the autumn of this year, the Digital Agenda will be at the half-way stage, when the Commission will undertake a mid-term review to evaluate priorities and implementation approaches in the fast-moving ICT world with the aim of adjusting the Digital Agenda. The mid-term review of the Digital Agenda will incorporate feedback from online debates, which are already ongoing and which will be discussed at the Digital Agenda Assembly at the end of June 2012. As a result of the larger debate, and on the basis of the indications provided by this Scoreboard, some areas will require particular attention.

For example, more support for innovation and entrepreneurship will be required to support growth and jobs. Besides austerity measures, structural reforms are essential to enable economic growth, requiring modernisation of digital public services, whether for eGovernment, eHealth or smart cities. Despite the fast implementation of all the actions under

[18] Available at http://ec.europa.eu/transport/air/sesar/doc/2011_12_22_comm_com_2011_0923_f_en.pdf.

the Digital Agenda, fixed and mobile high-speed broadband deployment is still too slow. Also, online security is becoming an increasingly important concern, where additional efforts may be required. Finally, cloud computing has emerged over the last two years as a key determinant of digital competitiveness. It can slash ICT costs — especially for SMEs — and reduce ICT energy consumption, as well as increase information security. It is also a new growth area for digital services, although Europe's fragmented regulatory environment poses significant challenges.

In addition and following the recent Commission Communication on *"a better Governance for the Single Market",* the analysis and assessment provided by this Scoreboard will feed the forthcoming Annual report on the integration of the Single Market[19].

By re-focusing priorities, the Digital Agenda will continue to make a considerable contribution to a jobs-rich recovery in Europe.

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[19] The Annual Single Market report will present an analysis of the state of Single Market integration and look at the way the Single Market functions in practice, including in particular the digital Single Market..